Hinton Wood Products
A Division of West Fraser Mills Ltd.

2013
SUSTAINABLE FOREST MANAGEMENT STEWARDSHIP REPORT

January 2014

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EXECUTIVE SUMMARY

This is an executive summary of HWP's 2013 Sustainable Forest Management (SFM) Stewardship Report. The 2013 Stewardship Report documents Hinton Wood Product's (HWP) performance achieved compared to objectives, targets, initiatives, and/or commitments made in a number of Company's plans, legal documents, or reports. HWP will also use the Stewardship Report to house any other important reporting or documenting information, such as: certification audit reports, Forest Operations Monitoring Program (FOMP) audit reports and action plans, and/or any other reporting information required by Alberta Environment Sustainable Resource Development's (AESRD).

In 2010, Hinton Wood Products (HWP) let its CSA certification expire (but continues to maintain its certification to the Sustainable Forestry Initiative); therefore, HWP no longer has a CSA mandated requirement to report annually on the progress made in meeting the Values, Objectives, Indicators, and Targets (VOITs) outlined in the Company's CSA Sustainable Forest Management Plan. However, HWP is going to continue to maintain and report on these VOITs because AESRD mandates the Company to develop and report on VOITs as part of the requirements of the Detailed Forest Management Plan (DFMP) and because we think it's a useful part of our Stewardship Program. Because HWP has developed more VOITs through the CSA process than AESRD mandates as part of their DFMP process, the Stewardship Report will be reporting on VOITs in two different sections of the Report:

- The first section (Section 2.1) describes mandatory VOITs (i.e. those required by AESRD as part of the FMP) – HWP will be asking AESRD to approve this section of the report.

- The second section (Section 2.2) describes voluntary VOITs (i.e. those not required by AESRD but are being reported on as a best management practice) – HWP will not be asking AESRD to approve this section of the report; it is provided as information only.

HWP wants to maintain all of its reporting requirements, both voluntary and mandatory, in one master document. The intent is that all reporting information will be housed either directly or through links in this document. This will also mean that some sections of this report will be available to the public, while other sections (e.g. due to sensitive financial information, etc.) will not be.

As well as reporting on the progress of additional plans and initiatives in this Stewardship Report, HWP will also explain why targets or other commitments the Company is reporting on, have not been met, and describe a plan or strategy to try to ensure they are met in the future.

As part of a continual improvement process, comparisons between our SFM Values, Objectives, Indicators, and Targets and how we have performed, are used to improve Sustainable Forest Management. This allows the Company to track its progress in terms of attainment various targets and take action where necessary.

In summary, in 2013 HWP maintained 46 VOITs; however, five have been deleted - VOIT #19, 39, 42, 43 and 44 (SFM Satisfaction). These VOIT's were deleted because they either held very little value or they were addressed in other VOIT's. Of the 40 VOITs reported in the 2013 Stewardship Report, ten of them had targets that were not met. Tables under Sections 2.14 and 2.24 contain a summary of all of the VOITS that were not met in 2013, as well as a brief explanation of why they were not met, and any corrective actions that may have been applied.

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1. INTRODUCTION

This 2013 Sustainable Forest Management (SFM) Stewardship Report documents Hinton Wood Product's performance achieved compared to objectives, targets, initiatives, and/or commitments made in a number of Company's plans, legal documents, or reports. Hinton Wood Products (HWP) will also use the Stewardship Report to house any other important reporting or documenting information, such as: certification audit reports, Forest Operations Monitoring Program (FOMP) audit reports and action plans, and/or any other reporting information required by Alberta Environment Sustainable Resource Development's (AESRD).

As noted in previous year's Stewardship Report, HWP let its Canadian Standards Association (CSA) SFM certification expire in 2010 (but continues to maintain some of its certification to the Sustainable Forestry Initiative); therefore, HWP no longer has a CSA mandated requirement to report annually on the progress made in meeting the Values, Objectives, Indicators, and Targets (VOITs) outlined in the Company's CSA Sustainable Forest Management Plan. However, HWP is going to continue to maintain and report on some of the VOITs because AESRD mandates the Company to develop and report on VOITs as part of the requirements of the Detailed Forest Management Plan (DFMP). Because HWP has developed more VOITs through the CSA process than AESRD mandates, this Stewardship Report will be reporting VOITS in two different sections of the Report:

Section 2.1 – A section with mandatory VOITs (i.e. those required by AESRD as part of the DFMP) – HWP will be asking AESRD to approve this section of the report.
Section 2.2 – A section with voluntary VOITs (i.e. those not required by AESRD but are being reported on as a best management practice) – HWP will not be asking AESRD to approve this section of the report; it is provided as information only.

HWP wants to maintain all of its reporting requirements, both voluntary and mandatory, in one master document. The intent is that all reporting information will be housed either directly or indirectly (through links in this document). This will also mean that some sections of this report will be available to the public, while other sections (e.g. due to sensitive financial information, etc.) will not be.

As well as reporting on the progress of additional plans and initiatives in this Stewardship Report, HWP will also explain why targets or other commitments the Company is reporting on, have not been met, and describe a plan or strategy to try to ensure they are met in the future.

As part of a continual improvement process, comparisons between our SFM Objectives and Targets (as well as those commitments from other plans) and how we have performed, are used to improve Sustainable Forest Management. This allows the Company to track its progress in terms of attainment of Objectives and Targets of various plans and take action where necessary.

The current (2008) SFM Plan, on which sections of this Stewardship Report is based, describes the SFM Values, Objectives, Indicators, and Targets (VOITs) as set by the HWP, with input from the Company's Forest Resources Advisory Group (FRAG). The 2008 SFM Plan conforms to the Canadian Standards Association's (CSA) Z809-02 Standard. However, as noted previously, HWP allowed this certification to expire in 2010.

The Hinton Wood Products' business encompasses a Sawmill and a Woodlands department. For the purposes of this document, each time the term "Hinton Wood Products (HWP)" or the "Company" is used; this will be referring to the Woodlands department portion of the business (i.e. not the Sawmill).

Acronyms are used throughout this report. The following table outlines the acronyms and their meanings:

Table 2 – *Common Acronyms (in alphabetical order)*

Acronyms	Meaning
AAC	Annual Allowable Cut
AOP	Annual Operating Plan
AESRD	Alberta Environment Sustainable Resource Development
CSA	Canadian Standards Association
DFA	Defined Forest Area (in this report, the DFA is synonymous with FMA)

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Acronyms	Meaning
DFMP	Detailed Forest Management Plan
FMA	Forest Management Area
FRAG	Forest Resources Advisory Group
FRI	Foothills Research Institute
HWP	Hinton Wood Products
SFI	Sustainable Forestry Initiative
SFM	Sustainable Forest Management
VOITs	Values, Objectives, Indicators, and Targets

A. Third Party Certification

Hinton Wood Products holds or has held a number of different third party certifications, including the following:

1.1 Sustainable Forestry Initiative (SFI)

Hinton Wood Products has been SFI certified since 2007. The Sustainable Forestry Initiative's (SFI) Standard is based on nine principles that address economic, environmental, cultural and legal issues, in addition to a commitment to continuously improve SFM. The SFI organization is fully independent, non-profit, and has a governance structure with equal representation from social, economic and environmental stakeholders. Each or West Fraser's Canadian divisions are independently audited by KPMG at regular intervals to ensure the SFI Standard has been adequately met.

In order to successfully register to the SFI Standard, Hinton Wood Products must have systems in place to meet each of the SFI Standard's 13 objectives. These 20 objectives address such SFM issues as:

1. Forest Management Planning
2. Forest Productivity
3. Protection and Maintenance of Water Resources
4. Conservation of Biological Diversity including Forests with Exceptional Conservation Value
5. Management of Visual Quality and Recreational Benefits
6. Protection of Special Sites
7. Efficient Use of Forest Resources
8. Landowner Outreach
9. Use of Qualified Resource and Qualified Logging Professionals
10. Adherence to Best Management Practices
11. Promote Conservation of Biological Diversity, Biodiversity Hotspots and High-Biodiversity Wilderness Areas
12. Avoidance of Controversial Sources including Illegal Logging
13. Avoidance of Controversial Sources including Fibre Sourced from Areas without Effective Social Laws
14. Legal and Regulatory Compliance
15. Forestry Research, Science, and Technology
16. Training and Education
17. Community Involvement in the Practice of Sustainable Forestry
18. Public Land Management Responsibilities
19. Communications and Public Reporting
20. Management Review and Continual Improvement

As part of West Fraser's SFI certification, the Company has developed a corporate SFM Plan that contains objectives, programs, indicators and targets. Section 9 of this Stewardship Report outlines the objectives and targets of this corporate SFM Plan and reports on HWP's success in meeting those objectives and targets.

The newest SFI standard was released for 2010. For more information about the SFI Standard please their website at www.sfiprogram.org.

1.2 International Organization for Standardization (ISO) 14001

Hinton Wood Products has been certified to the ISO 14001 Standard since 2000. ISO is a worldwide federation of national standards-setting bodies. It was established in 1947 and is headquartered in Geneva, Switzerland.

ISO's mission is to facilitate the international exchange of goods and services. It pursues this mission by defining technical specifications, rules, and guidelines to ensure that materials, products, processes and services fit their purpose.

The ISO 14000 series is a set of environmental management systems and environmental management tools that are designed to enable companies to define and implement environmental objectives. The main benefit of ISO 14001 certification is the requirement for a Company to develop an Environmental Management System, which improves environmental performance through a process of documenting and formalizing our environmental programs, increasing awareness, planning, reviewing, and incorporating improvements.

ISO 14001 is not specific forestry standard. ISO 14000 certification requires a company to monitor and measure its environmental performance in order to implement continual improvement. The ISO 14000 system incorporates no threshold level of environmental performance beyond the commitment to comply with applicable laws and regulations. The ISO 14000 series documents are tools for companies to obtain a certain level of environmental performance. The standards or goals are set by HWP.

The ISO 14001 Standard requires companies to establish and maintain programs for meeting its objectives and targets. HWP has evaluated all of its environmental risks and has established objectives and targets – Table 3 below outlines the sections of this report that contain and report on the values, objectives, indicators, and targets that have been established as part of HWP's ISO 14001 certification:

Table 3 – *ISO Objectives/Targets Reporting*

Section	ISO Objective/Target Name
2.1201	Seral Stage
2.1204	Compliance with the riparian-related sections of the current Operating Ground Rules.
2.1206	Non-HWP Water Crossings
2.1207	Company Watercourse Crossings
2.1208	Provenances and Genetic Lines in Gene Banks and Trials
2.1210	Annual % of SR Regeneration Surveys
2.1211	Cumulative Percentage of Reforested Areas that Meet Reforestation Target
2.1212	Amount of Change in the Forest Landbase
2.1213	Amount of Area Disturbed
2.1215	Percentage Compliance with Company OGR
2.1216	Incidence of Soil Erosion and Slumping
2.1217	Watershed Basins
2.1218	Reforestation Delay
2.1219	Scientific Advancements and Policy Development Pertaining to Carbon Sequestration and Modeling
2.1223	Aboriginal Consultative Activities
2.2225	Species Conservation Strategies
2.2226	Non-forestry Disposition Area by Disposition Type
2.2236	Training and Education
2.2237	Non-compliance Incidents
2.2238	Waste Management
2.2239	Garbage Incidents
2.2240	Safety Plans and Partners in Injury Reduction (PIR) Audit
2.2245	Standard Operating Procedure Review
2.2247	Certification Status
6.0	FOMP Reports and Action Plans
11.0	SFI/ISO Audit Reports
12.0	Internal Compliance Audits
13.0	Emergency Drills

1.3 PEFC Chain of Custody

The Programme for the Endorsement of Forest Certification (PEFC) is an international non-profit, non-governmental organization dedicated to promoting Sustainable Forest Management (SFM) through independent third-party certification

Many customers are increasingly seeking verification that products they purchase are derived from fibre that has been "legally harvested" from a certified sustainably-managed forest. To meet this demand, West Fraser utilizes a certification system known as "Chain of Custody," which is designed to track the legality and the certification of our timber sources. This system is based on the PEFC volume-credit method, which is internationally-recognized and widely-accepted. West Fraser's PEFC Chain of Custody system was introduced and successfully certified at all of the Company's Canadian manufacturing facilities in 2010.

1.4 FSC Standard for Chain of Custody Certification (FSC-STD-40-004 v2-0)

As well as the PEFC Chain of Custody certification noted above, West Fraser's Hinton Pulp operation was registered to the Forest Stewardship Council's (FSC) Standard for Chain of Custody Certification (FSC-STD-40-004 v2-0) in 2008. The FSC Chain of Custody is an information trail about the path taken by products from the forest to the consumer including each stage of processing, transformation, manufacturing, and distribution where progress to the next stage of the supply chain involves a change of ownership.

1.5 Standard for Company Evaluation of FSC Controlled Wood (FSC-STD-40-005 v2-0)

Also in 2008, West Fraser's Hinton Pulp operation was registered to the Standard for Company Evaluation of FSC Controlled Wood (FSC-STD-40-005 v2-0). This standard was designed to allow companies to avoid trading in illegally harvested wood, wood harvested in violation of traditional and civil rights, wood harvested in forests where high conservation values are threatened by management activities, wood harvested in forests being converted to plantations or non-forest use, wood from forests in which genetically modified trees are planted.

Compliance with this standard allows companies to supply FSC Controlled Wood to FSC certified chain of custody companies for the purpose of mixing with FSC certified material. It allows companies to demonstrate that they are implementing best efforts to avoid the trade in illegally harvested timber, in support of the international Forest Law Enforcement, Governance and Trade (FLEGT) program.

1.6 Canadian Standards Association (CSA) Z809

The Canadian Standards Association (CSA) is a not-for-profit, independent standards writing organization. The CSA Sustainable Forest Management (SFM) Project was initiated in June 1994, through funding and support of the Canadian forest industry. The purpose of the CSA Sustainable Forestry Management system is to provide a credible and recognized process for certifying sustainable forestry in Canada. The CSA SFM is modeled on the ISO environmental management systems standard (ISO series 14000). The CSA Sustainable Forest Management approach to certification involves the auditing of a sustainable forest management system for a defined forest area.

Hinton Wood Products was certified to the CSA Z809 Standard from 2000 to 2010; however, HWP allowed its CSA to expire in 2010, in order bring HWP in line with all other West Fraser Canadian woodlands divisions, who are all SFI certified.

A Sustainable Forest Management (SFM) Plan is required as part of the definition and implementation of a Sustainable Forest Management System under the CAN/CSA Z809 standard. The SFM Plan describes the SFM System, which includes Values, Objectives, Indicators, and Targets, (VOITs), and management strategies to be applied to the Defined Forest Area (in this instance the defined forest area is HWP's FMA).

Although HWP did let its CSA certification expire in 2010, the division, through this Stewardship Report, is still maintaining and reporting on the VOITs developed through its CSA certification process, and as a requirement of AESRD's DFMP process. Hinton Wood Products still maintains a comprehensive public consultation process that includes a Forest Resource Advisory Group (FRAG) – all the VOITs in this Stewardship Report have been previously vetted through FRAG.

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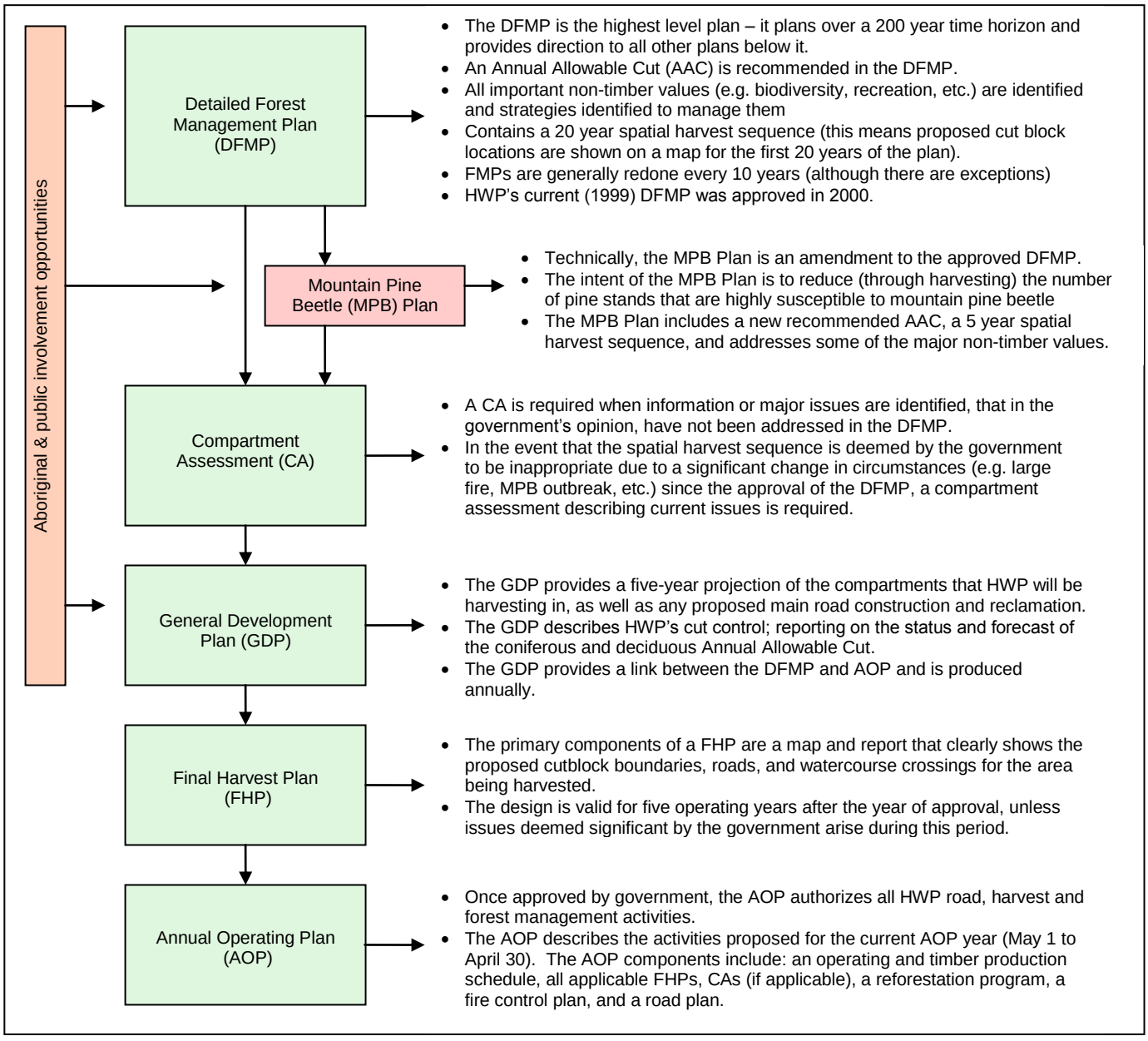
2. HWP PLANNING AND REPORTING

A. The Alberta Planning Process

The Alberta planning process describes the various plans that a forest company must develop and submit to AESRD for approval before they can undertake forest management activities, such as: harvesting, road building, and silvicultural activities (e.g. site preparation, planting, stand tending, etc.). Figure 1 below outlines the planning process in Alberta:

Figure 1 – *The Planning Process in Alberta*



B. Sustainable Forest Management (SFM) Plan

In 2009, West Fraser made a decision at the corporate level to not recertify the Hinton division to the CAN/CSA Z809 Standard in 2010. This brought the Hinton division in line with all of West Fraser's other wholly-owned Canadian divisions, which are certified only to SFI sustainable forest management standard. HWP will continue to monitor and report on the VOITS identified in the 2008 SFM Plan, until such times as those VOITs are rolled

into HWP's new Detailed Forest Management Plan (with a planned submission date to AESRD of 2014 – see section C below).

C. Detailed Forest Management Plan

In 2005, Hinton Wood Products started developing a new Detailed Forest Management Plan (DFMP), with a planned submission date of 2009. Changes in the provincial government's Planning Manual (this is the document that sets the requirements for developing DFMP's) now require the FMA holder to closely follow the CSA Z809-2002 Standard when developing a DFMP (especially with respect to the CSA Standard's requirement to develop VOITs with significant public input). The target submission date for HWP's new DFMP has recently been moved from 2009 to 2014; this is due to a number of mitigating factors, including:

- The Alberta government is in the process of developing land use plans for seven different regions in Alberta. The land use plan for the upper Athabasca region, in which HWP's FMA lies, is due to start development 2012 at the earliest. AESRD and HWP felt it was prudent to wait until the conclusion of the that process before starting a new DFMP, as decision made during the land use planning process will likely substantially impact any new DFMP.
- Mountain pine beetle (MPB) has arrived in significant numbers on the Hinton FMA. The extent to which the beetles can establish themselves will also play an important role in a new DFMP. Rather than have HWP complete a new DFMP during this uncertain time, AESRD has asked HWP to complete a "MPB Plan".

D. MPB Plan

As explained in Figure 1, the MPB Plan is an amendment to HWP's approved (1999) Detailed Forest Management Plan. Even though DFMPs are typically redone every ten years, the Alberta government has given HWP permission to delay the next submission of the Company's DFMP until 2014. The primary reason for this extension is because of the uncertainty around a number of issues that will have a significant effect on HWP's next DFMP – just a few examples of current issues that are unresolved or unknown include: the extent of the mountain pine beetle infestation, the government's Land Use Framework, the Caribou Recovery Plan, and the Grizzly Bear Recovery Plan.

Approving an extension to the submission date of HWP's DFMP to 2014 allows the time for initiatives such as the Land Use Framework and the Caribou Recovery Plan to be implemented and then included as part of HWP's new DFMP in 2014.

The key purpose of the MPB Plan is to reduce (through harvesting) the number of pine stands in HWP's FMA that are highly susceptible to mountain pine beetle. Highly susceptible lodgepole pine is generally the older and bigger pine forests within the FMA. Reducing the extent of these forests reduces the pine beetle's food source and thereby the risk of large MPB outbreaks.

The MPB Plan contains five main components:

1. *A new gross and net landbase for HWP's FMA* – this new landbase calculation includes: the use of new forest inventory data, an update for previous harvesting, fires, and energy dispositions, new steep slopes data and new information about water (e.g. streams, lakes, etc.).
2. *New forest growth relationships* – a model based on HWP's permanent sample plots was developed to determine how fast the forest is growing on various ecosites.
3. *A new Annual Allowable Cut (AAC)* – Using the new landbase and growth & yield information, a new AAC for the FMA was proposed to AESRD, and subsequently approved.
4. *Five Year Spatial Harvest Sequence* – At least five years of cutblocks were identified within the MPB Plan.
5. *Strategies for major non-timber values on the FMA* – How HWP intends to manage for water, caribou, trumpeter swans and grizzly bear are described in the MPB Plan.

The MPB Plan was submitted to AESRD for approval in the summer of 2010 and approved with conditions on August 18, 2010. This plan will be an interim plan (replacing HWP's 1999 DFMP) until a new DFMP is approved (planned DFMP submission date of 2014).

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E. Values, Objectives, Indicators and Targets (VOITs)

Both the DFMP and (voluntary) SFP Plan are based on the definition of SFM developed by the Council of Canadian Forest Ministers and implemented through a hierarchy of Criteria, SFM Elements, Values, Objectives, Indicators and Targets. The Criteria, which are also set by the Canadian Council of Forest Ministers, represent a broad and internationally accepted measure of sustainable forest management. The six Criteria are:

1. *Conservation of biological diversity*
2. *Maintenance and Enhancement of Forest Ecosystem Condition and Productivity*
3. *Conservation of Soil and Water Resources*
4. *Multiple Benefits to Society*
5. *Forest Ecosystem Contributions to Global Ecological Cycles*
6. *Accept Society's Responsibility for Sustainable Development*

Although no single criterion is a measure of sustainability on its own, together they represent a measurable definition of sustainable forest management. In addition to the Criteria noted above, the Canadian Standards Association has further divided each of the Criteria into a total of 17 SFM Elements, which provide more clarity around each of the six Criteria.

From the six Criteria and 17 SFM Elements, in conjunction with HWP's Forest Resources Advisory Group (representing various public stakeholders) and based on input from Aboriginal communities, other public stakeholders or interested parties, Hinton Wood Products have developed Values, Objectives, Indicators and Targets (VOITs), which help to assess our performance in meeting the Criteria, as well as set out the work that needs to be done. Together this forms the basis, and key performance measurement, of HWP's current (2008) Sustainable Forest Management Plan and future (2014) DFMP.

The DFMP scheduled for submission in 2014, and the existing (2008) voluntary SFM Plan, are designed to define the Values, Objectives, Indicators, Targets and management strategies, which are applied to HWP's Forest Management Area and together put HWP on the path to a sustainably managed forest. The VOITs that are described in the SFM Plan (and will be described in the 2014 DFMP) were developed according to the CAN/CSA Z809:02 Standard.

The (2008) SFM Plan, and 2014 DFMP, will follow the definitions described in the Canadian Council of Forest Ministers (1995) and the CAN/CSA Z809:02 SFM Standard document. As previously noted, there are six SFM Criteria. Under each *Criterion* and *SFM Element*, V*alues* and Objectives have been identified. To meet the *Values* and Objectives, a series of I*ndicators* and *Targets* have been defined.

- ***Criterion*** – A distinguishable characteristic of sustainable forest management; a value that must be considered in setting objectives and in assessing performance.
- ***SFM Element*** – A more specific component of the criterion. Each SFM Element relates to one Criterion; a Value, Objective, Indicator, and Target must be set for each SFM Element.
- ***Value*** – A DFA-specific characteristic or quality considered by an interested party to be important (e.g. ecosystem diversity, timber, etc.).
- ***Objective*** – a broad statement that describes a desired future state or condition for a DFA-specific value (e.g. maintain current levels of types of ecosystem diversity).
- ***Indicator*** – A variable that measures the sate or condition of a DFA-specific value and for which one or more targets are set (e.g. age-class structure or the forest's stands).
- ***Target*** – A specific statement describing a desired future state of condition of an indicator (e.g. maintain forest age class within range of natural variability). A Target is commonly stated as a desired level of an indicator.

Values and Objectives are developed in consultation with the public (and other interested parties), which address each of the six CCFM Criteria and 17 CSA Elements. Next, Indicators and Targets are chosen, again in consultation with the public (and other interested parties), which are used to measure and achieve the Objectives. Sections 2.1 and 2.2 of this SFM Stewardship Report documents annually the progress made in achieving the Values, Objectives, Targets and Objectives (VOITs) set out in HWP's (2008) SFM Plan.

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F. Mandatory versus Voluntary VOITs

The government has mandated a number of Values, Objectives, Indicators and Targets that must be included within HWP's new (2014) DFMP. These mandatory VOITs are described in Section 2.1. Section 2.2 describes and reports on HWP's voluntary VOITs – these are VOITs that are not required to be part of HWP's 2014 DFMP, but have been developed and are reported on as part of HWP's SFM Plan under the CSA Z809 requirements (to which HWP now does not subscribe). Rather than drop these VOITs, which were developed with significant input from HWP's public advisory group (FRAG), HWP has decided to keep monitoring and reporting on these VOITs as part of this Stewardship Report.

There are also a number of mandatory VOITs that HWP has not yet developed a target for (primarily due to lack of data). These VOITs are described in Appendix 2 of this Stewardship Report. Once a target has been developed for the VOITs shown in Appendix 2, they also will be reported on annually in this Stewardship Report.

HWP's current (2008) SFM Plan can be downloaded from the Company's website at www.westfraser.com/hintonforestry (hit the "forest management" link, then the "CSA/Z809" link – then go to "Sustainable Forest Management Plan (2008)".

Section 2.1 and 2.2 of this 2010 SFM Stewardship Report documents Hinton Wood Products' performance in meeting both the mandatory and voluntary VOITs, which are defined as follows:

1. **Mandatory VOITs (section 2.1)** – These are VOITs that the government has mandated HWP to report on as part of the DFMP Process. HWP is asking that AESRD officially acknowledge receipt for this section of the Stewardship Report and provide its approval.

2. **Voluntary VOITS (section 2.2)** – These are VOITs that the government has not mandated, but HWP has decided to track and report on as part of our commitment to our local Forest Resources Advisory Group and as a best management practice. HWP is not asking AESRD to acknowledge receipt, provide comment, or approval for this section of the Stewardship Report.

Prior to final submission to Alberta Environment Sustainable Resource Development, sections 2.1 and 2.2 of this Stewardship Report were reviewed by the following persons:

- Hinton Wood Products' Stewardship Committee;
- The staff responsible for each indicator;
- Senior management; and
- The Forest Resources Advisory Group (a public stakeholder group).

G. SFM Stewardship Report

The SFM Stewardship Report (this document) will be prepared annually by HWP staff and report on multiple aspects of HWP's forest management activities. The intent of the Stewardship Report will be to house all relevant information, documentation, and/or reporting requirements generated by HWP during the 2013 timber year (April 10 to March 11) or calendar year (2013) in this one document. Some of this reporting information will be available for public viewing but other information may not be. Some information requests would be made to the government, while other reporting information can be found on HWP's website (www.westfraser.com/hintonforestry) or West Fraser's corporate website (www.westfraser.com). Table 4 outlines the information that will be gathered as part of HWP's annual Stewardship Report (this table may change from time to time):

Table 4 – *Information gathered and reported in the Stewardship Report*

Reporting information	Available for public viewing
Mandatory VOITs	Yes (within report)
Voluntary VOITs	Yes (within report)
VOIT Performance Review	Yes (within report)
Action Plan for Voluntary VOITs Not Met	Yes (within report)
Stewardship Committee Initiatives	Yes (within report)
Communication initiatives	Yes (within report)
Record of Aboriginal Engagement	No

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Reporting information	Available for public viewing
A copy of the General Development Plan	Yes (available on HWP website)
A copy of the Annual Operating Plan	Yes (available on HWP website)
Operating Ground Rules Reporting Requirements:	
• Silviculture and Harvest Activity Reporting	Yes (request made to gov't)
• Periodic Timber Operations Inspections	Yes (request made to gov't)
• ARIS Silviculture Work	Yes (request made to gov't)
• Open Compartments	Yes (within report)
• Annual status of channelled watercourse crossings	Yes (within report)
A copy of the West Fraser Alberta Stewardship Report	Yes (available on WF website)
FMA Accomplishment Report	Yes (request made to gov't)
West Fraser Corporate Annual Stewardship Report	No
West Fraser Corporate SFM Plan and HWP's Report	Yes (within report)
SFI, CSA, and ISO Audit Reports	Yes (on request of HWP)
Internal Compliance Audits	No
Emergency Drills	No
ENGO Engagement and Correspondence	No
FOMP Reports and action plans	Yes (request made to gov't)

2.1 Mandatory VOITs

This section of the Stewardship Report describes VOITs that are mandatory as part of AESRD's Forest Management Planning Process (i.e. outlined in AESRD's Forest Management Planning Standard – Version 4.1-April 2006). Although, HWP does not yet have a DFMP approved to the current AESRD Forest Management Planning Standard and our approved 1999 DFMP (and subsequent 2010 approved DFMP amendment) does not require VOITs, HWP will still report on all of the AESRD mandated VOITs from this year forward.

HWP is asking that AESRD approve the reports for the VOITs outlined in this section of the Stewardship Report.

2.11 VOIT Table & Definitions

Table 2.111 on the following pages illustrates how the AESRD mandatory Values, Objectives, Indicators, and Targets are linked together (VOIT). The VOIT descriptions found in the table include the following information:

- **Summary Table** – This table located at the beginning of each VOIT description, describes briefly which section of which standard (i.e. CSA, ISO, or SFI) the VOIT applies to. The table then outlines the Criterion, Element, Value, Objective, Indicator, Target, acceptable variance and Monitoring strategy for each VOIT.
- **Overview** – a brief overview of the VOIT.
- **Definitions** – This section contains definitions of certain words or terms used within the VOIT. Any word that is underlined in the VOIT description will either contain a definition in this section, or in the glossary. All underlined words will be in the glossary.
- **Inventory & Analysis** – This section outlines any inventory or analysis of the VOIT that has previously been carried out.
- **Target, Basis for Target, and the Primary Strategy(s)** – This section describes the Target(s) and the primary strategy that will be implemented to meet the Target. This section also describes the basis for choosing the Target.
- **Monitoring and Reporting** – This section describes how the indicator will be monitored and reported on.
- **Annual Report** – This section reports on how the Company did in meeting the Targets set out under the VOIT. If the VOIT was not met, this section of the report will also describe why the VOIT was not met, and where feasible, plans to ensure the VOIT is met in the future.
- **Future Development** - . This section contains information on future improvements or activities that may be planned or contemplated related to the VOIT.
- **References\Associated Documentation** – This section gives a list of references or documentation associated with the VOIT.

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This Stewardship Report also includes a definition section that describes the more technical words or terms used within the VOIT description – this is found in Appendix 1.

2.12 VOIT Reports

Following Table 2.111, there is a detailed report on each of the VOITs mandated by AESRD to be included in HWP's new DFMP. These detailed VOIT descriptions and reports are found in sections 2.1201 to 2.1224 of this report.

Table 2.111 – Mandatory VOIT Table

CCFM Criterion	CSA SFM Elements	VOIT #	Value	Objective	Indicator	Target
Criterion #1 Conservation of Biological Diversity	**1.1 Ecosystem Diversity** – Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally occur in the DFA.	1	Biodiversity at the landscape scale	Maintain biodiversity by retaining the full range of cover types and seral stages	Seral Stage	Maintain all seral stage amounts by major forest type and landbase scale within Range of Natural Variation according to the 1999 DFMP analysis.
		2	Biodiversity at the landscape scale	Maintain plant communities uncommon in DFA or province	Uncommon plant communities	Apply operational procedures to conserve uncommon plant communities for 100% of known and encountered occurrences
		3	Biodiversity at the landscape scale	Maintain unique habitats provided by wildfire and blowdown events	Unsalvaged natural stand replacing disturbances	1. The cumulative total area of unsalvaged natural stand replacing disturbances to be at least 25% of area disturbed based on a 20 year rolling average. 2. Apply operational procedures to address unsalvaged trees and patches at salvage planning stage.
		4	Biodiversity within riparian areas	Retain ecological values and functions associated with riparian zones	Compliance with HWP Riparian Operating Ground Rules	100% consistent and compliant with the DFMP and the Hinton Wood Products Operating Ground Rules.
		5	Sites of special biological significance	Protect and maintain the integrity of rare ecological sites, sensitive sites, and special landscape features.	Protected Area	1. Identify and document special features through HWP's Standard Operating Procedures (Special Features SOP & Form – EM-0054) and Special Places in the Forest Program - develop a management strategy for each identified site within 12 months.
	1.2 Species Diversity – Conserve species diversity by ensuring that habitats for the native species found in the DFA are maintained through time that naturally occur in the DFA.	6	Biodiversity at the local/stand scale	Maintain aquatic biodiversity by minimizing impacts of water crossing	Non-HWP water course crossings	1. Participate in the Foothills Stream Crossing Partnership.
		7	Biodiversity at the local/stand scale	Maintain aquatic biodiversity by minimizing impacts of water crossing and protecting water quality	Company watercourse crossing	1. Implement and be in compliance with the Company's Stream Crossing Program and water crossing SOP; and be in compliance with the provincial government's Code of Practice for Water Course Crossings, and compliance with the Fisheries Act (Federal). 2. Remediate Company stream crossings not meeting current standards (condition #1 – safety, erosion, and where fish are present, fish passage) on watercourses according to the annual action plan.
	1.3 Genetic Diversity – Conserve genetic diversity by maintaining the variation of genes within species.	8	Genetic integrity of natural tree populations	Conserve wild forest genetic resources through gene archiving.	Provenances and genetic lines in gene banks and trials	Active conservation program for all species on the FMA that have a tree improvement program.

Table 2.111 – Mandatory VOIT Table

CCFM Criterion	CSA SFM Elements	VOIT #	Value	Objective	Indicator	Target
	1.4 Protected Areas and Sites of Special Biological Significance – Respect protected areas identified through government process. Identify sites of special biological significance within the DFA and implement management strategies appropriate to their long-term maintenance	9	Areas within managed landscapes with minimal human disturbances	Integrate trans-boundary values and objectives into forest management	Stakeholder consultation	Follow existing consultation processes: 1. Forest Resources Advisory Group (FRAG) 2. Final Harvest Plan process 3. Recreation Program 4. West Yellowhead Mountain Pine Beetle Coordinating Committee 5. FireSmart 6. Long Term Access Plans
Criterion #2 – Maintenance and Enhancement of Forest Ecosystem Condition and Productivity	**2.1 Forest Ecosystem Resilience** – Conserve ecosystem resilience by maintaining both ecosystem processes and ecosystem conditions.	10	Reforest all harvest areas	Meet reforestation targets on all harvested areas	Annual % of SR regeneration surveys	90% of blocks surveyed (establishment surveys) will be Satisfactorily Restocked (SR) on the first survey
		11	Reforest all harvest areas	Meet reforestation targets on all harvested areas	Cumulative % of reforested areas that meet reforestation target	90% of post-91 blocks surveyed (establishment surveys) will be Satisfactorily Restocked (SR)
	2.2 Forest Ecosystem Productivity – Conserve forest ecosystem productivity and productive capacity by maintaining ecosystem conditions that are capable of supporting naturally occurring species.	12	Maintain forest landbase	Limit conversion of forest landbase to other uses	Amount of change in the forest landbase	Maintain or limit the loss of forest landbase by: 1. Annually review and update all existing Long Term Access Plans. 2. On a net basis, maintaining the merchantable landbase (contributing to the AAC) at 650,163 ha. 3. Limit the net FMA landbase withdrawals for use by Crown to be < 2% of total FMA landbase as of Jun-88 4. Undertake assessments of 139 industrial sites currently identified as being "returned" to the FMA; identify sites that are ecologically suitable and operationally feasible to reforest within the next three years. 5. Implement silviculture strategy for afforestation of previously forested shrub communities.
		13	Health of the forest landbase	Recognize lands affected by insects, disease or natural calamities.	Amount of area disturbed	Limit combined annual loss to fire and epidemic insect/disease outbreaks to a maximum of 0.1% of the FMA contributing landbase (based on a 20 year rolling average).
		14	Control invasive species	Control invasive non-native plants species (weeds)	Presence of invasive non-native plant species	Continue to implement the Company's noxious weed program.
Criterion #3 – Conservation of Soil and Water Resources	**3.1 Soil Quality and Quantity** – Conserve soil resources by maintaining soil quality and quantity.	15	Soil productivity	Maintain soil productivity	% Compliance with Company OGR	Complete compliance with Company Operating Ground Rules that relate to soil & water
		16	Minimize soil	Minimize soil erosion	Incidence of soil erosion	Complete compliance with Forest Soil Conservation

Table 2.111 – Mandatory VOIT Table

CCFM Criterion	CSA SFM Elements	VOIT #	Value	Objective	Indicator	Target
			erosion		and slumping	Guidelines and Stream Crossing Guidelines.
	3.2 Water Quality and Quantity – Conserve water resources by maintaining water quality and quantity.	17	Water resources	Keep changes to quantity and timing of water yields within reasonable limits.	Watershed Basins	All watershed basins to be within acceptable impact thresholds as per the 1999 DFMP – Hydrology Assessment Model analysis.
Criterion #4 – Forest Ecosystem Contributions to Global Ecological Cycles	**4.1 Carbon Uptake and Storage** – Maintain the processes that take carbon from the atmosphere and store it in forest ecosystems **4.2 Forest Land Conversion** – Protect forestlands from deforestation or conversion to non-forests.	18	Ecological processes	Maintain the ecological processes that are responsible for recycling water, carbon, nitrogen and other life sustaining elements	Reforestation Delay	Commence reforestation on 80% of Hinton Wood Products harvested area within 1 year of harvest, and 100% of harvested area within 2 years of harvest
		19	Climate change			This VOIT has been deleted in 2013.
Criterion #5 – Multiple Benefits to Society	**5.1 Timber and Non-Timber Benefits** – Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits	20	Maintain sustainable timber supplies	Maintain the sustainable productive capacity of ecosystems	Annual Timber Harvest (m3)	Establish appropriate AAC using the process and standards described in Annex 1 & 2 of the AESRD Planning Manual and comply with cut control requirements specified in the Forest Management Agreement.
	5.2 Communities and Sustainability – Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and to participate in their use and management	21	Reduce the risk to communities from wildfire	To reduce wildfire threat potential by reducing fire behaviour, fire occurrence, threats to values at risk and enhancing fire suppression capability	FireSmarting cooperative initiatives	Cooperate with all AESRD FireSmart initiatives around communities within or bordering the DFA.
	5.3 Fair Distribution of Benefits and Costs – Promote the fair distribution of timber and non-timber benefits and costs	22	Forest Productivity	Maintain Long Run Sustained Yield Average	Regenerated stand yield compared to natural stand yield	Average regenerated stand yield is greater than or equal to average natural stand yield.

Table 2.111 – Mandatory VOIT Table

CCFM Criterion	CSA SFM Elements	VOIT #	Value	Objective	Indicator	Target
Criterion #6 – Accepting Society's Responsibility for Sustainable Development	**6.1 Aboriginal and Treaty Rights** – Recognize and respect Aboriginal and treaty rights **6.2 Respect for Aboriginal Forest Values, Knowledge and Uses** – Respect traditional Aboriginal forest values and uses identified through the Aboriginal input process **6.3 Public Participation** – Demonstrate that the SFM public participation process is designed and functioning to the satisfaction of the participants **6.4 Information for Decision-Making** – Provide relevant information to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.	23	Respect for Aboriginal and treaty rights & Aboriginal consultation	Respect and accommodate the special and unique rights and needs of aboriginal peoples in forest management decisions.	Aboriginal Consultative Activities	1. Annually conduct consultative activities as required under Alberta's "First Nations Consultation Guidelines on Land Management and Resource Development" and as directed in AESRD's September 1, 2009 letter regarding HWP's Aboriginal Consultation Program. 2. Hinton Wood Products may also conduct consultative activities voluntarily with the various other Aboriginal communities, as required.
		24	Conduct meaningful public involvement	Implement public involvement program ensuring broad participation of interested parties in forest management decision-making processes.	Consultation Opportunity and Participation	Develop, implement, monitor, and report on a public participation process that meets the requirements of CSA Z809-02 Standard.

ToC

2.1201 Seral Stage

DFMP VOIT	Yes
SFI Objective#	Objective #1 & #4
ISO Objective and Target?	Yes
Criterion:	Criterion #1 – Conservation of Biological Diversity
SFM Element:	1.1 Ecosystem Diversity – Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally occur in the DFA
Value:	Biodiversity at the landscape scale
Objective:	Maintain biodiversity by retaining the full range of cover types and seral stages
Indicator:	Seral Stage
Target:	Maintain all seral stage amounts by major forest type and landbase scale within Range of Natural Variation (RNV) according to 1999 Forest Management Plan (DFMP) analysis
Acceptable variance:	±5% from forecast in the first 10 years.
Monitoring:	Cumulative changes and changes in the preceding 10 year interval will be reported in the 2014 DFMP and future versions. At that time, a new seral stage analysis will be completed and compared to the 1999 forecast.

Overview

Forests constantly change in response to disturbances, which vary by type and size. Disturbance types include non-biological processes such as forest fires, timber harvesting, winds, and floods, and biological processes such as reproduction, growth, death, decay, insects and disease. Disturbance sizes range from very small events that affect individuals to very large events that may kill many or most of the trees and other species in very large areas. Then the process of succession starts – trees and other species become established and compete for resources until another disturbance occurs.

Broad trends in landform and climate govern the types of forests that can occur in a region. Alberta forest types are categorized into areas called Natural Regions. Within these, disturbance regimes and species response shape forests into patterns that tend to repeat themselves over time. The most noticeable pattern is the mosaic of forest ecosystems that vary in size, age (time since disturbance), and the species community that lives in each ecosystem.

Representation of a full range of seral stages (see definition below) is part of a "coarse filter" biodiversity conservation strategy. Species can usually be classified as either habitat specialists (associated with specific seral stages or structural features) or habitat generalists (associated with a broad range of seral stages or structural features). The community associated with each seral stage changes through time in response to succession processes and reflects the adaptations of both generalist and specialist species. Therefore, the area of each seral stage is an important indicator of availability of the habitat that individual species are associated with. The assumption is that seral stage representation within the range that seral stage would naturally vary (e.g. 5 to 25% of the landscape) is likely to conserve biodiversity and ecological resilience. Seral stage representation is also important for conservation of other forest values. For example, the old seral stage is often associated with high recreation and scenic values.

Definitions

A. ***Seral stages*** (see Table 2.1201a for definitions) – Seral stages represent the four major forest succession stages, which are aggregates of what is really a continuous ecological gradient of forest stand development and structure related to time since disturbance. Stand age was used as a surrogate for stand structure information. The age where a plant community changes from one seral stage to another can differ among plant communities. Each stand was classified into a seral stage based on time since last disturbance and classification criteria developed for the major community type. The range that a particular seral stage within a particular forest type might vary under natural circumstances is called the ***natural range of variation*** (NRV).

Table 2.1201a – *Seral Stage Definitions*

Seral Stage	Definition
Young	The ***young seral stage*** starts with a major disturbance and continues until regenerated trees have dominated the site and crown closure occurs (in stands where tree density is high enough to

Seral Stage	Definition
	support crown closure). This stage is typically dominated by a single age cohort of trees but may have more than one cohort, particularly if veteran trees and other vegetation survived the major disturbance. This stage is analogous to the stand-establishment period.
Pole	The ***pole seral stage*** continues from the point of crown closure in fully-stocked young stands until trees are mature and height growth slows. This stage is analogous to the stem exclusion period.
Mature	The ***mature seral stage*** continues from the onset of reduced height growth until mortality rates of mature trees begin to increase significantly, creating canopy gaps.
Old	The ***old seral stage*** is characterized by canopy gaps, dead trees (standing and fallen), and the presence of additional tree age cohorts resulting from canopy gap dynamics. Under some conditions, this stage can continue to occupy a site for long periods because of natural within-stand dynamics, until a stand-replacing disturbance occurs. Management activities can potentially be used to maintain the old seral stage for prolonged periods, or to move mature seral stands into old seral condition sooner than might happen naturally.

B. ***Stochastic landscape disturbance model*** – Stochastic is synonymous with "random." The word is of Greek origin and means "pertaining to chance". It is used to indicate that a particular subject is seen from point of view of randomness. Stochastic is often used as counterpart of the word "deterministic," which means that random phenomena are not involved. Therefore, stochastic models are based on random trials, while deterministic models always produce the same output for a given starting condition.

Inventory & Analysis

For the 1999 Forest Management Plan analysis, stands were aggregated using Alberta Vegetation Inventory information into 15 yield groups, which were in turn aggregated into 4 forest types (Table 2.1201b). Seral stages for each forest type were defined by stand origin age to the closest decade, considering the approximate mean time since disturbance necessary for the forest type to attain the structural characteristics associated with each seral stage.

Table 2.1201b – *1999 Forest Management Plan forest types and seral stages.*

Forest Type	Yield Groups	Seral stage (age in years)			
		Young	Pole	Mature	Old
Pine	Pine, pine/black spruce, pine/fir, pine/white spruce	0–20	20–100	110–180	>180
Spruce	White spruce, white spruce/pine, fir, mixed spruce, black spruce/larch	0–20	20–100	110–180	>180
Mixed-wood	Aspen/softwood, other hardwood/softwood, pine/hardwood, spruce/hardwood	0–20	20–80	90–120	>120
Hardwood	Aspen, other hardwood	0–20	20–80	90–120	>120

As noted previously, under natural disturbance regimes, forest composition by type and seral stage fluctuates within a natural range of variation (NRV). Forest type and seral stage composition within a landscape of a specified size vary between lower and upper limits defined by types and rates of natural disturbances. The 1999 FMP analysis, RNV within the DFA was defined for 30,000 hectare natural disturbance units (n = 38), and for Natural Subregions (n = 3) using a stochastic landscape disturbance model (Andison 1998).

In 1996, a map of seral stages by major forest type was created. This included forests originating from Company harvest activity since 1956, natural disturbances, and pre-Company human disturbances. The mapping indicated that landbase-scale projections over 180 years had all categories within NRV.
The landbase in 1996 was within NRV for all combinations except there was more area of mixed-wood and hardwood old seral stages in the Upper Foothills (UF) and Lower Foothills (LF) Natural Subregions than would have been expected through the natural disturbance regime. This is likely a result of the historic bias towards conifer harvest on the FMA landbase, a large pulse of mature/old age class from extensive fires in the 1880s, and more than 40 years of systematic and successful fire protection. In the early 1990s the commercial value of hardwood species increased, and the proposed harvest schedule is expected to move the seral stage distribution for hardwood/mixed-wood back within NRV over the next several decades.
In addition, mature spruce in the UF/LF was close to the upper NRV. Again, fires and harvest activity in the last 100 years have not provided levels of disturbance sufficient to overcome the huge pulse of a single age class from 1880s fires. The proposed harvest level is expected to move the spruce/mature category back within RNV over the next 6 decades.

We forecast that old spruce will exceed NRV in UF/LF in approximately 70 years, and that old spruce in the Subalpine Natural Subregion will be approaching the upper NRV at the end of the 180 year simulation period. This was mainly related to the effect of set-asides (non-contributing landbase), which will be protected from timber harvesting and fire and are dominated by spruce (white spruce and black spruce) types. Many riparian forests are dominated by white spruce and many of the non-productive types in uplands are dominated by black spruce. Additional investigation is proposed through the natural disturbance program to separate white and black spruce types to get additional insight about this prediction, and integrate this with the next FMP.

Our initial intent for this indicator was to report annually for changes related to human activities and large-scale natural disturbances (e.g. forest fires, insect-caused tree mortality), and approximately every 10 years for changes related to natural processes such as succession. However, the annual changes are reported elsewhere (see VOIT #12 & #13), so we have changed the reporting cycle so that cumulative changes and changes in the preceding 10 year interval will be reported in the next FMP and subsequent future versions.
Since 2006, a number of changes have been implemented that have significant implications for seral stage management. First the FMA AAC was reduced to reflect a change in utilization standard to reflect an emphasis on lumber production. Secondly, the acceptance of the 2010 MPB Amendment saw the implementation of the provincial Pine Management Strategy on the FMA. This strategy directs companies to reduce the area of susceptible pine stands (in mature and old age classes) to 25% of the current levels within 20 years. HWP's plan includes a 20 year surge cut, however the deteriorating economic conditions curtailed log sales to other West Fraser Divisions and other companies, thus reducing the harvest level below the AAC.

All these changes make the 1999 seral stage targets are of questionable value. New targets need to be developed but an assessment was not a required part of the 2010 MPB Amendment. The next full assessment of the seral stage targets will be completed as part of the 2014 FMP.

Target and Strategy

The Target is:

1. *Maintain all seral stage amounts by major forest type and landbase scale within Natural Range of Variation (NRV) which is currently based on the 1999 Forest Management Plan (FMP)*

The strategy for implementing the target is to implement the compartment availability and schedule specified in the 2010 FMP Amendment, the volume schedule in the Development Plan, and the harvest schedule in the Annual Operating Plan.

Basis for Target	Remaining within NRV is believed to increase the probability of successful coarse filter biodiversity conservation. The 1999 FMP Analysis showed that most seral stage amounts would be within NRV if the proposed harvest schedules are implemented. Therefore the amounts forecast in the analysis were accepted as the target for this indicator.
Primary Strategy	HWP will continue to implement the compartment availability and schedule specified in the 2010 FMP Amendment, the volume schedule in the Development Plan, and the harvest schedule in the Annual Operating Plan. A comprehensive analysis will be completed as part of the 2014 FMP.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

All seral stage amounts are planned to be within the Range of Natural Variation specified in the 1999 FMP. The FMA is no longer being managed exclusively under the 1999 FMP; therefore this VOIT is being redeveloped for the 2014 FMP. See the "Future Development" section below.

Monitoring and Reporting

Cumulative changes and changes in the preceding 10 year interval will be reported in the next FMP and future versions. At that time, a new seral stage analysis will be completed and compared to the 1999 forecast.

Future Development

This VOIT has been redeveloped as part of the 2014 DFMP. The new VOIT as approved by ESRD in the Plan Development Team process is as follows:

- Over the 200 year planning horizon, the area in the following five seral stages:
  - Young, Pole, Early Mature, Late Mature, and Old

and the following five vegetation types:

- Pine (pine leading), White Spruce (white spruce leading), Wet (black spruce or Larch leading), Mixed wood, Deciduous

will be maintained between the following ranges for the gross and active FMA landbase:

Gross Landbase Seral Stage Targets*

Seral Stage	Low range		and	High range	
	Ha.	%		Ha.	%
Young					
Pole					
Early Mature					
Late Mature					
Old					

Contributing Landbase Seral Stage Targets*

Seral Stage	Low range		and	High range	
	Ha.	%		Ha.	%
Young					
Pole					
Early Mature					
Late Mature					
Old					

These ranges are based on the Natural Range of Variation for each seral stage as determined by the Andison LANDMINE model. A more detailed description of the NRV calculations and how they were used to inform each target will be described in the new DFMP.

ToC

2.1202 Uncommon Plant Communities

DFMP VOIT	Yes
SFI Objective#	Objective #6
ISO Objective and Target?	No
Criterion:	Criterion #1 – Conservation of Biological Diversity
SFM Element:	1.1 Ecosystem Diversity – Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally occur in the DFA
Value:	Biodiversity at the landscape scale
Objective:	Maintain plant communities uncommon in DFA or province
Indicator:	Uncommon plant communities
Target:	Apply operational procedures to conserve uncommon plant communities for 100% of known and encountered occurrences. *(This VOIT was finalized October 29, 2007)*
Acceptable variance:	± 5% from target (100% application of operational procedures) in the first 10 years of the DFMP. If the variance is exceeded, the operational procedures and controls used to ensure they are followed will be reviewed and revised to ensure conformance.
Monitoring:	Uncommon plant communities will be defined and then, when encountered, reported on annually in the Stewardship Report.

Overview

The HWP intent is to conserve uncommon plant communities on the FMA over the 200 year planning horizon as represented by selected uncommon ecological units (Natural Subregion – Ecosite – Ecosite Phase) that constitute < 1,000 ha on the FMA. See VOIT # 7 for conservation of plant species at risk.

Most uncommon plant communities on the FMA do not support merchantable forests and will not be altered by HWP activities. Conservation of both non-forested and forested uncommon plant communities will be through application of a Standard Operating Procedure (SOP) developed and applied as part of the SFM Plan for the FMA.

Biodiversity conservation includes special attention to ecosystems, species, and genes that are uncommon. Uncommon communities should be conserved to maintain ecosystem diversity and the individual species (species diversity) and genes (genetic diversity) found within the communities. Uncommon plant communities usually occur on special physical environments at the scale of the FMA, region, or province. These sites are likely to contain species and genes that are also uncommon because the environmental conditions they need are in short supply. For example, most wetlands in the FMA are bog or fen ecosites, and marsh ecosites are relatively uncommon. Therefore, some marsh plant species are also probably uncommon on the FMA.

Definitions

A. ***Plant Community*** – A plant community is as a distinct assemblage of plant species that can often be associated with particular environmental conditions and, given the right conditions, reoccurs predictably. Plant communities can be separated into three major types: terrestrial, wetland and aquatic. Aquatic plant communities are not considered in this indicator.

   For this VOIT, a plant community is a unique combination of Natural Subregion, Ecosite, and Ecosite Phase as described in the Field Guide to Ecosites of West-central Alberta (Beckingham et al. 1996). The Field Guide to Ecosites recognizes a plant community type as a subdivision of an ecosite phase, but the subdivision will not be used in this VOIT because the maximum resolution of the FMA inventory is to the ecosite phase.

B. ***Uncommon Plant Community*** – There is little guidance to define the word ‘uncommon’ in relation to this VOIT. The NatureServe global conservation status rank Apparently Secure (G4) definition is: “Uncommon but not rare; some cause for long-term concern due to declines or other factors.” (NatureServe Explorer 2014). Therefore under the NatureServe system uncommon plant communities are not the same as at risk plant communities: Critically Imperiled (G1), Imperiled (G2), and Vulnerable (G3). The NatureServe system currently only applies to global distributions and does not cover most of Canada.

Until further detail is developed through the NatureServe system, HWP will use area to define uncommon plant communities on the FMA. An uncommon plant community is a Natural Subregion/Ecosite/Ecosite Phase that occurs on the FMA and:

1. For the Lower Foothills, Upper Foothills, and Subalpine Natural Subregions, has a total area of <1,000 ha (approximately 0.1% of the FMA).
2. For the Montane Natural Subregion, has a total area of <225 ha (approximately 1.0% of the Montane).

C. ***Natural Subregions, Ecosites and Ecosite Phases*** – These terms are defined in the Field Guide to Ecosites of West-central Alberta (Beckingham et al. 1996) and mapped through the Ecological Land Classification (ELC) inventory for the FMA.

Plant communities on the Alberta Conservation Information Management System (ACIMS) that might occur or do occur on the FMA will be considered for addition to the uncommon plant community list as more knowledge is obtained.

Inventory and Analysis

Two Alberta plant community classifications are applicable to the FMA.

The west-central Alberta ecosite classification (Beckingham et al. 1996) uses Natural Subregions, Ecosites, Ecosite Phases, and Plant Community Types. Ecological landscape classification and mapping for the FMA was completed to the Ecosite Phase level in 2004 by Timberline Natural Resource Group. The FMA has portions of 4 Natural Subregions, 14 Ecosites, and 43 Ecosite Phases, for a total of 103 Natural Subregion/Ecosite/Ecosite Phase combinations (plant communities).

Based on the ELC, 28 (27.2% of total) plant communities have a total area extent of < 1,000 ha in the Upper Foothills, and Subalpine Natural Subregions or <225 ha in the Montane Natural Subregion (Table 2.1202a). The total area occupied by uncommon plant communities on the FMA is 7,469 ha.

The Nature Conservancy plant community type classification is used by the ACIMS. *Element* occurrences are tracked as point data that can be searched online using the ACIMS Data Map. Most occurrences in Alberta are poorly known and are not mapped. At present there are no linkages between the classification systems. Opportunities to link them are being explored.

Table 2.1202a – *Uncommon plant communities on the Forest Management Area*

Plant Community[1]	Ecosite	Ecosite Phase	Area (ha)
Montane-A-1	grassland	shrubby grassland	126.1
Montane-A-2	grassland	graminoid grassland	193.4
Montane-B-1	bearberry	bearberry Fd	0.3
Montane-B-2	bearberry	bearberry Pl	96.1
Montane-C-1	hairy wild rye	hairy wild rye Fd	4.8
Montane-E-1	meadow	shrubby meadow	206.4
Montane-E-2	meadow	forb meadow	52.8
Montane-F-1	horsetail	horsetail Pb-Aw	206.4
Montane-G-2	fen	shrubby fen	172.6
Montane-G-3	fen	graminoid fen	224.9
Montane-H-1	marsh	marsh	3.0
Montane Natural Subregion Total			1,286.6
Lower Foothills-A-1	grassland	shrubby grassland	121.1
Lower Foothills-B-1	bearberry lichen	bearberry/lichen Pl	204.7
Lower Foothills-C-4	hairy wild rye	hairy wild rye Sw	870.5
Lower Foothills-G-2	meadow	forb meadow	611.4
Lower Foothills-K-2	bog	shrubby bog	342.2
Lower Foothills-N-1	marsh	marsh	126.5
Lower Foothills Natural Subregion Total			2,276.5
Upper Foothills-A-1	grassland	shrubby grassland	311.0

Upper Foothills-B-1	bearberry lichen	bearberry/lichen Pl	967.7
Upper Foothills-I-1	Labrador tea/horsetail	Labrador tea/horsetail Sb-Sw	2.3
Upper Foothills-K-2	bog	shrubby bog	216.0
Upper Foothills Natural Subregion Total			1,497.0
Subalpine-A-1	grassland	shrubby grassland	256.5
Subalpine-A-2	grassland	graminoid grassland	120.0
Subalpine-C-2	hairy wild rye	hairy wild rye Pl-Aw	383.8
Subalpine-E-2	meadow	forb meadow	277.8
Subalpine-H-1	bog	treed bog	645.4
Subalpine-H-2	bog	shrubby bog	2.9
Subalpine-I-3	fen	graminoid fen	722.4
Subalpine Natural Subregion Total			2,408.8
Forest Management Area Total			**7,468.9**

[1] Format: Text-Character-Number: Natural Subregion-Ecosite-Ecosite Phase

Target and Strategy

The Target is to:

1. *Apply operational procedures to conserve uncommon plant communities for 100% of known and encountered occurrences. The operational procedures will be completed by December 31, 2006, and applied starting January 1, 2007.*

Basis for Target	Operational procedures include definition, identification, planning, and operations for uncommon plant communities. As most uncommon plant communities are non-forested ecosites, conservation will normally be identification and protection. We expect that conservation over time of forested uncommon plant communities with merchantable timber will usually involve harvest or some other form of planned disturbance on a portion of sites that support each uncommon plant community. Some types provisionally identified as an uncommon plant community (Table 2.1202a) may be uncommon only because of the restricted occurrence of the Montane Natural Subregion in the FMA. These will be reviewed in context with the Montane outside the FMA, particularly within Jasper National Park, to determine the relative degree of special management the community should receive.
Primary Strategy	Complete the operational strategies and apply them to conserve uncommon plant communities.

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Target Met ☒ **Target Not Met** ☐

The operational procedures were incorporated into the Planning Manual in 2006. Uncommon Plant Community Ecosites were defined using the criteria described above. Planning staff and contractors were instructed to look for UPC sites, exclude them from blocks, and include sites in an Uncommon Plant Community inventory layer in the GIS. Significant sites are to be reported using the Special Features form for consideration as part of the Special Features in the Forest Program.

In 2007 work commenced to develop a guidebook describing Uncommon Plant Communities that occur on the FMA (Table 2.1202a). The draft guidebook was completed in 2007, but photographs of several UPC needed to be obtained before the guidebook could be finalized. The photos were obtained in summer 2012 and the final guidebook was completed in 2013.

All blocks harvested since 2007 were designed or redesigned to protect small occurrences of Uncommon Plant Communities. HWP decided to defer additions of small UPC occurrences to the UPC inventory layer in the GIS until the UPC Guidebook was completed. UPC additions will be implemented beginning in 2014.

Monitoring and Reporting

Application of operational procedures will be reported annually in the Stewardship Report. The status of uncommon plant communities on the DFA will be summarized every 5years and reported in future Forest Management Plans.

Future Development

The wording for this VOIT will change slightly in 2014 to reflect wording agreed too between HWP and ESRD as part of the Plan Development Team process for HWP's next DFMP. The wording will be changed as follows:

- Indicator – Area or occurrence of each uncommon plant community within DFA.
- Target – Apply a Standard Operating Procedure to conserve uncommon plant communities for 100% of known and encountered occurrences (listed in Stewardship Report table and DFMP text).

Table 1202a will also be updated to reflect the current status of UPCs.

References\Associated Documentation

- Alberta Conservation Information Management System: http://albertaparks.ca/albertaparksca/management-land-use/alberta-conservation-information-management-system-(acims).aspxAlberta Native Plant Council: http://www.anpc.ab.ca/
- Beckingham, J.D., I.G.W. Corns, and J.H. Archibald. 1996. Field guide to ecosites of west-central Alberta. Special Report 9, Canadian Forest Service, Northern Forestry Centre, Edmonton, Alberta, Canada.
- Kershaw, L., J. Gould, D. Johnson, and J. Lancaster (editors). 2001. Rare vascular plants of Alberta. University of Alberta Press, Edmonton, Alberta, Canada, and Canadian Forest Service, Northern Forestry Centre, Edmonton, Alberta, Canada.
- NatureServe Explorer: URL downloaded on January 14, 2014. http://www.natureserve.org/explorer/
- Species at Risk Act, Public Registry: http://www.sararegistry.gc.ca/species/default_e.cfm

ToC

2.1203 Unsalvaged Natural Stand Replacing Disturbances

DFMP VOIT	Yes
SFI Objective#	Objective #4
ISO Objective and Target?	No
Criterion:	Criterion #1 – Conservation of Biological Diversity
SFM Element:	1.1 Ecosystem Diversity – Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally occur in the DFA
Value:	Biodiversity at the landscape scale
Objective:	Maintain unique habitats provided by wildfire and blowdown events
Indicator:	Unsalvaged natural stand replacing disturbances
Target:	1. The cumulative total area of unsalvaged natural stand replacing disturbances will be at least 25% of area disturbed based on a 20 year rolling average. 2. Apply operational procedures to address unsalvaged trees and patches at salvage planning stage.
Acceptable variance:	1. -5% 2. n/a
Monitoring:	This will be tracked and reported annually in the Stewardship Report

Overview

Natural disturbances are a key component of the ecological processes that support healthy and dynamic forest ecosystems and long term ecological integrity. In managed forests the basic strategy is to reduce the rate and amount of natural disturbances such as forest fires and use controlled harvesting to maintain overall levels of disturbance similar to what would occur naturally. This strategy recognizes that it would not be possible or desirable to eliminate natural disturbances or to salvage harvest all trees killed or damaged by natural disturbances. Balance between establishment, growth, death, and removal of trees must be maintained to support ecological resilience, which is the capacity of forest ecosystems to absorb change and recover from disturbances.

In practice, the Company attempts to prevent and suppress all forest fires and epidemic disease and insect outbreaks that could lead to large scale disturbances, and also to reduce the potential for damage caused by other natural disturbances such as wind and floods. This approach will inevitably not be completely successful, and natural disturbances will continue to occur on the FMA. This provides an “insurance policy” to support the main strategy of replacing most large scale natural disturbance with harvesting.

Application of this approach relates to three VOITs. VOIT # 1 tracks the cumulative result of natural and managed disturbance to ensure that representation of seral stages remains within the Natural Range of Variation (NRV). VOIT # 13 tracks the occurrence of natural disturbances to ensure that natural disturbances are still occurring, albeit at a reduced rate. This VOIT (#3) tracks unsalvaged natural stand replacing disturbances. This refers to the area affected by natural disturbances that is not salvage harvested, and is required to ensure that some naturally disturbed and regenerated areas are maintained on the FMA through time.

The annual allowable cut is calculated by assuming that all merchantable timber from contributing lands will be harvested. When timber is killed or damaged but not salvaged, the assumption is not met. This affects the amount of timber available for human use and it also affects the amount allocated to maintain ecological function and resilience. A significant disturbance such as a large forest fire would trigger a new annual allowable cut determination and reassessment of ecological objectives. Timber salvage supports the assumptions and analysis that determines the annual allowable cut. Salvage reduces risk of additional insect, disease, and fire occurrence, and it recovers timber value that would otherwise be lost. However, it is recognized that some dead trees must be left unsalvaged in the forest to maintain ecological function.

There are considerable ecological differences between salvaged and unsalvaged forest ecosystems, and the differences are most pronounced in the first few years following the disturbance. For this and other reasons (Lindenmayer et al. 2004) HWP will not salvage harvest at least 25% of the area affected by natural disturbance.

Definitions

A. ***Natural disturbances*** – Natural disturbances are agents that cause the death of most trees in an area. They include fire, wind (blowdown), floods, insects, disease, etc. Disturbances that damage most of the trees in a stand are called stand-replacing disturbances.

B. ***Timber salvage*** – Timber salvage is the recovery and use of merchantable timber that is damaged (killed or injured) by stand-replacing fire, insects, disease, or blowdown. Timber salvage also refers to timber that is cut on the FMA for non-Company dispositions (roads, wellsites, pipelines, mines, powerlines, etc).

C. ***Damaged timber*** – This is defined as an area ≥ 1 ha in size where most of the trees have been killed or are dying. Damaged timber does not include areas < 1 ha or individual trees that die in forest stands as a result of natural processes.

D. ***Endangered timber*** – Timber that has been damaged but not salvaged is called endangered timber because it must be salvaged before decay makes it unsuitable for forest products. The window from death to salvage to meet quality specifications is usually < 3 years.

Inventory and Analysis

HWP tracks occurrence of natural disturbances on the FMA through several processes. Area burned is tracked in the Annual Fire Statistic Summary Report prepared by Alberta Environment and Sustainable Resource Development and summary information is included in the Stewardship Report. At present, insects, disease, windthrow and other disturbances are reported on an informal basis. There have been no significant timber losses to insects and disease since records started in 1954.

Endangered timber is identified by source through ongoing inventory and survey programs. Significant occurrences are mapped and incorporated into the inventory program, and salvage is planned and approved through the planning and approval process. Harvested (salvaged) areas are reforested and tracked through the history and silviculture records system. The status of the FMA landbase is inventoried every 10 years

There is no historical data to calculate a 20 year rolling average for the first target, so the rolling average was commenced starting in 1997. The cumulative percentage of unsalvaged natural disturbances as of December 31, 2013 is 87.7% (Table 2.1203).

Table 2.1203 – *Cumulative total area of unsalvaged natural stand replacing disturbances, 1997-2013*

Event	Year	Area disturbed (ha)	Area unsalvaged (ha)	Cumulative % unsalvaged
Fire 37	1997	1,603	1,310	81.7%
1997 blowdown (multiple events)1	1997	400	200	75.4%
Fire 61	2003	459	13	61.9%
2005 blowdown (multiple events)1	2005	150	125	63.1%
Fire EWF-059-2006	2006	163	148	64.7%
Fire EWF-080-2006	2006	95.0	95.0	65.9%
Fire EWF-138-2006	2006	240.0	240.0	68.5%
McLeod 25 blowdown	2008	11.7	1.7	68.3%
McLeod 12 blowdown	2009	54.0	1.5	67.2%
2009 blowdown (multiple events)[1]	2009	181.6	181.6	69.0%
2009 hail damage (multiple events)[1]	2009	1,714	1,286.1	71.0%
2011 hail damage (multiple events)	2011	5,450.4	5,450.4	86.0%
2011 Blowdown[2]	2011	669.9	669.9	86.9%
2012 Blowdown[2]	2012	25.1	25.1	86.9%

Event	Year	Area disturbed (ha)	Area unsalvaged (ha)	Cumulative % unsalvaged
2012 Hail[3]	2012	465.0	465.0	87.4%
2013 Blowdown[2]	2013	1,327.4	1,203.0	87.7%
Total		**13,009.1**	**11,415.3**	**87.7%**

[1] The blowdown and hail damage areas reported here are approximate and include the entire extent of known events. Within the events there were portion that were not stand-replacing. The total areas associated with these events may be revised after more detailed analysis is completed and as we become aware of other disturbed areas associated with the 2009 wind and hail events.
[2] The blowdown areas reported here are approximate and include the entire extent of known events. Within the events there were portion that were not stand-replacing. The total areas associated with these events may be revised after more detailed analysis is completed and as we become aware of other disturbed areas associated with the 2011 wind and hail events. Some salvage has occurred of these events in 2011; however, a final accounting of these areas was not available at the time of this report.
[3]Hail damage in 2012 was associated with regenerated stands.

Target and Strategy (and alternate strategies)

The Target and strategies are as follows:

Target #1 *– The cumulative total area of unsalvaged natural stand replacing disturbances to be at least 25% of area disturbed based on a 20 year rolling average.*

Basis for Target	25% unsalvaged is a realistic target that can be achieved while still meeting the objective. Larger or smaller targets result in unacceptable economic, and possibly environmental, impacts.
Primary Strategy	HWP will leave unsalvaged at least 25% (based on a rolling 20 year average) of the area affected by stand-replacing natural disturbances. A salvage plan will be determined for each new natural stand replacing disturbance event targeting the timber that is least damaged and most accessible (in terms of sensitive ground, steep slopes, habitat issues, etc.), and the unsalvaged area will be added to the rolling ledger, with the goal of having at least 25% of natural disturbances remaining un-salvaged.

Target #2 *– Apply operational procedures to address unsalvaged trees and patches at salvage planning stage.*

Basis for Target	Target #1 addresses the amount of unsalvaged natural disturbances. Target #2 addresses the pattern of retention, which is an important component of biodiversity conservation. The intent is to retain residual material in patterns similar to what might be produced by natural disturbances.
Primary Strategy	The Company will develop an operational procedure for timber salvage by June 30, 2006, and apply it to all natural disturbance events that occur following that date.

2013 Annual Report

Target #1 **Target Met** ☒ **Target Not Met** ☐

There were some natural disturbance events on the FMA in both 2012 and 2013. In 2012 approximately 25 ha of blowdown was noted in 4 different events. The largest event was about 13 ha, with a mean event size of 6.3 ha. Hail damage was a bigger issue in 2012 with approximately 465 ha known to be affected in 5 events recorded. The largest area was 218 ha and the average affected area was 93 ha. These events occurred in the northern part of the FMA in the Athabasca and Berland Working Circles.
In 2013, wind events were the biggest issue. There were 14 noted wind events, damaging timber in areas ranging from 1.2 ha to 1162 ha, with the average size being 95 ha. The largest event occurred in the Marlboro 2.compartment. No hail damage events were reported for 2013.

There were several major natural disturbances on the FMA in 2012 (see Table 2.1203). There were several high wind events which damaged standing timber across the FMA, particularly on east and south-east facing slopes. The locations of these events were widespread including the Marlboro, Athabasca and Embarras Working Circles. Additionally, several hail events have been noted. The extent of the damage of these events is difficult to quantify because the impacts on forest health typically take 1-3 years to become evident.

Target #2 **Target Met** ☒ **Target Not Met** ☐

A new operational procedure was developed for the 2014 DFMP and approved at the Plan Development Team level. It has also been circulated internally and approved.

Monitoring and Reporting

Fires are currently monitored in cooperation with the Alberta government utilising fire towers, lightning detectors, aircraft and reports by people. Significant insect and disease outbreaks are mapped and inspected by the Alberta government. All HWP field personnel are expected to report sightings using the Alberta government Tree Insect & Disease Collection and Identification Form. Significant blowdown areas are monitored and accessible areas are planned and scheduled for salvage.

Reporting of this VOIT in the SFM Stewardship Report commenced with the 2004 report.

Future Development

In 2013, as part of the DFMP process, HWP developed a new operational procedure for timber salvage to make it consistent with Alberta Forest Management Directive 2007-01 Fire Salvage Planning and Operations and as part of the next Forest Management Plan.

References\Associated Documentation

- Lindenmayer, D.B., D.R. Foster, J.F. Franklin, M.L. Hunter, R.F. Noss, F.A. Schmiegelow, and D. Perry. 2004. Salvage harvesting policies after natural disturbance. Science 303:1303.

ToC

2.1204 Compliance with the Riparian-Related Sections of the OGRs

DFMP VOIT	Yes
SFI Objective#	Objective #3
ISO Objective and Target?	Yes
Criterion:	Criterion #1 – Conservation of Biological Diversity
SFM Element:	1.1 Ecosystem Diversity – Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally occur in the DFA
Value:	Biodiversity within riparian areas
Objective:	Retain ecological values and functions associated with riparian zones
Indicator:	Compliance with the riparian-related sections of the current Operating Ground Rules.
Target:	100% consistent and compliant with the DFMP Riparian Management Strategy and the Hinton Wood Products Operating Ground Rules. *(This Target and variance were amended on June 2, 2008)*
Acceptable variance:	No variance, unless authorized by AESRD
Monitoring:	Report annually.

Overview

Riparian areas are zones of direct interaction between terrestrial and aquatic environments. All riparian areas on the FMA are part of the Special Management Area landbase category. This includes the entire landform complex (watercourse channel, floodplain, terrace, hillslope, plus in some cases related upland areas). The current riparian management approach based on measured linear buffers was designed primarily to protect the aquatic environment and biodiversity from the effects of harvesting in riparian areas. Over long periods reduced or excluded disturbance rates (both fire and harvesting) would lead to riparian forests with characteristics outside their natural range of variation (NRV). This presumably would have an affect on ecological function of riparian areas and the values they conserve.

In contrast, the HWP Natural Forest Management (NFM) approach assumes that disturbance and recovery from disturbance in riparian areas is necessary to conserve the variability that maintains ecological function. Regulatory frameworks and social acceptance do not allow unrestricted fires or unconstrained emulation of fires in riparian areas, and a balanced approach must be employed to maintain variability and function within acceptable social limits. In particular, disturbance must be managed to maintain variability without compromising aquatic ecosystem values, which still have primary importance. The management challenge then is to plan and implement changes to the current riparian management approach to more closely approximate natural disturbances and patterns, while maintaining the current focus on conservation of non-timber values, and continuing to manage for a sustainable timber supply.

The overall approach described in the draft Riparian Management Strategy is to maintain ecological function by increasing the similarity between natural riparian areas and managed riparian areas. The proportion of riparian area that experiences disturbance will be increased to maintain seral stage amount and other indicators at amounts and patterns within the NRV. Targets for structure and composition variability within NRV will be adjusted to conserve the important values recognized in the traditional riparian conservation management approach. A more conservative approach will be applied to areas close to channels. Professional judgment will be used to determine appropriate management prescriptions for a given site.

Harvesting will be substituted for natural disturbance processes where it can be applied safely and economically without causing environmental damage or impairing ecological function. This will increase riparian area that experiences disturbance but it is expected that many areas will still not be suitable for harvest disturbance treatments. If necessary, other treatments (prescribed fire, mechanical brushing, etc) will be considered to ensure that these areas remain within the RNV over the long term.

Riparian area management plans will be integrated with plans for adjacent uplands as part of Final Harvest Plans. The FMA Access Strategy will be applied to minimize infrastructure footprint in riparian areas.

Detailed processes and plans for the Riparian Management Strategy will be developed as part of the NFM Implementation Plan and incorporated into the Planning Process, which includes the Forest Management Plan and the Operating Ground Rules. Monitoring results will be reported in the SFM Stewardship Report. As

additional detail and direction is developed, the Riparian Management Strategy overview document will be revised.

Definitions

A. ***Riparian areas*** – These are zones of direct interaction between terrestrial and aquatic environments. All riparian areas on the FMA are part of the Special Management Area landbase category. This includes the entire riparian landform complex (watercourse channel, floodplain, terrace, hillslope, plus in some cases related upland areas).

B. ***100% consistent and compliant with the DFMP and the Hinton Wood Products Operating Ground Rules*** – For the purposes of this indicator, 100% consistent will mean no contraventions during the calendar year of sections 6, 7.5, and 11 deal of the 2011 Operating Ground Rules.

Inventory and Analysis

Riparian areas were delineated as part of the 1999 DFMP. The Company contracted Pearson Timberline Forestry Consultants (1996) to identify and map watercourse SMA corridor perimeters on all permanent FMA watercourses that could be seen on 1:15,000 aerial photographs (approximately 4,000 km of linear corridors). The SMA corridors were then classified for operability sensitivity (Table 2.1204a).

Table 2.1204a – *Watercourse SMA Operability Sensitivity Rating and Areas*

Operability Sensitivity Rating Area (ha)				
High (buffers)	High (inventory)	Medium	Low	Total
6,586	45,003	15,950	9,830	77,369

Target and Strategy

The Target is:

1. *100% consistent and compliant with the DFMP Riparian Management Strategy and the Hinton Wood Products Operating Ground Rules.*

Basis for Target	The target is worded to support continued application of the riparian management provisions of the new (2011) Operating Ground Rules and future revisions related to development and implementation of the Riparian Management Strategy, which is still in progress. In practice HWP started to apply the Riparian Management Strategy on a case by case basis in 2003. This includes operations and research trials and demonstrations of the new approach and standard planning and operations practices. We are planning to have the new Riparian Management Strategy fully developed and implemented in conjunction with the next (2014) DFMP and associated revision of the Operating Ground Rules.
Primary Strategy	Apply the riparian related measures found in the Operating Ground Rules. Variance requests can still be made on a case-by-case basis. Continue to develop the Riparian Management Strategy and incorporate it into the next 2014 DFMP and OGR.

2013 Annual Report **Target Met** ☐ **Target Not Met** ☒

There was one incident that specifically contravened the riparian related sections (sections 6.0, 7.5 and 11.4) of the Operating Ground Rules (OGR); therefore this target was not met.

Table 2.1204b – *OGR Riparian-Related Incidents, January 1, 2013 – December 31, 2013*

HWP Event #	Date Reported	Type	Description	Effect[1]
1112-0140	Jan 29, 2013	HWP – Watercourse crossing variance	See incident 1112-0137. Block was self-reported due to inadequate buffer. ESRD identified concern with bridge when they went to inspect buffer. ESRD took pictures on 28 Nov 2012. ESRD concern was that logs were placed in the watercourse. Bridge was pulled on 13 Dec 2012. ESRD staff was on site when work commenced however were not present when the crossing was removed. Installation of crossing during non-frozen period likely contributed to this issue. Subsurface flow may have been impeded, resulting in the upstream pooling of water observed be ESRD. ESRD reported that stream returned to normal flow levels and location. No environmental damage was noted.	High

[1] Environmental effect of event - subjective rank.

Any incident that occurs is thoroughly investigated by HWP staff and a corrective action plan is developed for each incident. This action plan is then referred to HWP's Stewardship Committee, who further reviews the plan and add on any additional action items that they think may be necessary to prevent a reoccurrence. This action plan is then reviewed by the Woodlands Manager, who might further amend the plan. Once the Woodlands Manager has signed off on the incident and its corrective plan, those action items begin to be implemented by staff.

The following is a summary of the correction actions taken to address the one incident (#1112-0140) noted above in Table 2.1204b.

Corrective Actions

As part of HWP's commitment to continual improvement, and in order to try to prevent similar incidents from occurring in the future, the following action items for this incident were developed, and have been, or are in the process of being, implemented:

Incident #1112-0140
- Remove bridge
- Complete a joint inspection with ESRD

There were three other environmental related incidents reported in 2013 that didn't contravene the riparian-related sections of the OGR's, but were environmental related incident none-the-less and are described and dealt with in section 2.2237 (VOIT # 37 – Non-Compliance Incidents) of this Stewardship Report.

Monitoring and Reporting

Non-compliance with the Operating Ground Rules is also tracked through VOIT # 37. Any non-compliance incidents related to riparian management will also be reported under this VOIT. We will also report progress on development and implementation of the new Riparian Management Strategy.

Non-compliance incidents are identified through these processes:
- All Woodlands personnel and contractors are expected to report non-compliance incidents encountered during regular work.
- Woodlands inspections and inventory programs
- External regulator audits (see section 6) – e.g. Alberta government, Department of Fisheries and Oceans Canada, ARIS, etc.)
- Third party certification audits (see section 10)

- Internal compliance audits (see section 11)

Future Development

HWP remains committed to developing and implementing the draft Riparian Management Strategy as part of the next DFMP. Considerable work to analyze and compare the existing distance-based Alberta approach and the proposed HWP approach will occur by 2014.

References\Associated Documentation

- NDP Information Session 2009 - Disturbance Dynamics in Foothills Riparian Zones
- NDP Quicknote #11: Do Riparian Zones Influence Landscape Burning Patterns? November 2001
  NDP Quicknote #12: Do Riparian Zones Influence Local Burning Patterns? January 2002
- Disturbance in Riparian Zones on Foothills and Mountain Landscapes of Alberta -- February 2002
- Pearson Timberline Forest Inventory Consultants. 1996. Watercourse identification project. Pearson Timberline Forest Inventory Consultants, Edmonton, Alberta, Canada.
- Weldwood of Canada Ltd. 1999. Forest Management Plan, Weldwood Forest Management Agreement. Volume 1 and Volume 2. Weldwood of Canada Ltd., Hinton, Alberta, Canada.
- Weldwood of Canada Ltd. 2002. Operating Ground Rules. Weldwood of Canada Ltd., Hinton, Alberta, Canada.
- Weldwood of Canada Ltd. 2003. Riparian Management Strategy Draft 2. Weldwood of Canada Ltd., Hinton, Alberta, Canada.

ToC

2.1205 Special Features

DFMP VOIT	Yes
SFI Objective#	Objective #6
ISO Objective and Target?	No
Criterion:	Criterion #1 – Conservation of Biological Diversity
SFM Element:	**1.4 Protected Areas and Sites of Special Biological Significance** – Respect protected areas identified through government process. Identify sites of special biological significance within the DFA and implement management strategies appropriate to their long-term maintenance
Value:	Sites of special biological significance
Objective:	Protect and maintain the integrity of rare ecological sites, sensitive sites, and special landscape features.
Indicator:	Special Features
Target:	Identify and document any special features found through HWP's Standard Operating Procedures (Special Features SOP & Form – EM-0054) and Special Places in the Forest Program - develop a management strategy for each identified site within 12 months.
Acceptable variance:	0%
Monitoring:	Reported on annually in the SFM Stewardship Report.

Overview

The objective is to protect and maintain the integrity of rare ecological sites, sensitive sites, and special landscape features. The HWP Standard Operating Procedures for identifying special features and our Special Places in the Forest Program address this Objective. The public can nominate special features for conservation, protection or special management. As this is a management activity indicator, there is no forecast.

Definitions

A. ***Special Feature*** **–** A special feature is any rare or unusual natural feature (usually small in area) on the Forest Management Area (FMA), such as a rare ecological site, a sensitive site or a special landscape feature. Some examples of special features are tufa springs, waterfalls, caves, mineral licks, stick nests, den sites, rock outcrops/talus slopes, and unique landforms, such as glacial erratics. These sites should be protected or carefully managed because they are rare and difficult to replace. Below is a more detailed explanation of various types of special features found on the Hinton FMA:

- **Tufa Spring** – Tufa springs are most often found around hot-springs. Tufa deposits are lumpy, spongy-looking masses of a chemical sedimentary rock composed of calcite. When the water from the spring reaches the surface, dissolved carbon dioxide escapes, reducing the water's capacity to hold calcium carbonate in solution, so tiny crystals form. These accumulate as the tufa deposit.
- **Glacial erratic** – An erratic is a piece of rock carried by glacial ice some distance from the rock outcrop from which it came. Erratics can range in size from pebbles to massive pieces such as the Okotoks and Airdrie erratics. The Foothills Erratics Train is a long series of erratics, of many sizes, stretching in a narrow belt for about 400 miles from the Athabasca River Valley to south-western Alberta. The rock type of the erratics is different to the underlying bedrock in the places where they are now found and indicates that they were probably derived from a rock outcrop in the Mount Edith Cavell area of Jasper National Park.
- **Hoodoo formation** – These unique columns and outcrops are created when strong winds attack the face of sandstone bluffs, eroding away the softer layers, leaving larger caps of harder stone atop narrow columns of softer substrate or protruding from the side of the hill.
- **Mineral Lick** – This is a mineral deposit or spring that animals regularly lick or drink. In an ecosystem, salt/mineral licks sometimes occur naturally, providing the sodium, calcium, iron, phosphorus and zinc required in the springtime for bone, muscle and other growth in deer and other wildlife. Mineral licks can draw animals from miles away for a taste of needed nutrients.

B. ***Special Features SOP & Form (EM-0054)*** **–** When a special feature is discovered, the Company follows an internal Standard Operation Procedure (SOP) to describe the feature and develop a protection or special management prescription. The intent of this SOP is to ensure that special features identified during Company

activities (such as planning, operations, silviculture, etc.) are reported and appropriate actions are taken to record and protect the feature where required. Depending on how unique the special feature is, it may be incorporated into the Company's Special Places in the Forest Program.

C. ***Special Places in the Forest Program*** – The Company also encourages public reporting of candidate special features through our Special Places in the Forest Program. The Special Places in the Forest Program recognizes that there are unique sites within our working forest and that these areas need to be managed in a special way. Some of these areas are protected, while others are specially managed for such values as wildlife, watersheds, aesthetics, recreation, education, geology, timber and cultural or historical significance. The four components of the Special Places in the Forest program are: protected areas, educational areas, cultural and historical areas, and special management areas and special features. Some of these components are further subdivided (see figure 2.1205a).

Part of the Special Places in the Forest program is the identification of "special features", which are defined as any rare or unusual natural feature (usually small in area) on the FMA. Under the Special Places in the Forest program, the public is encouraged to nominate special features for protection. The process for nominating special features is outlined on our website (there is a nomination form on Hinton Wood Products' website).

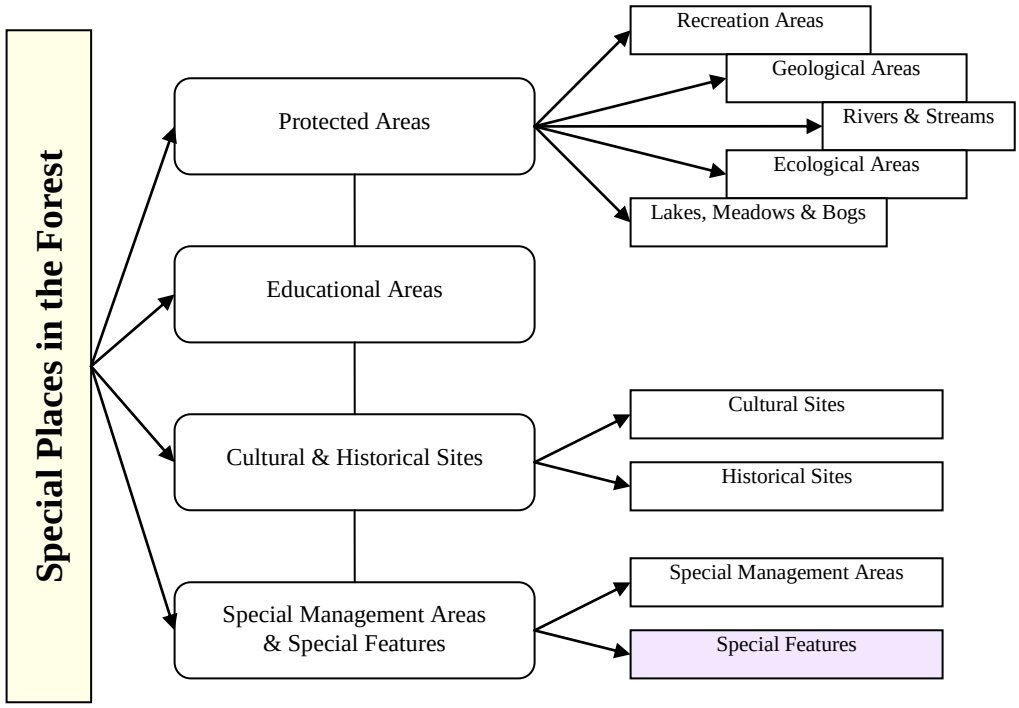

Figure 2.1205a – *Components of Hinton Wood Products' Special Places in the Forest Program*

For a more detailed explanation of the Special Places in the Forest Program, follow the "Sustainable Forest Management" link found on the front page of HWP's website at www.westfraser.com/hintonforestry.

Inventory and Analysis

Table 2.1205b outlines the current status of special features on HWP's FMA.

Table 2.1205b – *Summary of known Special Features as of December 31, 2013*

Site ID Number	Description of Special Feature	Special Places in the Forest (Yes/No)
GESF0063	Large glacial erratic	Yes
GESF0068	Glacial erratic	Yes
GESF0069	Glacial erratic	Yes

Site ID Number	Description of Special Feature	Special Places in the Forest (Yes/No)
GESF0098	Glacial erratic – (large rock deposited by a glacier when it moves or melts).	No
HFSF0060	Sandstone hoodoo formation	Yes
HFSF0061	Sandstone hoodoo formation	No
HFSF0099	Hoodoo Formation	Yes
MLSF0117	Large Mineral Lick	Yes
OTCA0119	Cave	No
SFWF0096	Waterfall/Hoodoo in steep canyon draw	No
TSSF0061	Tufa spring	Yes
TSSF0062	Tufa spring	Yes
TSSF0065	Tufa spring	Yes
TSSF0066	Tufa spring	Yes
TSSF0067	Tufa spring	Yes
TSSF0097	Tufa spring – not extensive	No
TSSF0098	Very large tufa spring	No
TSSF0112	Tufa Spring	Yes
TSSF0113	Tufa Spring	Yes
TSSF0114	3 Tufa Springs	Yes
TSSF0118	Tufa Spring	No

Inventory and status of legislated protected areas and some policy-protected areas is available from Alberta government land disposition records. These areas have been removed from the FMA landbase (e.g. Provincial Parks) or recognized through other processes (e.g. Operating Ground Rules). In addition, the Woodlands Department identified all lands within the FMA landbase that would be designated as non-contributing (no timber management) or special management areas (e.g. water buffers) for the 2010 MPB Plan (an amendment to the 1999 DFMP). Table 1205c outlines the landbase allocation being submitted for ESRD's approval as part of the 2010 MPB Plan (technically a DFMP amendment). This will be updated with the submission of HWP's next DFMP (scheduled for submission in 2014).

Table 2.1205c – *1999 versus 2010 HWP FMA Landbase*

Landbase Category	FMA 1999 (ha) 10/8 UtSt*	FMA 2010 (ha) 15/11 UtSt**	FMA 2010 (ha) difference
Total Landbase within the FMA Perimeter	*1,038,564*	*1,034,067*	*-4,497*
Not part of the FMA but within the perimeter (e.g. town-sites, parks, mines, etc.)	*36,093*	*45,293*	*+9,200*
Non-Forested Area Reductions (e.g. rock, swamp, lakes, etc.)	*65,909*	*49,991*	*-15,918*
Dispositions and Other Area Removals (e.g. well sites, gas lines, etc.)	*22,044*	*23,303*	*+1,259*
Seismic Lines	*16,144*	*13,569*	*-2,575*
Ecosite Deletions (e.g. Non-Operational Ecosites, Wet Site, Black Spruce Composition ≥ 80%, etc.)	*119,083*	*197,217*	*+78,134*
Water course buffers	*53,648*	*16,737*	*-36,911*
Steep Slopes (e.g. slopes too steep to harvest)	*10,303*	*37,794*	*+27,491*
Total Deletion Area (ha)	***323,224***	***383,904***	*+60,680*
Total Contributing Landbase (ha)	***715,341***	***650,163***	*-65,178*

* This landbase calculation was based on a stands being utilized down to a 10 centimetre butt and 8 centimetre top.
**This landbase calculation was based on a stands being utilized down to a 15 centimetre butt and 11 centimetre top.

Target and Strategy

The target for this VOIT is:

1. *To identify and document special features through HWP's Standard Operating Procedures (Special Features SOP & Form – EM-0054) and Special Places in the Forest Program, and then develop a management strategy for each identified site within 12 months.*

Basis For Target:	While the provincial government has the overall mandate to identify Crown land worthy of protection and to protect these areas through legislation, there are also opportunities for companies working on the landscape to identify and protect smaller features of biological, ecological, or geological significance. Hinton Wood Products has a number of procedures, as well as our Special Places in the Forest Program, that have been developed to identify and protect special features found on the FMA.
Primary Strategy:	The primary strategy to implement this target is to ensure staff are aware of the procedures to take when a special feature of any kind is discovered. In addition, the public has been made aware through brochures (located at all of our campgrounds), as well as information on our website, that they can also nominate special places for protection. The management strategies may range from "business as usual", to special management, to complete protection.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

In 2013, there were no special features discovered on the Hinton FMA by HWP staff. Also in 2012, HWP was not made aware of any special features discovered by the public.

Table 2.1205d – *Special Features recorded in 2013*

Site ID Number	Description of Special Feature	Special Places in the Forest (Yes/No)	Management Strategy
n/a	n/a	n/a	n/a

In the past five years there has been only one special feature identified by HWP staff. This is not particularly surprising because HWP's planning focus has switched to compartments that are primarily 2nd pass – this means that they have already had one pass of timber removed and have had an approved compartment operating plan. It is less likely to find special features in compartments like these (2nd pass) because they probably would have been discovered during the original lay out.

Monitoring and Reporting

The status of Table 2.1205b and Table 2.1205d will be updated and reported on annually in the SFM Stewardship Report. A brief summary of the management strategy for each special feature will also be described in the SFM Stewardship Report.

Future Development

No future development of this VOIT is planned at this time.

References

- Special Places in the Forest – VIP Brochure with CD
- Special Places in the Forest—A Strategy for Hinton Forest Resources

ToC

2.1206 Non-HWP Water Crossings

DFMP VOIT	Yes
SFI Objective#	Objective #3
ISO Objective and Target?	Yes
Criterion:	Criterion #1 – Conservation of Biological Diversity
SFM Element:	1.2 Species Diversity – Conserve species diversity by ensuring that habitats for the native species found in the DFA are maintained through time that naturally occur in the DFA.
Value:	Biodiversity at the local/stand scale
Objective:	Maintain aquatic biodiversity by minimizing impacts of water crossings
Indicator:	Non-HWP watercourse crossings
Target:	Participate in the Foothills Stream Crossing Partnership.
Acceptable variance:	0% - the Company will participate
Monitoring:	Work undertaken as part of the SCG will be reported on annually in the Stewardship Report.

Overview

Forest management activities have both direct and indirect impacts on water quality, which in turn affects aquatic ecosystems. Impacts increase with amount of disturbance in a watershed basin and the effects are more pronounced in smaller basins. Impacts occur in response to natural disturbances (e.g. forest fire) and management activities (e.g. roads and harvesting). Roads and stream crossings play a critical role in allowing road access into areas for resource management activities. If installed to older standards or not properly maintained, stream crossings can impact fish habitat and movement through crossings or can become safety issues. A large network of permanent roads exist on the HWP FMA that are owned by various companies and organizations including forestry, oil and gas, railways, AB Transportation, County and local Municipalities. Aquatic systems such as lakes and rivers are interconnected and pose a complex management problem as the activities influencing the watercourse in one area can impact other areas within the watershed.

Definitions

A. ***Watercourse crossing*** – A watercourse crossing is any structure such as a culvert, bridge, etc. used to provide access across a water body.
B. ***Foothills Research Institute*** – The Foothills Research Institute (FRI) is a unique partnership dedicated to providing practical solutions for stewardship and sustainability on Alberta forest lands. The mandate of the FRI is to have their research reflected in on-the-ground practice throughout Alberta and elsewhere in Canada, where applicable, incorporated in forest and environmental policy and changes and widely disseminated to and understood by a broad spectrum of society. The overall result will be a solid, credible, recognized program of science, technology, demonstration, and outreach. More information on the FRI including results of their research can be found on their website at www.foothillsresearchinstitute.ca.
C. ***Foothills Stream Crossing Partnership*** – The Foothills Stream Crossing Partnership is a group of organizations with responsibilities for stream crossing on the FMA. The FSCP members have a common purpose of repairing and re-mediating all stream crossings (for which they have responsibility) to current standards. This organization is coordinated through the FRI.

Inventory and Analysis

The locations of potential non-HWP stream crossings have been mapped by overlaying the road layer with the hydrography layer to provide an estimate of crossing numbers by owner. This will assist in the budget process for assessing the amount of infrastructure and field sampling that will be required for monitoring. A centrally housed database at the Foothills Research Institute (FRI) will contain the data for the project and can be combined with other information from the FRI fish and aquatic program for more detailed analysis. For example, crossing performance compared with fish habitat models that predict bull trout occurrence.

Target and Strategy

The Target and strategies are as follows:

1. *Participate in Foothills Stream Crossing Partnership (FSCP).*

Basis for Target	Participating in the FSCP will provide a standardized approach to assessing performance in the majority of crossing sites in the FRI Area. A coordinated effort between crossing owners to prioritize repairs can also be undertaken. The long term strategy is to have all owners of crossings on the FMA join the program and have a standardized inspection process for evaluating stream crossing performance.
Primary Strategy	Participate in the Foothills Stream Crossing Partnership.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

Hinton Wood Products' continues to be a member of the Foothills Stream Crossing Partnership (FSCP). FSCP meetings number three to four per calendar year usually with at least one field tour to look at various crossing structures.

The program leads, along with the co-chairs continue to engage in discussions with FMA and disposition holders beyond the Hinton FMA boundaries in order to recruit members and expand its membership. Current member companies are Apache, Canfor, CNRL, Coal Valley, Conoco, Devon, Shell, Talisman, Tourmaline and West Fraser..There has been an on-going effort to recruit all crossing owners into the program, so when land sales occur; there is an even greater effort to ensure that those areas historically covered by the program will continue under new ownership. As in past years, the federal government (Department of Fisheries and Oceans), Alberta Environment Sustainable Resource Development, Foothills Research Institute, Alberta Chamber of Resources, and Alberta Infrastructure and Transportation continue their participation as support members.
The FSCP has also been engaging in discussions with government officials and the Assistant Deputy Minister (AESRD) to seek endorsement for the program and find a solution which benefits both the government and the crossing owner.
Major FSCP Milestones to Date:

- 2005/2006– Developed Stream Crossing Manual and completed just over 300 field inspections
- 2007– Developed a collaborative watershed management strategy for two basins (Pine Creek and Nose Hill) to test cooperative remediation process
- 2008– Inspected all crossings and collected baseline fisheries data in test basins
- 2009- Remediated 52 crossings and completed all member crossing inspections
- 2010 – Developed 6 priority watershed plans and expanded to the Caribou Zone.
- 2011 – Developed a new data system which replaced data loggers with tablets, added Wi-Fi capability and online access to members
- 2012 – Completed 365 initial inspections and re-inspections in an area stretching from Pincher creek to Grande Prairie. Remediation planning was moved to the FSPC's new online planning tool which tracks planned and completed remediation. More electro-shock sampling of watersheds for fish presence was completed to better understand fish population dynamics.
- 2013 – FSCP data management system improvements made emphasizing operational planning and reporting and bringing more value to its members. FSCP program leads and co-chairs meet with the Assistant Deputy Minister.

In addition, in 2013 the FSCP trained an aboriginal crew from The Aseniwuche Environmental Corporation (AWN) based out of Grande Cache to conduct crossing inspections in the Grande Cache region in the hope of providing greater efficiency.

Monitoring and Reporting

Specific information on individual crossing performance will be held by the owner of the crossing. Results will also be available to report in the HWP annual stewardship report.

Future Development

In 2013 the FSCP identified system improvements with strong emphasis on operational planning and reporting. Some of the key improvements included:

- Standardized unique crossing identifier system based on the legal location description
- New crossing types (ephemeral, cross-drains, ROW [pipeline] crossings)
- Simplify/reduce requirements for re-inspections
- Incorporate ability to capture task based remediation planning and actual reporting.
- Incorporate functionality for authorized users to edit ownership and road ID
- Incorporate ability for members to define re-inspection timing.
- Incorporate crossing map.
- Incorporate crossing proximity functionality for inspections.

The FSCP continues to work on the development of the data management system by incorporating new functionality to streamline inspections and facilitate operational planning of remediation activities as well as reporting functionality.

The FSCP work plan for the 2014 field season will focus on several key areas: inspections, re-inspections and electro-fishing for members; contract work for members outside of the working area, and training.

References\Associated Documentation

- FRI Fish and Aquatic Program – www.foothillsresearchinstitute.ca

ToC

2.1207 Company Watercourse Crossings

DFMP VOIT	Yes
SFI Objective#	Objective #3
ISO Objective and Target?	Yes
Criterion:	Criterion #1 – Conservation of Biological Diversity
SFM Element:	1.2 Species Diversity – Conserve species diversity by ensuring that habitats for the native species found in the DFA are maintained through time that naturally occur in the DFA.
Value:	Biodiversity at the local/stand scale
Objective:	Maintain aquatic biodiversity by minimizing impacts of water crossing and protecting water quality
Indicator:	Company watercourse crossings
Target:	1. Implement and be in compliance with the Company's Stream Crossing Program and water crossing SOPs; and be in compliance with the provincial government's Code of Practice for Water Course Crossings, and compliance with the Fisheries Act (Federal). 2. Remediate Company stream crossings (old and new) not meeting current standards (Safety, Fish Passage (on fish streams), Erosion, and Functionality) on watercourses according to the annual action plan.
Acceptable variance:	1. 0% 2. 5%
Monitoring:	Measured using existing monitoring programs (streams crossings program, block inspection program, roads maintenance program, roads monitoring program). Information from the monitoring programs will be summarized by category as part of the annual Stream Crossings Report. Data collected through the SCG will also be available for the annual stewardship report.

Overview

Forest management activities have both direct and indirect impacts on water quality, which in turn affects aquatic ecosystems. Impacts increase with amount of disturbance in a watershed basin and the effects are more pronounced in smaller basins. Impacts occur in response to natural disturbances (e.g. forest fire) and management activities (e.g. roads and harvesting). Roads and stream crossings play a critical role in allowing road access into areas for resource management activities. Older crossings installed to different standards or not properly maintained stream crossings can impact fish habitat and movement through crossings and can become safety issues. Old stream crossings and new installations can be tracked separately for management purposes.

Definitions

A. Watercourse crossing – A watercourse crossing is any structure such as a culvert, bridge, etc. used to provide access across a water body.

Crossings of watercourses with a channel and sandy/rocky bottom (i.e. permanent creeks) are assessed and rated according to the following categories:

- Satisfactory: Safety, Fish Passage, Erosion and Functionality all meet the current standard for watercourse crossings
- Non-Satisfactory: One or more of the above stated factors fails to meet the current standard for watercourse crossings

Crossings assessed as being Non-Satisfactory will be given a High, Medium, or Low priority of repair based on a risk assessment comparing frequency of occurrence vs. severity of occurrence. High and Medium priority issues will be dealt with promptly while low priority issues will be monitored for status changes and repaired as resources permit.

B. Fish passage – This refers to the ability of any fish that frequent a waterbody to pass through the crossing structure both upstream and downstream under all baseline flow conditions.

Inventory and Analysis

A stream crossing inspection program was initiated in 1995. Data for a large number of crossings (over 1500 of both Hinton Wood Products-owned and non-HWP crossings) are currently housed in the West Fraser Mills GIS system called "The Forest Manager" (TFM). Significant repair actions for each crossing are also recorded digitally and tracked in the database. Information from the inspections is used to develop the annual repair plan and long-term capital plans. Additional data from the FRI fish and aquatic program such as basin reports as well as data collected as part of the FSCP are also used in the planning process.

Future developments will eventually see all WFM stream crossing data residing in the Foothills Stream Crossing Partnership (FSCP) Data Management System. The FSCP system will provide data consistency through built in data validation processes and system functionality to facilitate remediation planning and reporting.

Target and Strategy

The Targets and strategies for this Indicator are:

1. *Implement and be in compliance with the Company's Stream Crossing Program and water crossing SOP's; and be in compliance with the provincial government's Code of Practice for Water Course Crossings, and compliance with the Fisheries Act (Federal).*

Basis for Target	Implementation and compliance will maintain aquatic biodiversity by minimizing impacts of water crossings and protecting water quality.
Primary Strategy	Implement and be in compliance with the Company's Stream Crossing Program and water crossing SOPs; and be in compliance with the provincial government's Code of Practice for Water Course Crossings, and compliance with the Fisheries Act (Federal).

2. *Remediate Company stream crossings not meeting current standards (safety, erosion, Fish Passage (on fish streams), Erosion, and Functionality) on watercourses according to the annual action plan.*

Basis for Target	Remediation of crossings not meeting current standards will maintain aquatic biodiversity by minimizing impacts of water crossings and protecting water quality.
Primary Strategy	Maintain the stream crossings inspection system and develop and implement a strategic and annual remediation plan for crossings not meeting current standards.

Best management practices will be applied, performance monitored and stewardship training for installation techniques for watercourse crossings will be incorporated in forest management activities. As part of the annual spring training program, HWP staff and contractors take part in forest stewardship awareness with particular attention to best practices regarding stream crossings and road maintenance.

The results of the annual inspection and repair plan are presented in this Stewardship Report. Capital plan crossings that have been repaired will also be tracked in the report. Any Non-Satisfactory stream crossings scheduled for remediation but not fixed in the current year, will be the highest priority in the subsequent year.

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Target #1 **Target Met** ☒ **Target Not Met** ☐

Inspections and repairs are still on-going. In several cases, there are known “problem crossings” such as hanging culverts that prevent fish passage (a non-conformity with the Fisheries Act), however HWP cannot fix them all in one year so these crossings are being repaired or replaced as time and resources permit.

HWP currently owns approximately 1,878 existing crossings on channeled watercourses and approximately 2882 cross-drains that are currently monitored through the TFM database based on a risk assessment protocol. There are also numerous other crossings owned by non-HWP companies that are stored in the database but are not an active part of the crossing inspection program.

During the summer of 2013, a total of 1127 watercourse crossings were inspected, 1109 by trained in-house staff and 18 by professional engineers. Table 2.1207a provides a summary of the stream crossing inspections by year.

Table 2.1207a - Stewardship Report - Crossing Inspection Program								
	Hinton FMA				Edson FMA			
	Culverts	Bridges	Other	Engineered	Culverts	Bridges	Other	Engineered
2013	823	124	6	17	153	3	0	1

Inspection findings are then prioritized based on severity and planned for subsequent remediation along with other past issues.

Target #2 **Target Met** ☒ **Target Not Met** ☐

During 2013, the annual stream crossing remediation program addressed 3 major/capital projects, 36 repairs/new installs, and numerous maintenance activities to address localized erosion, drainage and wear and tear issues. Incomplete activities planned for 2013 will be planned again for 2014.

Monitoring and Reporting

The application of best management practices will be measured using existing monitoring programs (stream crossing program, FSCP, environmental reporting). Information from the monitoring programs will be summarized by category as part of the annual stream crossing report.

Future Development

2014 will be the first year in which all WFM inspections will be collected on android tablets and the data synchronized wirelessly into the FSCP system. Future stream crossing inspections, remediation planning and reporting will be generated from the FSCP system.

References\Associated Documentation

- The Forest Manager (TFM)
- Foothills Stream Crossing Partnership (FSCP)
- 2001 Terms of Reference for the Company Stream Crossing Program.

ToC

2.1208 Provenances and Genetic Lines in Gene Banks and Trials

DFMP VOIT	Yes
SFI Objective#	Objective #2
ISO Objective and Target?	No
Criterion:	Criterion #1 – Conservation of Biological Diversity
SFM Element:	**1.3 Genetic Diversity** – Conserve genetic diversity by maintaining the variation of genes within species.
Value:	Genetic integrity of natural tree populations
Objective:	Conserve wild forest genetic resources through gene archiving.
Indicator:	Provenances and genetic lines in gene banks and trials
Target:	Active conservation program for all species on the FMA that have a tree improvement program.
Acceptable variance:	0%
Monitoring:	Conservation activities identified in DFMP as per Standards for Tree Improvement in Alberta

Overview

The objective of this Indicator is to ensure that genetic diversity of tree species with tree improvement programs is maintained. The intent is that for locally adapted material utilized in every breeding region where HWP intends on participating in a tree improvement program, provisions will be made for archival of provenances, and arrangements made of gene archive made of superior genotypes by seed (in storage or in plantations) and by vegetative archive (cuttings in a breeding orchard, operational orchard or other gene archive). The FGRMS-Alberta Forest Genetic Resource Management And Conservation Standards-May2009 (formerly known as Standards for Tree Improvement in Alberta" (STIA)") establishes the Provincial standards for Material Collections, Handling, Registration and Storage (MCHRS) of cone, seed and cuttings. STIA also sets standards for genetic research plantings in the Green Area Deployment section (see Standard 23). The Breeding Testing and Verification (BTV) Standards also set the parameters for Genotype Information and Pedigree Records and for *Ex Situ* Conservation of Native Species (Standards 26, 27 and 29).

Definitions

A. ***Breeding Region*** – A geographic area, defined mainly by adaptation criteria for which materials are selected, bred, tested, multiplied and deployed.
B. ***Collections*** – Genetic material gathered for the purposes of reforestation, breeding or research.
C. ***Controlled Parentage Plan*** – A stock production program that includes in its population a finite number of deliberately chosen individuals.
D. ***Ex situ conservation*** – Transfer of organisms (e.g. a tree) from one site (e.g. the wild) to another site (e.g. seed banks, test sites) for the purpose of maintenance or breeding as a means of conserving the organism
E. ***Gene archive*** – A place where material for a genotype is kept for use in ex situ conservation work.
F. ***Genetic Diversity*** – The genetic variability with a population of species.
G. ***Genotype*** – the genetic identity or constitution of an individual. Physical material in the form of plant tissue, provides the medium for storage and transmission of a genotype.
H. ***Locally Adapted Material*** – Material from, or derived from, the seed zone or the breeding region in question
I. ***Pedigree*** – A record of parentage, sometimes also including data on the performance of parents or other relatives.
J. ***Provenance*** – The region or geographical source where trees were originally found and is native, and where its genetic constitution has developed through natural selection in between periods of glaciation.
K. ***Registration*** – A Provincial process that allows a seed or vegetative lot to be used for deployment.
L. ***Seed zone*** – - A geographic area that the seed is collected from, defined on the basis of ecological characteristics and genetic information as set by the Province.
M. ***Tree Improvement Program*** – Hinton Wood Products' tree improvement program is a program that improves stand performance through breeding and genetic testing. The overall goal is to use seed from genetically superior trees to grow seedlings, which would then be planted on Hinton Wood Products' Forest Management Agreement area. These seedlings would have superior genetic traits that give them advantages such as increase growth, insect and disease resistance, and superior milling qualities. It is important to note that these trees have not been genetically engineered.

Inventory and Analysis

At this time Hinton Wood Products is active in four tree improvement programs that propose to deploy improved seed over the FMA. These include:

- Lower elevation white spruce (Breeding Region I)
- High elevation lodgepole pine (Breeding Region B2)
- Lower elevation lodgepole pine (Part of Breeding Region A or West Fraser Pine Population)
- Low elevation black spruce (Breeding Region L1)

Target and Strategy

The Target under this Indicator is:

1. *Active conservation program for all species on the FMA that have a tree improvement program.*

Basis for Target	The basis for this Target is to ensure that the genetic diversity of tree species within tree improvement programs is maintained.
Primary Strategy	The Target and Strategy are the same

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

Hinton Wood Products has active conservation programs for all species on the FMA that have a tree improvement program.

Monitoring and Reporting

Active Breeding Region Work Plans and Controlled parentage plans include an inventory of seed banked, representation in tests, breeding orchards, operational orchards and other gene archive locations where applicable for each genotype.

Future Development

All Breeding Region Work Plans will eventually convert to Controlled Parentage Plans as set out in the Alberta Forest Genetics Resource Management and Standards. Region A population being expanded to include more material from adjacent FMA's and more tests. The "standards" are up for revision in 2014.

References\Associated Documentation

- Alberta Forest Genetic Resource Management and Conservation Standards – Alberta Environment Sustainable Resource Development (May 1, 2009)

ToC

2.1209 HWP Participation in Consultative and Integrative Processes

DFMP VOIT	Yes
SFI Objective#	Objective #17
ISO Objective and Target?	No
Criterion:	Criterion #1 – Conservation of Biological Diversity
SFM Element:	**1.4 Protected Areas and Sites of Special Biological Significance** – Respect protected areas identified through government process.
Value:	Areas with minimal human disturbances within managed landscapes
Objective:	Integrate trans-boundary values and objectives into forest management
Indicator:	HWP participation in consultative and integrative processes
Target:	Follow existing consultative and integrative processes: 1. Forest Resources Advisory Group (FRAG) 2. Final Harvest Plan process *(changed in 2010, from Compartment Operating Plan process)* 3. FRMA Recreation Program 4. West Yellowhead Mountain Pine Beetle Coordinating Committee 5. FireSmart 6. Long Term Access Plans
Acceptable variance:	0%
Monitoring:	Reported on annually in the SFM Stewardship Report.

Overview

The objective of this Indicator is to integrate trans-FMA boundary values and objectives into forest management planning. The Hinton Forest Management Area (FMA) sits adjacent to two large protected areas – Jasper National Park and the Willmore Wilderness Area. Smaller protected areas within and adjacent to the FMA include Switzer Provincial Park, Sundance Provincial Park, Wildhay Glacial Cascades Natural Area, Pinto Creek Natural Area, the Brazeau Canyon Wildland Park and the Rock Lake/Solomon Creek Wildland Park.

To address the issue of integrating trans-boundary values and objectives, Hinton Wood Products (HWP) has developed a number of separate processes, and also participates in a number of different committees or projects, that integrate the values and objectives of those landbases that border our FMA. These processes, committees, and projects are all described below in the "Definitions" section.

Definitions

A. ***Forest Resources Advisory Group (FRAG)*** – The Forest Resources Advisory Group was established in 1989 to provide organized and regular public input into the Company's Woodlands department planning and operations. FRAG is also established to select or respond to issues, consider and recommend actions and policies to Hinton Wood Products. FRAG is the main avenue for public participation. The Group is made up of various stakeholders including those that represent landbases that are adjacent to or within our FMA. For example, the "Friends of Switzer Provincial Park" have a voting member on FRAG. Part of these members' mandate is to ensure the interests of their constituents are represented at FRAG and are incorporated into Company planning and operations.

B. ***Final Harvest Plan Process (FHP)*** – The Company's FMA is divided into 135 compartments that vary in size from just over 100 hectares to over 22,000 hectares. HWP develops a Final Harvest Plan for each of these compartments (or a portion thereof) approximately 1-3 years before harvesting is planned. As part of this FHP process, the Company places advertisements in the local community papers looking for input into the development of values and objectives for the compartment. In addition, as part of the FHP process, the Company's Operating Ground Rules (OGRs) must be adhered to. These Rules address a number of trans-boundary issues – for example, the OGRs contain Special Management Areas (SMAs), which are areas that have unique or special values that need to be managed in a special way. A number of these SMAs have specific guidelines that address issues around trans-boundary values and objectives, such as:

- The Pinto Creek mountain goat SMA, which is adjacent to the Pinto Creek Natural Area, has a conservation goal of minimizing the disturbance of the mountain goats that use Pinto Creek Canyon.
- The Sundance Provincial Park SMA, which is adjacent to Sundance Provincial Park, contains guidelines

about operating practices adjacent to the Park (within 500 metres).

C. ***FRMA Recreation Program*** **–** Hinton Wood Products (HWP) has been using Forest Resources Improvement Association of Alberta (FRIAA) funding, combined with revenue collected through camping fees, to run a large recreation program for the last 14 years. Currently, HWP manages 13 government-owned campgrounds, two government-owned trail systems, two HWP-owned campgrounds, and six HWP-owned trails.

In 2010, staff at HWP started to become concerned about the future viability of the Company's recreation program primarily because HWP's FRIAA funds, which support the recreation program, were continuing to dwindle, with no new money being put into the account in almost four years. In the fall of 2010 and winter of 2011, HWP started looking at different options for continuing to fund the Recreation Program. It was at this time that HWP started to explore the idea of bringing on additional partners to help fund the program.

In December 2010 and early 2011, HWP approached the three coal companies that work within or adjacent to the Hinton FMA (Teck, Sherritt, and Coalspur) and the two municipal governments in the Hinton area (Yellowhead County and the Town of Hinton). HWP asked each organization if they would be interested in partnering in the recreation program HWP had been running for the past decade. The response from each was overwhelmingly positive and a new association was formed, called the Foothills Recreation Management Association, which has 6 members that commit various levels of funding to the organization on an annual basis. HWP is the managing partner of FRMA and is the main contact with the government and the public.

FRMA
Foothills Recreation Management Association

FRMA's Recreation Program addresses trans-boundary values and objectives by directly managing the recreation facilities within the protected areas, such as the trails and campgrounds HWP manages within Sundance Provincial Park, Obed Provincial Park, Rock Lake/Solomon Creek Provincial Park, and Whitehorse Creek Wildland Park and working with organizations that have differing values and objectives (e.g. coal, tourism, etc.). Every time someone stays at a FRMA campground, they can fill out a comment card providing feedback about their experience. All comments (both through comment cards and other means such as verbal feedback and e-mail) are summarized in our annual recreation report. Feedback from the comments received from the public are used to help determine how to better manage and maintain FRMA's campgrounds and trails. The Company also conducts recreation surveys from time to time on the users of our campgrounds. A recreation survey was conducted in 2002, 2006 and 2013. Results from this survey are also used to determine future improvements to the Recreation Program.

For further information on the Recreation Program please visit West Fraser's website (http://www.westfraser.com/responsibility/recreation).

D. ***West Yellowhead Mountain Pine Beetle Coordinating Committee*** – The Mountain Pine Beetle (MPB) is an insect that primarily attacks lodgepole pine. In the past, its range has not included the HWP FMA, however, with the recent large MPB outbreak in British Columbia and coinciding warmer winters; the beetle is now showing up east of Rocky Mountains with infestations found on the FMA. The expansion of the mountain pine beetle population in Alberta is of enormous concern due to the potential for major economic impacts on the forest industry and potential adverse effects on recreation, wildlife and forest health in general. Because of the numerous trans-boundary values and objectives that vary significantly from HWP's (e.g. Jasper National Park and Willmore Wilderness Area), a multi-agency West Yellowhead Coordinating Committee was formed in 2004 to deal with the emerging issue of MPB. The federal and Alberta governments and other land management partners have formed this Committee in order to work collaboratively with respect to forest management and to protect the economic value of the provincial forest and achieve ecological integrity objectives of the national and provincial parks and protected areas. Actions to date have included an aggressive short term approach to control MPB in areas of high risk and the development of an effective long term strategy to create better vegetation diversity across the landscape.

E. ***FireSmart*** – FireSmart is a provincial government initiative whose goal is to make communities more fire aware and fire proof. HWP sits on a local committee made up of representatives from various provincial and

municipal governments that have together developed a *Yellowhead Corridor Community Protection Plan.* This Plan identifies both man-made and natural landscape features which, through recommended enhancement programs, will serve as firebreaks or buffers. This proactive strategy will help minimize the wildfire threat, and help mitigate catastrophic fires. A pre-attack plan has also been developed to outline current landscape features that could be utilized to assist fire suppression activities. Throughout the development of the Yellowhead Corridor Community Protection Plan, Project Management Teams reviewed and referred all pertinent data to interest groups both within and outside the provincial government, to ensure that the data necessary to successfully engineer the project was accessed. HWP also participated in similar processes for the Hinton, Robb, and Carldale Community Protection Plans.

F. ***Long Term Access Plans*** – A Long Term Access Plan (LTAP) is a plan showing the current and proposed future permanent roads or access corridors for an identified area on the Forest Management Area (FMA). The intent is to address identified access concerns and coordinate access development and management for HWP and other industrial users of the landbase such as the oil & gas industry. Long Term Access Plans will be developed for areas where access concerns have been identified. The Company develops each LTAP with the participation of Alberta Environment Sustainable Resource Development (AESRD), who approves the LTAP for 10 years. The LTAP approval is for the location, standard, and access management aspects of road planning and development. Approvals and schedules for road construction and use will continue to occur through the Annual Operating Plan (AOP) and the License of Occupation (LOC) approval processes. Hinton Wood Products will implement each approved LTAP for Company roads and management using approvals obtained through existing processes (LOC, AOP, etc). The Company works with AESRD and other users (e.g. the oil & gas industry) to coordinate non-Company access development and management.

Inventory and Analysis

1. ***Forest Resources Advisory Group (FRAG)*** – FRAG meets approximately 5-10 times per year with one field trip (if interest permits). The Group has been meeting since 1989. Minutes from these meeting are stored on Hinton Wood Products' webpage and accessible to FRAG members and Woodlands staff only.

2. ***Final Harvest Plan Process*** – As this is associated with a management activity indicator, there is no resource inventory, analysis or forecast. Each year HWP produces a "General Development Plan Summary Document" that is distributed to all our employees and made available at our annual open houses. This Document outlines which of the 135 compartments on the FMA will be harvested in over the next 5 years.

3. ***Recreation Program –*** See VOIT # 29 (section 2.2229) for detailed information about FRMA's recreation infrastructure and recreation program. Detailed information on FRMA's Recreation Program can also be found on West Fraser's website (http://www.westfraser.com/responsibility/recreation).

4. ***West Yellowhead Mountain Pine Beetle Coordinating Committee*** – The West Yellowhead Mountain Pine Beetle Coordinating Committee meets 1 time per year. As this is associated with a management activity indicator, there is no resource inventory, analysis or forecast.

5. ***FireSmart –*** HWP staff will continue to participate in government-led FireSmart initiatives.

6. ***Long Term Access Plans*** – The need for an LTAP is identified jointly between Hinton Wood Products and AESRD as part of the DFMP process. LTAPs are being developed in 2014.

Targets and Strategies

Basis for Target	The targets and strategies are the same – follow or participate in the existing consultation processes, programs, or committees that are outlined below; each of which has a degree of integrating trans-boundary values and objectives into the Company's forest management.
Primary Strategies	#1. Forest Resources Advisory Group (FRAG) – Continue with FRAG meetings and field trips. #2. Final Harvest Plan Process – Implement the Final Harvest Plan process. Annually produce a General Development Plan Summary Document. #3. Recreation Program – Implement the action plan for year one of the current Recreation

Action Plan VOIT # 29 (section 2.2229). Continue to manage and maintain FRMA and look for opportunities to expand recreational opportunities where possible.

#4. West Yellowhead Mountain Pine Beetle Coordinating Committee – Continue to actively participate on the West Yellowhead Mountain Pine Beetle Coordinating Committee.

#5. FireSmart – Continue to actively participate on FireSmart initiatives, working cooperatively with Alberta Environment Sustainable Resource Development (see VOIT #29 – section 4.29).

#6. Long Term Access Plans – Annually review and update all existing Long Term Access Plans (LTAP) – complete new LTAPs as needed.

2013 Annual Report

Target #1 **Target Met** ☒ **Target Not Met** ☐

In 2013, there were eight FRAG meetings. Topics discussed during the FRAG meetings held in 2013 included:

- HWP Business Updates – At the beginning of every FRAG meeting, senior staff from the Sawmill and Woodlands provided business updates for FRAG members.
- FRAG Membership – On July 8, 2013, HWP was notified by Jasper National Park that they had decided to resign from FRAG stating a lack of resources to continue with the group. On September 30, 3013, FRAG members voted for the acceptance of Coalspur Mines as an advisory member of FRAG. On November 25, 2013, FRAG members voted for the acceptance of the Hinton Historical Society as the newest member on FRAG.
- Field trip to view the new sawmill upgrades – On March 21, 2013, Rob Baron, general manager of the HWP mill gave interested FRAG members a tour of the sawmill highlighting the numerous and significant upgrades made in the sawmill over the last two years
- Coalspur Mine Vista Project – On March, 25, 2013, Curtis Brinker and Stephanie Mitchell from Coalspur Mines gave FRAG members a detailed update on the Vista Coal Project.
- Standing Plans for 2013 – On June 5, 2013, Tim Trahan, an Area Silviculturalist for HWP, provided an update to FRAG members on HWP's stand tending activities for 2012 and 2013. Tim's presentation focused on two main topics: a review of the 2012 stand tending program (mechanical and chemical tending) and a review of the proposed stand tending program for 2013.
- Riparian Management Science - On June 5, 2013, Dr. Dave Andison, the Program Lead, for the Foothills Research Institute's Healthy Landscape Program, gave FRAG members a presentation outlining some of issues around removing or excluding disturbance from riparian areas (in the Foothills area of Alberta).
- HWP's Riparian Management Strategy – Aaron Jones gave FRAG members detailed descriptions of, and answered questions about, HWP's proposed Riparian Management Strategy, at the following FRAG meetings in 2013:
  - January 28, 2013
  - February 25, 2013
- Riparian Monitoring and Measuring Program – On July 8, 2013, Aaron Jones provided a detailed overview of the current status of the monitoring and measuring program that HWP was developing as part of its Riparian Management Strategy. Jones noted that the monitoring and measuring program was still in its initial development stages and may change over time. On September 30, 2013, Jones gave an update on the new direction HWP was taking with respect to developing a monitoring and measuring program for HWP's Riparian Management Strategy. The new direction would be adapting the British Columbia's existing monitoring and measuring system, called the, "Riparian Management Routine Effectiveness Evaluation). On October 28, 2013, Dr. Rich McCleary, of McCleary Aquatic Systems Consulting, gave a presentation outlining and summarizing the riparian assessment protocols he had adapted for use by HWP for the monitoring of the implementation of the Company's proposed Riparian Management Strategy.
- Detailed Forest Management Plan – Aaron Jones gave presentations reviewing certain VOITs that will be included in the 2014 DFMP. This DFMP information was provided to FRAG at the following meetings:
  - January 28, 2013 – VOIT review (FRAG members were provided HWP VOIT Table for VOITs 6,7,9,14,15,16,20,21,22,& 42).
  - March 25, 2013 - HWP reviewed proposed VOIT#48 (to meet ESRD VOIT#2) – patch size distribution.

- July 8, 2013 – FRAG members were provided with detailed information on VOIT #1 – area by seral stage; including: HWP's forest cover type definitions, seral stage definitions, and the proposed target for the VOIT.
- July 8, 2013 – FRAG members were provided detailed information on VOIT #2 – patch sizes by subunit, including: HWP's patch size classes and how old patches would be measured.
- July 8, 2013 – FRAG members were provided detailed information on VOIT #3 – old interior forest. Aaron noted that ESRD had agreed that they would calculate OIF for HWP using HWP's Spatial Harvest Sequence.
- September 30, 2013 – VOIT #4, open all-weather forestry road density by subunit, was discussed with FRAG members.
- September 30, 2013 – VOIT #10, stand structure retention, was discussed with FRAG members. FRAG members had no major concerns with this VOIT as proposed.

- General Development Plan (GDP) and Stand Tending Plan Summary Document – On March 4, 2013, copies of HWP's "2013/14 GDP & Stand Tending Summary Document" and "2014 DFMP Summary Document" were mailed to FRAG members, along with a covering letter that asked FRAG members to contact HWP if they had any questions or concerns about the GDP, DFMP, HWP's stand tending activities, or, would like more details regarding any of the information provided. This letter also included an invitation to attend HWP's open houses held in Edson and Hinton on March 27 and 28, 2013 respectively.
- FRAG Member Survey – A survey of FRAG member's satisfaction with the FRAG process was carried out at the June 5 2013 FRAG meeting.
- Mountain Pine Beetle Update – On September 30, 2013, Andrea Sharpe, Forest Health Officer for AESRD, gave FRAG members a presentation summarizing the current status of mountain pine beetle in the Foothills region.
- Obed Mine containment pond release – On November 25, 2013, John Schadan, Vice President Operations for Sherritt, gave a recap of the events surrounding the October 31, 2013 containment pond release at the Obed Mine.
- Caribou – On November 25, 2013, Laura Finnegan, the Program Lead for the Caribou Program at the Foothills Research Institute, gave an update on the current status of caribou in Alberta and described some of the research that was ongoing or that she would be initiating.

Target #2 **Target Met** ☒ **Target Not Met** ☐

Each year Hinton Wood Products produces and distributes a GDP Summary Document, in order to provide an overview of the Company's annual planning in a less technical and detailed format. A map in the middle of the document shows the Forest Management Area – this map is subdivided into 135 compartments and is colour-coded to provide information about HWP's future harvesting and road building plans.

For the 2013 timber year, a new document titled "2013/2014 GDP & Stand Tending Summary Document" was produced in the spring and released roughly concurrent with the General Development Plan (GDP) submission to Alberta and our open houses (March 27-28). This Summary Document provided the following information:

- The operating areas (compartments) where HWP is planning to operate for the next 5 years
- Major roads construction in the next five years
- An overview of the DFMP and the planning process in general.
- Previously harvested blocks that are being planned for a mechanical or chemical stand tending treatment in the next operating year (May 1, 2011 to April 30, 2012)

This Summary Document also outlined other important information contained within the GDP, such as:

- An overview of the planning process in Alberta.
- Cut control numbers (i.e. actual harvested volumes versus what is allowable)
- Plans to address certain important non-timber values: water, caribou, trumpeter swans, and grizzly bear
- An explanation of the stand tending process, including the difference between chemical and mechanical stand tending.
- A description of the numerous ways that the public can have direct input into HWP's operations.

In 2013, HWP mailed out the "2013/2014 GDP & Stand Tending Summary Document" to approximately 136 stakeholders consisting primarily of trappers, local and regional politicians, contractors, media, energy companies, and FRAG members - a limited number were also produced for our open houses.

As noted in last year's Stewardship Report, accelerated changes to compartment and block scheduling and design will necessitate changes to our compartment-level public consultation process from time-to-time. When timelines are compressed, we will rely on the GDP summary process described above to solicit public input instead of our standard newspaper ad at the start of a compartment plan.

In 2013, there were six Hinton Wood Products' compartments that were advertised in local newspapers.

Table 2.1209a – *Compartments Advertised in 2013*

Compartment	Advertising Date
Athabasca 1	July 25, 2013
McLeod 3	Aug 1, 2013
McLeod 24	Aug 1, 2013
Athabasca 31	Aug 1, 2013
Berland 27	Aug 1, 2013
Marlboro 16	December 3, 2013

Target #3 **Target Met** ☒ **Target Not Met** ☐

The majority of the projects slated for the 2013 Recreation Plan were completed within the acceptable variance – see VOIT # 29 for further detailed information.

Target #4 **Target Met** ☒ **Target Not Met** ☐

Hinton Wood Products staff participated in the West Yellowhead Mountain Pine Beetle Coordinating Committee. There were two meetings in 2013, one on May 7th and the other on October 16. At each meeting HWP staff presented updates summarizing the various MPB initiatives the company is involved with, including the dispersal bait program, mill yard containment traps, as well as individual tree and stand level control activities for both FMAs (HWP and EFP). Representatives from Alberta Environment and Sustainable Resource Development (AESRD), and other forest companies attended the meeting. Representatives from Alberta Community Development, BC Parks, Jasper National Park and the Canadian Forest Service did not attend.

Target #5 **Target Met** ☒ **Target Not Met** ☐

Hinton Wood Products staff participated in the Robb and Carldale FireSmart Programs in 2009.

Hinton Wood Products staff participated in the Robb FireSmart program in late October 2010 and harvest operations were completed by the end of the year.

Planning was initiated in 2012 for the completion of another FireSmart block along Highway 40 South near the landfill. This cutblock was harvested in the winter of 2012/13. Nothing further took place in 2013.

Target #6 **Target Met** ☒ **Target Not Met** ☐

Five Long Term Access Plans have been drafted as part of the completion of the 2014 DFMP. They are for Company use and will not be submitted to government for approval. HWP continues to participate in the Foothills Landscape Management Forum. HWP will be submitting the Road Corridor Plan component of access management (i.e. future required roads) to the government as part of the DFMP.

Monitoring and Reporting

1. ***Forest Resources Advisory Group (FRAG)*** – Annually report in the SFM Stewardship Report on what was discussed and accomplished on FRAG. FRAG will provide an annual summary report to the media which will be in the form of a notice in the local newspaper to be run in the summer.

2. ***Final Harvest Plan Process*** – Annually report in the SFM Stewardship Report on how many compartment were advertised in the local newspaper (asking for public input).

3. ***Recreation Program –*** Annually report in the SFM Stewardship Report under VOIT # 29 the progress (i.e. what was done?) in implementing the Recreation Action Plan.

4. ***West Yellowhead Mountain Pine Beetle Coordinating Committee*** – Annually report in the SFM Stewardship Report a summary of the issues discussed and any progress made within the West Yellowhead Mountain Pine Beetle Coordinating Committee.

5. ***FireSmart*** – Annually report in the SFM Stewardship Report under VOIT #21 the progress and initiatives completed in cooperation with the provincial government's FireSmart Program.

6. ***Long Term Access Plans (LTAPs)*** – Information about the status of LTAPs will be reported annually. Cumulative changes and changes in the preceding 10 year interval will be reported in subsequent FMPs.

Future Development

The wording for this VOIT was amended slightly in 2013, as a result of input and discussion between HWP and ESRD as part of the DFMP Plan Development Team.

References\Associated Documentation

- FRAG Minutes
- FRAG Agendas
- FRAG Membership Information - This link contains FRAG membership information including: FRAG's Terms of Reference, a membership list, contact information, the Annual Report to the Community, and the Annual Issue Tracking Summary document.
- VOIT # 29 – Recreation Infrastructure

ToC

2.1210 Annual % of SR Regeneration Surveys

DFMP VOIT	Yes
SFI Objective#	Objective #2
ISO Objective and Target?	Yes
Criterion:	**Criterion #2** – Maintenance and Enhancement of Forest Ecosystem Condition and Productivity
SFM Element:	**2.1 Forest Ecosystem Resilience** – Conserve ecosystem resilience by maintaining both ecosystem processes and ecosystem conditions.
Value:	Reforest all harvest areas
Objective:	Meet reforestation targets on all harvested areas
Indicator:	Annual % of SR regeneration surveys
Target:	90% of blocks surveyed (establishment surveys) will be Satisfactorily Restocked (SR) on the first survey. *(This Target was revised Oct 29, 2007)*
Acceptable variance:	+/-10% – (this acceptable variance was revised Oct 29/07)
Monitoring:	Results of regeneration surveys will be reported on annually in SFM Stewardship Report.

Overview

The objective of this indicator is to ensure ecosystem resilience by maintaining ecosystem processes and conditions. Prompt reforestation after harvest ensures that forest ecosystems are maintained after disturbance. Establishment surveys provide a means to measure the success of reforestation efforts. The target is that 90% of blocks will be surveyed to be satisfactorily restocked on the first legislated survey.

The Regeneration Survey of Alberta Manual sets standards for Conifer (C), Conifer leading Mixedwood (C/D), Deciduous leading Mixedwood (D/C) and Deciduous (D). Currently there is a requirement to balance regeneration strata as per Policy Directive 2005-1. Another policy directive that applies to crop trees includes balsam and alpine fir as Acceptable Regeneration Species.

Definitions

A. ***Establishment survey*** – A legislated survey to be completed in Alberta at 5 to 8 years after harvesting in coniferous, deciduous (D), coniferous/deciduous (C/D), and deciduous/coniferous (D/C) cutblocks or strata. At the establishment survey, the stocking of a block can be SR (satisfactorily restocked), CSR (aspen blocks that are conditionally restocked), RTD (re-treated after an NSR survey or declaration) or NSR (not satisfactorily restocked). An establishment survey will show stocking amount (%), density (stems/ha) and height of regenerated trees; this survey will also show the approximate locations of plots by status and NSR areas larger than 4 hectares.

B. ***Performance Survey*** – A legislated survey to be completed 12 to 14 years after harvesting in broad strata grouping as C, D, CD and DC cutblocks. As of June, 2010, the Provincial Alternative Regeneration Standards have been replaced with the Regenerated Standards of Alberta. As of May 1, 2009, the Performance Survey measures different variables from the establishment survey. The regenerated stands are stratified from aerial photos based on the Provincial Planning Manual Standards of 10 strata. A sample of the strata is measured on the ground and an average "mean annual increment" (MAI) for coniferous and deciduous species is calculated. That average MAI is applied to each block in the survey population (in proportion to the actual strata represented in each block). The average MAI for conifer and deciduous by broad strata group (C, CD, DC and D) are compared to target MAI stated in the Forest Management Plan. After the refinement period is completed in 2012, a cut adjustment may be made depending on regenerated stand performance. A block will no longer be called FTG (Free to Grow) or NSR after a performance survey but is declared PSC (Performance Survey Completed).

C. ***Satisfactorily Restocked (SR)*** – This means "satisfactorily restocked" according to the definitions described in the current survey manual for the type of survey, species, height, etc. This term only applies to establishment surveys. The term may refer to an individual plot, a portion of a cut block, or an entire cut block. In general, "satisfactorily restocked" means that a particular site is stocked with trees of a suitable species that meet specific criteria as set out by the government. Currently establishment survey standards are set out in RSA-ReforestationStandardAlberta-2010.pdf available on the Province's website.

D. ***Not Satisfactorily Restocked (NSR)*** **–** This means "not satisfactorily restocked" according to the definitions described in the current survey manual for the type of survey, species, height, etc. This term only applies to establishment surveys. The term may refer to an individual plot, a portion of a cut block, or an entire cut block.

E. ***Regeneration Survey*** – A general term used to describe an activity where HWP monitors the performance of a regenerated stand. Some surveys are legislated, while others are meant as an intermediate check to monitor performance or assess the need for management intervention.

F. ***Poorly Regenerated Areas (PRA)*** – This means a poorly regenerated area within an opening that is greater than two hectares in size with a total density of less than 200 stems per hectare. This only applies to performance surveys as defined by RSA-ReforestationStandardAlberta-2010.pdf available on the Province's website.

Inventory and Analysis

Block survey results are maintained in the company's silviculture record keeping system (TFM) and is reported to the Province and tracked by the government in the Alberta Reforestation Information System (ARIS).

Target and Strategy

The target for the VOIT is:

1. *90% of blocks surveyed (establishment surveys) will be Satisfactorily Restocked (SR) on the first survey.*

Basis For Target:	The target was chosen based on past performance and reasonable expectations for success. It would not be possible to have a target of 100% SR on the first establishment survey, because this has never happened in the past. There are too many variables that can effect successful restocking that the Company would have difficulty controlling such as weather, seed crop, seed viability, planting stock, etc. Historically, a target of 90% of first time blocks being surveyed to SR is aggressive, but reasonable.
Primary Strategy:	The primary strategy for meeting this target is to implement our current silviculture procedures for each block being logged. After logging, a Management Opportunity Survey (MOS) is also conducted. The block is then site prepared, and either left for natural regeneration or planted at the nearest window of opportunity. The block is then surveyed at the appropriate time. Tending including herbicide will take place as per our Integrated Vegetation Management Plan and with the appropriate assessments.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

This target was met in 2013, as the first legislated establishment survey was performed on a total of 3,858.45 hectares; of this 98.5% (3,800.53 hectares) were surveyed to be Satisfactorily Restocked (SR).

A total of 4148.47 hectares were surveyed (establishment) in the 2013 calendar year – this includes: first legislated surveys, areas declared "Not Satisfactorily Restocked" (NSR), areas declared LIG (Let it Grow), and areas declared Retreated (RTD). Of those 4,148.47 hectares surveyed, 98.6% (4,090.95 hectares) were surveyed SR or declared "Retreated" (RTD).

As part of our continual improvement process, and also in order to be able to track cause and effect, our silviculturalists assign a cause for NSR after a field visit to the site of a failed or marginal establishment survey (as well as a failed stocking survey). From these silvicultural assessments, the major categories of reasons for failure of the establishment surveys for 2013 are outlined in the Table 2.1210a below:

Table 2.1210a – *Major Reasons for Establishment Survey Failure - 2013*

Reason For NSR	Occurrence
Trespass by industrial activities	2%
Trees too Short	31%
Deciduous competition	0
Grass Competition	0
Missed trees	62%
Poor Germination	5%

For the most part, opening is the “trees too short” category “ were eligible for “Let-it-Grown” declaration so no further treatment were required. The missed trees category was addressed with a walk through or intensive survey so no further treatment were required for those openings either. Of note, for the 2013 establishment survey population, no opening was deemed NSR due to competition.
We examined our 2013 survey results in the context of management practices and ecosites. Due to the low NSR rate there was no real trend for NSR by ecosite. However, 1,000 ha of Subalpine harvested blocks were surveyed in 2013 and the NSR rate is comparable to the rest of the FMA at around 1%. Historically, the Subalpine NSR was closer to 20%.

Monitoring and Reporting

The percentage of blocks surveyed SR will be reported annually in the Stewardship Report. The actual surveys are submitted to Alberta Environment Sustainable Resource Development (AESRD) and reported in the Annual Silviculture Report on May 15 of every year.

The historical NSR (Not Satisfactorily Restocked) rate since 1995 has been in the range of 5% to 12% except for 2005 and 2006 where blocks with a portion of NSR were 20.1% and 14.1% respectively.

Hinton Wood Products conducts all surveys according to the Regeneration Standards of Alberta. One set of standards now exist for the Province, which are better linked to the growth and yield expectations within our Forest Management Plan. The methodology of new regeneration standards is complex. Although it was originally voluntary, the development of “Alternate Regeneration Standards” (ARS) standards has now been mandated by Alberta through the Alberta Forest Management Planning Standard (implementation date of May 1, 2010 for the Province).

Future Developments

This VOIT reports on the results of establishment surveys. Establishment surveys for the new RSA are not changed to reflect the MAI performance targets. Although minimum standards remain the same (80%) as they were prior to ARS, more work is required to link establishment standards to performance standards. This VOIT will be re-assessed annually to ensure that it remains current with any changes to the standards and related reporting requirements.

References\Associated Documentation

- Policy Directive 2005-1 Regeneration Stratum Declarations and Allowable Cut Adjustments:http://142.229.231.105/srd/forests/fmd/directives/pdf/dir/Directive2005-1.pdf
- Policy Directive 2001-01 Balsam Fir and Alpine Fir as Acceptable Regeneration Species: http://www3.gov.ab.ca/srd/forests/fmd/directives/pdf/dir/fir.pdf
- Regeneration Survey Manual Q & A: http://142.229.231.105/srd/forests/fmd/manuals/pdf/RegenManualQAFeb_05final.pdf
- Reforestation Standard of Alberta. May 2013. http://srd.alberta.ca/LandsForests/ForestManagement/files/RSA-UPStandards-2013-14.zip

ToC

2.1211 Cumulative Percentage of Reforested Areas that Meet Reforestation Target

DFMP VOIT	Yes
SFI Objective#	Objective #2
ISO Objective and Target?	Yes
Criterion:	**Criterion #2** – Maintenance and Enhancement of Forest Ecosystem Condition and Productivity
SFM Element:	**2.1 Forest Ecosystem Resilience** – Conserve ecosystem resilience by maintaining both ecosystem processes and ecosystem conditions.
Value:	Reforest all harvest areas
Objective:	Meet reforestation targets on all harvested areas
Indicator:	Cumulative percentage of reforested areas that meet reforestation target
Target:	90% of post-91 blocks surveyed (establishment surveys) will be Satisfactorily Restocked (SR). *(This Target was revised Oct 29, 2007)*
Acceptable variance:	+/- 10% – (this acceptable variance was revised Oct 29/07)
Monitoring:	Cumulative reforestation status of post-91 blocks establishment surveys will be reported on annually in SFM Stewardship Report.

Overview

As in the previous indicator, reforestation success is a measure of ecosystem resilience. This indicator addresses the long-term cumulative performance of reforestation efforts. This indicator only applies to blocks harvested since March 1, 1991. In any one year it may be acceptable for a block not to meet survey standards, but blocks that do not meet the standards on the first survey are retreated until they meet the survey standards up until year 14 since skid clear date.

Currently there is a requirement to balance regeneration Strata as per Policy Directive 2005-1. Another policy directive, Directive 2001-01, applies to crop tree include balsam and alpine fir as Acceptable Regeneration Species.

Definitions

A. ***Establishment survey*** – A legislated survey to be completed in Alberta at 5 to 8 years after harvesting in coniferous (C), deciduous (D), coniferous/deciduous (C/D), and deciduous/coniferous (D/C) cutblocks or strata. At the establishment survey, the stocking of a block can be SR (satisfactorily restocked), CSR (aspen blocks that are conditionally restocked), RTD (re-treated after an NSR survey or declaration) or NSR (not satisfactorily restocked). An establishment survey will show stocking amount (%), density (stems/ha) and height of regenerated trees; this survey will also show the approximate locations of plots by status and NSR areas larger than 4 hectares.

B. ***Performance Survey*** – A legislated survey to be completed 12 to 14 years after harvesting in broad strata grouping as C, D, CD and DC cutblocks. As of June, 2010, the Provincial Alternative Regeneration Standards have been replaced with the Regenerated Standards of Alberta. As of May 1, 2009, the Performance Survey measures different variables from the establishment survey. The regenerated stands are stratified from aerial photos based on the Provincial Planning Manual Standards of 10 strata. A sample of the strata is measured on the ground and an average "mean annual increment" (MAI) for coniferous and deciduous species is calculated. That average MAI is applied to each block in the survey population (in proportion to the actual strata represented in each block). The average MAI for conifer and deciduous by broad strata group (C, CD, DC and D) are compared to target MAI stated in the Forest Management Plan. After the refinement period is completed in 2012, a cut adjustment may be made depending on regenerated stand performance. A block will no longer be called FTG (Free to Grow) or NSR after a performance survey.

C. ***Satisfactorily Restocked (SR)*** – This means "satisfactorily restocked" according to the definitions described in the current survey manual for the type of survey, species, height, etc. This term only applies to establishment surveys. The term may refer to an individual plot, a portion of a cut block, or an entire cut block. In general, "satisfactorily restocked" means that a particular site is stocked with trees of a suitable species that meet specific criteria as set out by the government. As of May 1, 2008, at establishment, any blocks where the stocking meets the minimum standards with trees too short (15 to 30 cm) are now assessed by a practitioner and called "Let it Grow" (LIG). For reporting purposes all LIG blocks are deemed SR.

D. ***Regeneration Survey*** – A general term used to describe an activity where HWP monitors the performance

of a regenerated stand. Some surveys are legislated, while others are meant as an intermediate check to monitor performance or assess the need for management intervention.

Inventory and Analysis

Block level treatments and survey results are maintained in the silviculture record keeping system. The first legislatively required performance surveys were due by April, 2005. Currently, there is a requirement to balance regeneration strata as per Policy Directive 2005-1: for Conifer (C), Conifer leading Mixedwood (C/D), deciduous leading Mixedwood (D/C) and Deciduous (D).

The first time a block is required to meet establishment survey for all blocks (including deciduous blocks as of May 1, 2008) is 8 years after harvest. The stocking status of block now can be either: CSR (after a deciduous Establishment Survey), SR, NSR, RTD (Retreated after an NSR survey), FTG or PSC(Performance Survey Completed after May 1, 2009). For the calculation of this indicator the areas of PSC, FTG, CSR, RTD and SR blocks are added together to come up with the percentage cumulative SR.

Target and Strategy

The target for the VOIT is:

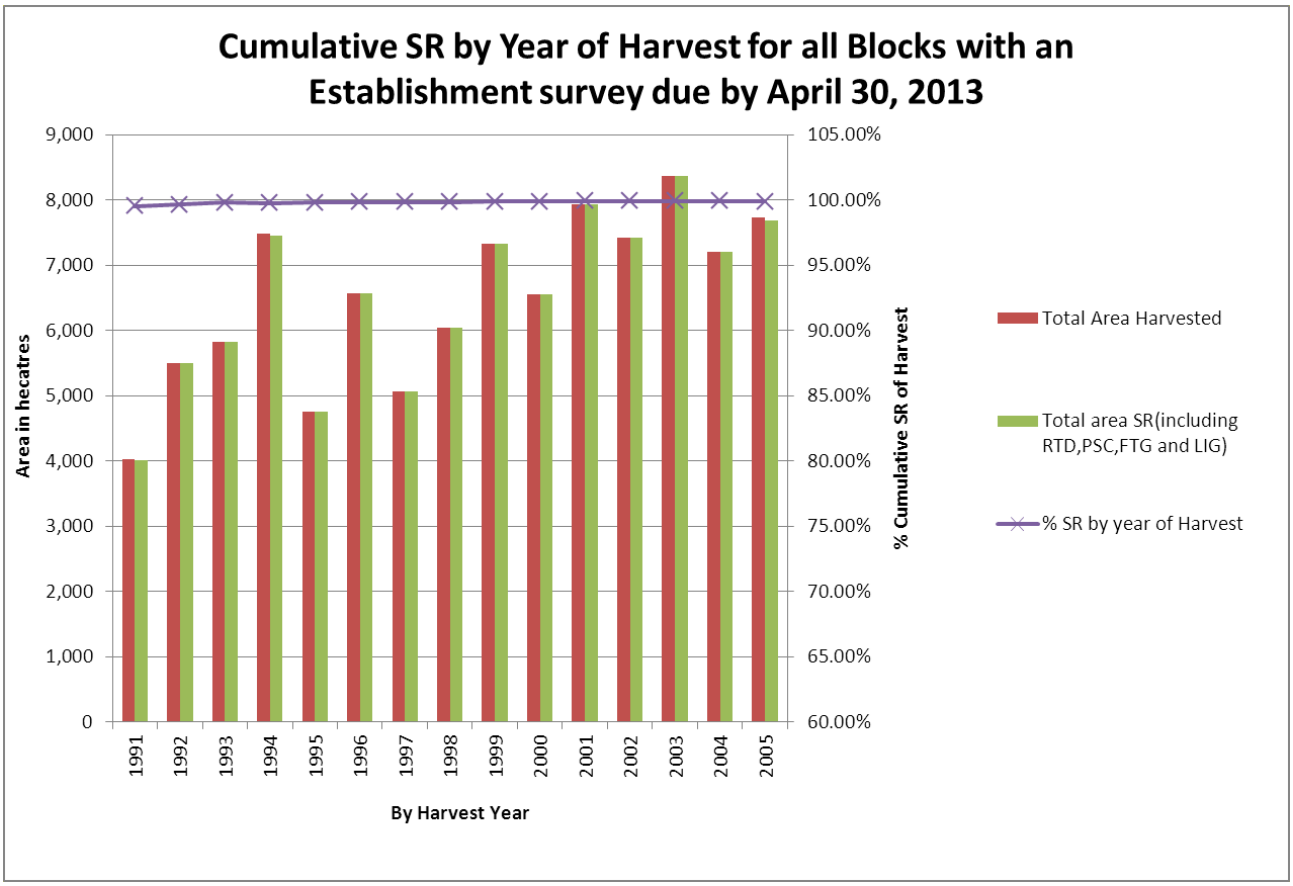
1. *90% of post-91 blocks surveyed (establishment surveys) will be Satisfactorily Restocked (SR).*

Basis For Target:	The target was chosen based on past performance and reasonable expectations for success. It is a cumulative target; meaning that on a running total (from 1991) 95% of our blocks will be surveyed to be SR. A target of 100% was unrealistic as historically we have always a few blocks that prove to be challenging to reforest the first time.
Primary Strategy:	The primary strategy will be the same as VOIT #10. In addition to the strategies outlined in VOIT #11, the Company will also use other techniques to ensure challenging blocks are satisfactorily restocked. This will mean the use of herbicides in certain cases, as part of an overall vegetative management strategy. Other methods such as manual brushing will also be undertaken where applicable.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

This target was met in 2013. A total of 3,858.45 hectares were surveyed (establishment) in the 2013 calendar year – this includes: first legislated surveys, areas declared “Not Satisfactorily Restocked” (NSR), areas declared LIG (Let it Grow), and areas declared Retreated (RTD). As of February 5, 2014 for areas where an establishment survey was due by April 30, 2014 (i.e. for blocks harvested up to the 2005-06 timber year), 98.5% of post-1991 blocks were surveyed “SR" (satisfactorily restocked). We have met this target within its acceptable variance. Figure 2.1211a on the following page outlines the cumulative “satisfactorily restocked” blocks that were harvest after 1991 with establishment surveys due in 2013.

Figure 2.1211a – *Cumulative Satisfactorily Restocked of Post 91 Blocks with Establishment Surveys due in 2013*



Monitoring and Reporting

Establishment surveys are carried out and the numbers of blocks that have not met the establishment standards are tracked through silviculture liability reporting. The actual surveys are submitted to AESRD and reported in the Annual Silviculture Report on May 15 of every year. The results of the surveys are submitted to the Alberta Government's provincial database (ARIS) by May 15 of every year. Areas reported for a given year change with better technology for determining area and as productive land base gets withdrawn and returned from other industrial users.

Future Development

HWP is conducting all surveys to the Provincial RSA standards. As of 2009/10 Mean Annual Increments (MAI's) are the results reported to government as a measure of performance (i.e. we are no longer using Free-to-Grow and NSR designation at year 14). At the renewal of the HWP's new Detailed Forest Management Plan, MAI targets for regenerated stands were established and are reported in VOIT #22. We believe this VOIT 22 is a better reflection of long-term regeneration success than the cumulative SR reported in VOIT 11, and therefore we may drop VOIT 11 in the future.

References\Associated Documentation

- Reforestation Standard of Alberta. May 2013. http://srd.alberta.ca/LandsForests/ForestManagement/files/RSA-UPStandards-2013-14.zip
- Policy Directive 2005-1 Regeneration Stratum Declarations and Allowable Cut Adjustments: http://142.229.231.105/srd/forests/fmd/directives/pdf/dir/Directive2005-1.pdf
- Policy Directive 2001-01 Balsam Fir and Alpine Fir as Acceptable Regeneration Species: http://www3.gov.ab.ca/srd/forests/fmd/directives/pdf/dir/fir.pdf

ToC

2.1212 Amount of Change in the Forest Landbase

DFMP VOIT	Yes
SFI Objective#	Objective #2
ISO Objective and Target?	Yes
Criterion:	**Criterion #2** – Maintenance and Enhancement of Forest Ecosystem Condition and Productivity
SFM Element:	**2.2 Forest Ecosystem Productivity** – Conserve forest ecosystem productivity and productive capacity by maintaining ecosystem conditions that are capable of supporting naturally occurring species.
Value:	Maintain forest landbase
Objective:	Limit conversion of forest landbase to other uses
Indicator:	Amount of change in the forest landbase
Target:	Maintain or limit the loss of forest landbase by: 1. Annually review and update all existing Long Term Access Plans. 2. On a net basis, maintaining the merchantable landbase (contributing to the AAC) at 650,163 ha. 3. Limit the net FMA landbase withdrawals for use by Crown to be < 1% of total FMA landbase as of May 1, 2008 *(updated in 2010 to reflect new landbase)* 4. Undertake assessments of 139 industrial sites currently identified as being "returned" to the FMA; identify sites that are ecologically suitable and operationally feasible to reforest within the next three years. *(This is a new Target created on Feb 25, 2008 –Targets #4 and #5 in previous SFM Plans have been deleted and replaced with this new Target #4)* 5. Implement silviculture strategy for afforestation of previously forested shrub communities. *(This is a new Target created on Feb 25, 2008 –Targets #6 in previous SFM Plans has been deleted and replaced with this new Target #5)*
Acceptable variance:	1. 0% 2. ± 5% from the forecast in the first 10 years 3. Anything over 2% is unacceptable 4. Report annually 5. Report annually
Monitoring:	Each target will be monitored and reported on in the annual SFM Stewardship Report.

Overview

This objective of this VOIT is to limit the conversion of EFP-HWP's forest landbase to other uses that are not compatible to growing trees. Industrial activities by Edson Forest Products and Hinton Wood Products and other commercial users can often reduce the productive landbase, through such activities as road building, oil & gas seismic exploration, pipeline construction, and well sites development. When these industrial dispositions are no longer required it is desired to have them reforested where appropriate and returned to a productive forest state as quickly as possible. However, not all returned industrial lands are appropriate for reforestation as the lands may be located in wetlands, barren rock, or other non-productive ecotypes. Also, in certain areas, some of the current ecotypes classified as non-productive were actually previously forested, and in fact, can be brought back to forests again with appropriate treatment – this is called afforestation.

This indicator also measures the total FMA landbase extent and the extent of the contributing landbase available for timber production. It is a measure of the sustainability of our harvest levels and other resource values, which were assessed in the 2010 DFMP amendment based on the extent of the landbase at that time.

Definitions

A. ***Long Term Access Plans*** – A Long Term Access Plan (LTAP) shows the current and proposed future permanent roads or access corridors for an identified area on the Forest Management Area (FMA). The intent is to address identified access concerns and coordinate access development and management for EFP-HWP and other industrial users of the landbase such as the oil & gas industry – coordinated development reduces the amount of road required and thereby reduces the amount of change in the productive forest landbase. Long Term Access Plans will be developed for areas where access concerns have been identified. HWP develops each LTAP with the participation of Alberta Environment Sustainable

Resource Development (AESRD), who approves the LTAP for a 10 year period. The LTAP approval is for the location, standard, and access management aspects of road planning and development. Approvals and schedules for road construction and use will continue to occur through the Annual Operating Plan (AOP) and the License of Occupation (LOC) approval processes. Edson Forest Products and Hinton Wood Products will implement each approved LTAP for Company roads and management using approvals obtained through existing processes (LOC, AOP, etc). HWP works with AESRD and other users (e.g. the oil & gas industry) to coordinate non-EFP-HWP access development and management.

B. ***Merchantable landbase*** – The merchantable landbase is that portion of the Forest Management Area that is productive (e.g. capable of growing trees) and contributes to the Annual Allowable Cut (e.g. isn't netted out for some reason such as being in a riparian reserve, on steep slopes, or protected for some other reason).

C. ***Industrial lands*** – In the context of this Indicator, industrial lands are those lands that have some type of industrial disposition constructed on them (e.g. pipeline, well site, coal mine, etc.), and that are non-HWP dispositions.

D. ***Management Opportunity Survey (MOS)*** – An MOS is a field assessment looking at the suitability of a site and the necessary treatments to reforest an opening. It considers soil and ecological constraints, and which tree species is most suitable to a site. It is a voluntary survey conducted by HWP.

E. ***Afforestation*** – This term refers to the process of returning land that is currently non-forested, but was previously forested, back to a forested state.

Inventory and Analysis

1. *Long Term Access Plans*

Table 2.1212a shows the status of the HWP's Long Term Access Plans (LTAPs):

Table 2.1212a – *HWP LTAP Status as of December 31, 2012.*

LTAP Description	Approved/Submitted/Draft	Comments
Athabasca West	Approved	Approved in 2004, reviewed in 2006-12.
McLeod West	Draft completed	Draft submitted to AESRD in 2010
Berland West	Draft completed	Draft submitted to AESRD in 2010
Embarras South	Draft completed	Draft submitted to AESRD in 2010
Embarras North	Draft completed	Draft submitted to AESRD in 2010
McLeod East	Draft completed	Draft submitted to AESRD in 2010
Marlboro	Draft completed	Draft submitted to AESRD in 2010
Athabasca Central	Draft completed	Draft submitted to AESRD in 2010
Wildhay	Draft completed	Draft submitted to AESRD in 2010

2. *Merchantable Landbase (650,163 hectares)*

A spatial landbase netdown was done as part of the 2010 DFMP mountain pine beetle amendment. Each part of the FMA is considered either in or out of the contributing landbase. Areas not considered part of the landbase are assigned a category based on the reason they were excluded from the contributing landbase, such as aesthetics, steep slopes, and water buffers. The 2010 DFMP amendment document (found on our website by following the forest operations/planning/DFMP links - www.westfraser.com/hintonforestry) provides further details. As this is a management activity indicator, there is no forecast.

3. *FMA Landbase Withdrawals*

Table 2.1212b on the following page, provides a summary of historical additions and withdrawals from the landbase since May 1, 2008, when a new Forest Management Agreement (FMA) came into effect.

Table 2.1212b – *Landbase Withdrawals (shown in brackets) and Additions (ha) to the Hinton Wood Products' FMA Landbase – New FMA Agreement Effective Date of May 1, 2008 (Year is FMA Renewal Year: May 1 to April 30).*

Year	Industrial (hectares)			Crown Uses (hectares)				Total Change (hectares)	Total FMA Landbase (hectares)	Change (hectares)
	Oil & Gas	Mining	Sub-Total	Special Place	Indian Reserve	Other	Sub-Total			
2008	FMA Landbase as of May 1, 2008								958,161	
2008*	(1275)	(1155)	(2429)	0	0	0	0	(2429)	955,732	(2429)
	381	0	381	0	0	50	50	431	956,163	(1998)
2009	(1008)	(4)	(1013)	0	0	0	0	(1013)	955,150	(3011)
	327	0	327	0	0	0	0	327	955,477	(2684)
2010	(1527)	0	(1527)	0	0	(733)	(733)	(2260)	953,217	(4944)
	481	3254	3735	0	0	6	6	3741	956,958	(1203)
2011	(2421)	(118)	(2539)	0	0	(462)	(462)	(3001)	953,957	(4204)
	113	0	113	0	0	0	0	113	954,070	(4091)
2012	(1536)	(32)	(1568)	0	0	(42)	(42)	(1610)	952,460	(5701)
	59	0	59	0	0	0	0	59	952,519	(5642)
2013	(1390)	(584)	(1974)	0	0	(363)	(363)	(2337)	952,182	(7979)
	114	0	114	0	0	0	0	114	952,296	(7865)
Total Net Change	(6406)	1945	(4461)	0	0	(1181)	(1181)	(5642)		
% Net Change	(0.67)	(0.20)	(0.47)	0.00	0.00	(0.12)	(0.12)	(0.59)		

* New reporting period May 1, 2008 - April 30, 2009 effective with the new FMA Agreement May 1, 2008, reset net billing area 958,561ha

4. *Industrial Lands*

From Table 2.1212c, it is evident that returned industrial lands are being identified, assessed and treated.

The assessment of returned industrial lands is a developing process; however the numbers available to date are reported in Table 2.1212c. The abandoned dispositions – landbase ledger was used to track abandoned lands and their treatment. Table 2.1212c also outlines those treatments.

Table 2.1212c – *Treatment of Returned Industrial Lands*

Year	Remaining Sites*	Hectares Remaining (ha)	Number of Sites Returned**	Hectares Returned	# of Sites Treated)	# of Sites Suitable for Afforestation	Ha Treated
2007	139	266.45			82	82	143.2
2008	52	117.26	0	0	5	4	4
2009	50	113.02	0	0	2	2	4.24
2010	50	113.02	0	0	0	0	0
2011	50	113.02	0	0	0	0	0
2012	50	113.02	1	6	1	1	2.5
2013	50	113.02	0	0	0	0	0

The Lands Ledger was reviewed in the winter 2007 and numerous duplicate records were removed. This resulted in a change in the Table values.

* *At the end of 2007 there were 139 sites still on the abandoned lands ledger that still required treatment. Many of these sites did have an afforestation plan already in the ledger. Where an area has been treated more than once (e.g. MOS, scarified then planted), only the initial treatment is included. Silviculture considers MOS/Field Assessment as initiation of and part of the treatment process.*

** *In 2007 AESRD changed the reclamation requirements. Under the new regulations any disposition older then 1994 are still subject to the old reclamation standards (reclaimed to grass). For this reason we are leaving the columns for number of sites returned and hectares returned. HWP expects this to be a minor amount, if any in the foreseeable future.*

5. ***Afforestation of Previously Forested Shrub Communities***

Within HWP's FMA there are approximately 900 hectares of shrub communities in the Robb Highlands Area that were previously forested, but have been converted to a shrub community due to repeated human-caused fire and the resulting lack of seed source. These shrub communities can be converted back into forested communities thereby reducing the loss of productive forest landbase. An assessment of these areas was completed in the fall of 2006. A summary of potential areas have been identified as potential afforestation. Some prescribed burning (hopefully through Fire Smart) was deemed a suitable site preparation treatment on part of these areas. However, with the prospect of expanding mine in the vicinity, a risk assessment and some assurance of protection of afforestation investments will need to take place prior to any further work occurring in this area.

Targets and Strategies

The harvest schedule specified in the 1999 Forest Management Plan (DFMP), Development Plan, and Annual Operating Plan will be implemented.

Established forest management planning processes (1999 DFMP, Development Plan, Compartment Operating Plans, Annual Operating Plan, etc) will be used to interpret and refine land use planning for the FMA landbase, addressing all identified issues.

Small site-specific areas on the FMA landbase will be protected as they are identified (special features: unique areas, historic sites, sensitive sites, etc). Participation will occur in provincial land use planning processes that relate to the FMA landbase (Eastern Slopes Policy, Integrated Resource Planning, Alberta Forest Legacy, etc). The FMA landbase that supports the AAC will be identified and maintained.

1. *Annually review and update all existing Long Term Access Plans (LTAPs)*

Basis for Target	LTAPs provide coordinated access between FMA activities such as road building and gravel pit development and similar activities (e.g. road building, gas lines, power lines, etc.) between the other main industrial users of the landbase, primarily oil & gas companies and the coal mining industry. By coordinating access, less land is ultimately permanently removed from the FMA landbase.
Primary Strategy	The Target and Strategy are the same.

2. *On a net basis, maintaining the merchantable landbase (contributing to the AAC) at 650,163 hectares.*

Basis for Target	Maintaining the merchantable landbase is a primary tenet of sustainable forest management.
Primary Strategy	To the extent that HWP can control, minimize the amount of land that is converted to non-productive land. This will be accomplished through initiatives such as Long Term Access Plans, coordination of development with the oil & gas industry, and reclamation of dispositions turned back to HWP.

3. *Limit the net FMA landbase withdrawals for use by the Crown to be < 1% of total FMA landbase as of May 1, 2008.*

Basis for Target	The terms of the Company's Forest Management Agreement allow the Crown to withdrawal up to 1% of the FMA landbase without compensating the Company – if the withdrawals exceed 1%, then some form of compensation must ensue. HWP would rather keep productive landbase within our Forest Management Area, than be compensated for withdrawals.

Primary Strategy	Work with the provincial government to limit the withdrawal of land from the FMA landbase.

The strategy for this Target is the same as the strategy for Target #2 above.

4. *Undertake assessments of 139 industrial sites currently identified as being "returned" to the FMA; identify sites that are ecologically suitable and operationally feasible to reforest within the next three years.*

Basis for Target	Provincial requirements for reclamation for well-sites and associated facilities have changed on April 2007. It is expected that from now on most of these industrial sites will have a woody species requirements. Returning of non-productive land back into productivity on the Hinton FMA is being focused on 139 sites outstanding on the Lands ledger.
Primary Strategy	Maintain a database of returned Hinton Wood Products industrial lands, undertake assessments within two years for suitability of reforestation, and afforest where ecologically suitable and operationally feasible.

5. *Implement silviculture strategy for afforestation of previously forested shrub communities.*

Basis for Target	Returning non-productive land back into productivity is a basic tenet of sustainable forest management.
Primary Strategy	Assess and identify all potential areas appropriate for reforestation using the site productivity, ecological and operational constraints. Stakeholder consultation for other objectives will take place and will be incorporated in reforestation treatment strategy and operating plan.

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Target #1 **Target Met** ☐ **Target Not Met** ☒

No LTAP's was provided to the government in 2013. HWP will be submitting the Road Corridor Plan component of access management (i.e. future required roads) to the government as part of the DFMP, but the long term requirement component (i.e. whether we want to maintain, deactivate or reclaim a given road) will be kept internal.

With respect to the LTAP process, five Long Term Access Plans have been drafted as part of the completion of the 2014 DFMP. They are for Company use and will not be submitted to government for approval. HWP continues to participate in the Foothills Landscape Management Forum. HWP will be submitting the Road Corridor Plan component of access management (i.e. future required roads) to the government as part of the DFMP.

Target #2 **Target Met** ☒ **Target Not Met** ☐

HWP continued to work with government and the energy industry companies to minimize losses of the productive forest landbase to other uses.

In addition, the process of validating the FMP spatial landbase netdown through the spatial harvest sequence (SHS) variance tracking procedures was initiated. The SHS is a detailed map of the individual stands which are expected to be harvested to achieve the annual allowable cut. As the field layout is completed within individual compartments, HWP's operational planners must explain and report on any variances from the SHS. These variances will be evaluated as part of the next forest management planning process.

Target #3 **Target Met** ☒ **Target Not Met** ☐

A new Forest Management Agreement came into effect on May 1, 2008. A new landbase ledger was established to coincide with the new agreement (Table 2.1212b). Landbase withdrawals for use by the Crown remains at 0.59%, which meets the target.

Target #4 **Target Met** ☐ **Target Not Met** ☒

In 2013 there have been no changes to the status of this VOIT. Due to the current economic climate and resource constraints HWP did not meet this target. There are 37 sites that are older then two years and still require a field assessment. At this time HWP made a conscious decision to defer treating on the outstanding 37 sites, unless they are in direct proximity to active planting operations. HWP still maintains the abandoned lands ledger. HWP commits to conducting Management Opportunity Surveys (MOS) on the remaining 37 sites within two years and treating within the next five years where ecologically suitable and operationally feasible.

HWP still uses the abandoned lands ledger to track dispositions that are cancelled and returned to the forest landbase. Over the past eight years HWP has conducted Management Opportunity Surveys (MOS) on 301 sites. Of these 301 sites, 214 of these sites (376.2ha) were found suitable for treatment. To date, HWP has planted 163 sites (281.2ha). At the end of 2007, there were 139 sites in the ledger that needed treatment. Eighty-two of these sites had forward afforestation plans in place, but had not been planted yet as they were not operationally feasible at the time. These 82 sites are considered to have had initial treatment begun.

In 2009, HWP reforested two sites totalling 4.26 hectares. This leaves 57 sites still needing an afforestation plan. These 57 sites have had preliminary ecosite review to see if they are suitable for treatment, but have not yet had a site visit (i.e. a MOS). This places these sites outside our 2 year treatment window. HWP is committed to reviewing and developing an afforestation plan for these remaining sites as resources permit.

In 2007, the Government of Alberta changed the reclamation requirements for cancelled dispositions returned to the Province of Alberta. In the Green Zone, reclamation requirements now require the disposition holder to ensure a viable forest ecosystem is re-established before AESRD will cancel the disposition. This means that disposition holders are responsible for establishing a woody plant layer as well as an herb/grass layer on reclaimed sites. Only sites older than 1994, are exempt from this new policy. HWP does not expect many pre-1994 sites to get cancelled in the foreseeable future. In 2013, under the new reclamation policy, there were no requests made to HWP for assistance to plant or provide seedlings.

Target #5 **Target Met** ☒ **Target Not Met** ☐

The assessment of the Robb Highlands was initiated in September 2005. Field work was completed in the summer of 2006. Prescriptions, including the area suitable for treatment, were netted down to 600 hectares. A draft report was prepared by HWP's consultant. A final report was finalized in October 2007. The Robb Highland (McLeod 23) area is currently under consideration for a coal mine expansion and is part of containment lines that may be mulched or prescribed burned by the Alberta government as part of the Robb Fire Smart initiatives.

Any further work for planning or implementation will come after some security of investment can be secured by all stake holders.

The crop planning and consultation with trappers, FireSmart and other stake holders has been put on hold.

Monitoring and Reporting

Each of the targets will be monitored and reported on annually in the SFM Stewardship Report.

Future Development

This entire VOIT will be redrafted for 2014. It has been changed as part of the new DFMP Plan. Wording of the targets of the new VOIT have been approved by ESRD as part of the Plan Development Team process. The new VOIT in 2014 will be as follows:

Indicator - Amount of change in the forest landbase
Target - Maintain or minimize the loss of forest landbase by:

1. Participate in the FLMF/GOA regional access plan process (e.g. TFA administration process)
2. Track the net FMA landbase withdrawals for use by Crown to be < 1% of total FMA landbase as of May 1, 2008
3. Measure and track the industrial footprint by disposition type.

References\Associated Documentation

- 1999 Forest Management Plan
- A Guide to: Reclamation criteria for well-sites and associated facilities—2007 Forested Lands in Green Area Update (draft), AESRD January 2007.

ToC

2.1213 Amount of Area Disturbed

DFMP VOIT	Yes
SFI Objective#	Objective #2
ISO Objective and Target?	Yes
Criterion:	**Criterion #2** – Maintenance and Enhancement of Forest Ecosystem Condition and Productivity
SFM Element:	**2.2 Forest Ecosystem Productivity** – Conserve forest ecosystem productivity and productive capacity by maintaining ecosystem conditions that are capable of supporting naturally occurring species.
Value:	Health of the forest landbase
Objective:	Recognize lands affected by insects, disease or natural calamities
Indicator:	Amount of area disturbed
Target:	Limit combined annual loss to fire and epidemic insect/disease outbreaks to a maximum of 0.1% of the FMA contributing landbase (based on a 20 year rolling average).
Acceptable variance:	Any losses that, combined with timber harvest, exceed the cut control objective (see VOIT #28) would be an unacceptable variance that would trigger a review of the Forest Management Plan (DFMP) analysis. If this Target cannot be met due to a MPB outbreak on the FMA, it will be reviewed and amended. *(This acceptable variance was amended on Feb 25, 2008)*
Monitoring:	This will be tracked and reported annually in the Stewardship Report

Overview

The underlying objective of this VOIT is to support ecological resilience. Natural disturbances are part of, and support, ecological function and forest dynamics. However, uncontrolled occurrence of natural disturbances is not desirable in a managed forest, where harvesting in a controlled manner is intended to largely replace uncontrolled natural disturbances.

On average, the Target of limiting loss to 0.1% of the FMA contributing landbase based on a 20 year rolling average would be equivalent to about 1,000 hectares burned per year. The average annual area burned per year during the last 20 years was 216.2 hectares. The only major fires on the FMA landbase since 1968 were a December 1988 fire that covered 593 hectares, a December 1997 fire that covered 2,800 hectares, an August 2003 fire that covered 421 hectares, and a July 2006 fire that covered 237.2 ha.

Definitions

A. ***Contributing landbase*** – That portion of the FMA landbase which contributes to the calculation of the Annual Allowable Cut. In other words, the portions of the landbase that is available (i.e. no other constraint is placed on it such as riparian reserve, visual buffer, steep slope, etc.) and can productively grow trees for current or future harvesting.
B. ***Green Attacked mountain pine beetle tree*** – The term “green attack” refers to a tree that has been attacked by a mountain pine beetle (MPB) and the tree still has the larva or pupae of the MPB in it. Once the pupae mature into beetles, the mature beetles fly and attack another tree, into which it lays its eggs. When a green attacked pine tree dies it turns red – this tree is called a red attacked tree, and it no longer has any beetles in it.
C. ***Pheromones*** – These are chemical attractants released by a MPB once it has successfully attacked a pine tree. These chemicals signal other beetles to come and attack the same tree. By synthetically reproducing these pheromones and placing them on a tree, we can attract beetles to particular trees, thereby making them easier to find and easier to control (through either the milling of those trees or by cutting and burning them).

Inventory and Analysis

Fire

The numbers presented in Table 2.1213a are based on reported numbers provided by Alberta Environment Sustainable Resource Development on the area within the fire perimeter. The amount of area actually burned

may be less because skipped patches may occur within a fire. Information on fire history dating back to FMA inception in 1954 was used to quantify 20 year rolling average fire occurrence.

Table 2.1213a – *Forest fires within the FMA landbase, 1994–2013*

Year	Number of fires	Area burned (ha)
1994	14	0.3
1995	14	71.1
1996	24	101.2
1997	23	2,899.4
1998	8	2.6
1999	6	113.0
2000	9	11.2
2001	24	19.8
2002	34	5.6
2003	56	424.9
2004	43	2.1
2005	21	0.8
2006	93	512.7
2007	42	5.4
2008	52	8.1
2009	44	132.6
2010	42	4.0
2011	38	1.1
2012	12	1.56
2013	28	3.84
Total	**627**	**4,321.3**
20 year average/year.	**31.3**	**216.1**

Mountain Pine Beetle

Two mountain pine beetle (MPB) epicentres with potential to expand to the FMA began prior to 2006. A massive wind-driven invasion of millions of MPB into Alberta occurred in summer 2006, mainly to the north of the HWP FMA. A series of cold weather events in the three following winters (2006-2007, 2007-2008 and 2008-2009) acted to reduce or stabilize new MPB attacks. A second massive wind-driven invasion of MPB into Alberta occurred in summer 2009. While the epicentre of this event is still to the north of the FMA, significant numbers of pheromone bait attacks and natural attacks did occur on the FMA, mainly in northern portions. Over-winter MPB survival from the 2009 attack was low and there has been no external-origin attack in 2010, 2011, 2012, or 2013. However the MPB outbreak started from the 2009 event continued to develop. See the annual report section below for additional information about MPB.

Target and Strategy

The Target is to:

1. *Limit combined annual loss to fire and epidemic insect/disease outbreaks to a maximum of 0.1% of the FMA contributing landbase (based on a 20 year rolling average).*

Basis for Target	The 20 year rolling average for fires over the 1994-2013 period is 216.1 ha (Table 2.1213a). This is less than 0.1% of the FMA contributing landbase (708.7 ha). There is currently no historical summary of losses to insect, disease or windthrow. A rolling average will be developed over time as losses are recorded. As there have been no historic insect or disease outbreaks and minimal losses to windthrow it is probable that losses from these sources are in the same order of magnitude as fire losses.
Primary	Our strategy continues to revolve around aggressively fighting all fires as quickly as possible

Strategy through support of AESRD's firefighting infrastructure. The 2004 Development Plan used a crowning susceptibility model to assess fire risk and direct harvest to compartments of higher risk for fire. This approach was continued in subsequent years. HWP will work with AESRD to assess landscape-level fire risk for the FMA.

The MPB strategy is to continue to monitor MPB attack on the FMA using pheromone baits placed on a grid system through the FMA. In addition, HWP shifted harvesting in 2006 to avoid non-pine species and target pine stands most vulnerable to MPB. This caused major shifts in harvest sequence and changes to block boundaries as non-target stands were dropped or added. HWP also targeted compartments in the northwest portion of the FMA to reduce susceptible pine stands in front of the projected route of the MPB advance. Annual Allowable Cut remained the same until approval of a MPB Amendment to the FMP in 2010.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

The 20 year rolling average for fires over the 19932-2012 period is 216.1 ha (Table 2.1213a). This is less than 0.1% (708.7 ha) of the FMA contributing landbase.

There is currently no historical summary of losses to insect, disease or windthrow. A rolling average will be developed over time as losses are recorded. As there have been no historic insect or disease outbreaks and minimal losses to windthrow it is probable that losses from these sources are in the same order of magnitude as fire losses.

Fire

Our strategy continues to revolve around aggressively fighting all fires as quickly as possible through support of AESRD's firefighting infrastructure. The 2004 Development Plan used a crowning susceptibility model to assess fire risk and direct harvest to compartments of higher risk for fire. This direction was continued in subsequent years.

Insect & Disease

1. *Mountain Pine Beetle*

In 2013, HWP placed 68 pheromone bait sites on and near the FMA in a grid pattern to detect new MPB attacks (Table 2.1213b). There were no pheromone bait sites placed in the northern portion of the FMA in 2013 (which was hardest hit by natural MPB attack in 2009) because HWP decided to stop putting bait sites there in 2010. This decision was made because if pheromone baits were placed there, 2010 to 2013 hits on those sites wouldn't then be distinguishable as either long-distance MPB dispersal or local MPB activity from the previous year's attack. In 2013 at each bait site, pheromone baits were hung up on three trees, resulting in 204 bait stations.

As shown in Figure 2.1213c, "coloured circles" represent the 2013 pheromone bait locations (3 bait trees at each location). The red circles are baits sites that have been hit the hardest – there are more than 301 MPB hits at the site. Orange circles have 101-300 hits, while yellow has 21-100 and green has 1 to 20. Blue circle have no MPB hits. Mass-attack sites (red triangles) are those sites that have more than 40 hits in a single tree. In 2013, 30 of the 68 pheromone bait sites had MPB attack. Of the 204 trees with pheromone baits, 51 of them were attacked by MPB. Individual MPB hits were over 5,150. This is the second highest number since HWP began collecting this data, but lower than the all-time high in 2009 of 8,760.

Table 2.1213b – *Summary of MPB pheromone bait hits and trap captures, 2006-2013.*

Year	Sites	Sites hit by MPB	Stations	Stations hit by MPB	Total MPB hits	Logyard funnel traps	Logyard MPB captures
2006	85	12	255	15	91	11	0
2007	92	19	276	28	143	13	14
2008	93	6	279	8	48	24	1
2009	92	74	276	147	8,760*	24	13
2010	63	34	189	57	2,145*	216	1,539

Year	Sites	Sites hit by MPB	Stations	Stations hit by MPB	Total MPB hits	Logyard funnel traps	Logyard MPB captures
2011	68	21	204	31	981*	195	978
2012	69	51	207	110	4368	195	2206
2013	68	30	204	51	5150+	195	3667

**Trees with more than 100 MPB hits were recorded as 100+ and hits on spill-over trees were not included so the actual total number of MPB hits at sites is higher than this estimate.*

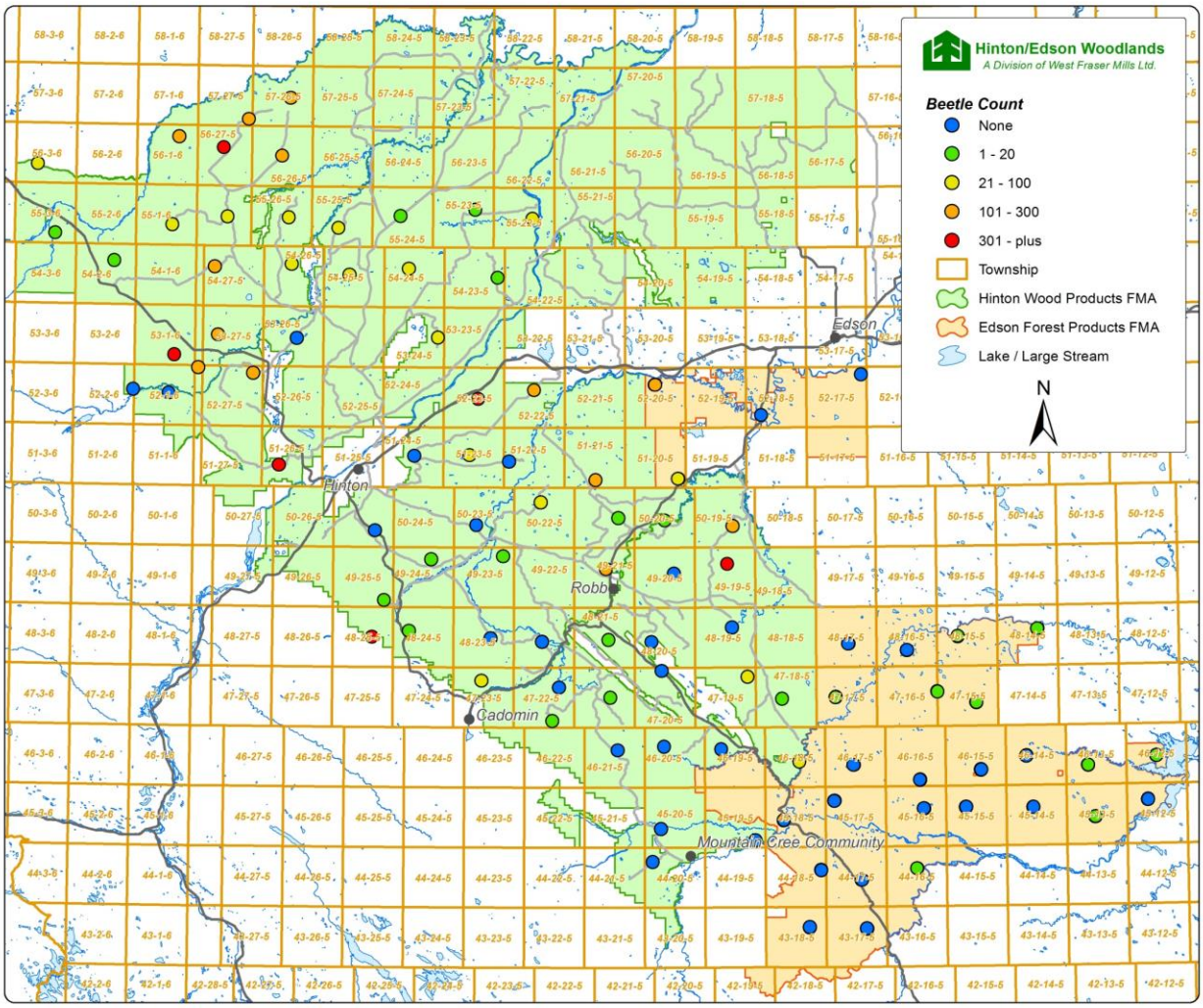


Figure 2.1213c – *Pheromone bait site locations on HWP's FMA in 2013. Note - baits were not placed in the northern section of the FMA because MPB was already firmly established there*

During the 2012 to 2013 beetle year, ESRD surveyed 952 sites in the Foothills Area, and controlled, through cutting and burning, 3,860 beetle-attacked trees. Control contracts began on Jan 21, 2013 and ended on Feb. 28, 2013. In addition to these contracts, ESRD crews also surveyed and controlled outlying infestation points. There were zero trees controlled in the Willmore in 2013, and there has been no trees controlled there since 2010. In 2012 (and 2013) there have been no major in-flights of beetles from BC.

ESRD also conducted Green-to-Red (G:R) surveys. G:R ratios of less than one green to one red indicates a decrease in the beetle population, while a G:R ratio that is greater than one green to one red indicates an increase in the MPB population. In total, 140 G:R survey sites were completed this year. Overall, G:R ratios were down this year due to fluctuating spring temperatures, however, the total number of MPB aerial survey sites collected in 2013 is up from last year (2012 there were 816 sites located, while in 2013 there were 1330 sites).

The collection of provincial MPB aerial survey and G:R data for 2013 is completed – all data has been entered into a provincial decision support system (DSS) to generate a control priority for each site. Not all collected points need to be controlled based on the number of trees attacked, the stand structure, and the surrounding forest. Data and priority for Level 2 control (harvesting) was sent to forest companies in the fall of 2013 for planning of harvest. ESRD-led MPB ground survey contracts will likely begin mid-November.

Detection monitoring for both red-attack (Alberta) and green-attack (HWP) trees will continue in 2014 and subsequent years.

HWP continued participation in the Integrated Pest Management Committee for the Northwest Region, and the West Yellowhead Mountain Pine Beetle Working Group.

Monitoring and Reporting

The number of fires and area burned will be updated each year in the SFM Stewardship Report. The status of insects and disease discovered on the FMA will also be updated each year in the Stewardship Report.

Future Development

HWP will work with AESRD to assess landscape-level fire risk for the FMA

Hinton Wood Products will continue working with the Mountain Pine Beetle Coordinating Committee and the Northern East Slopes Integrated Pest Management Working group to develop strategies for insect and disease management. We are working with AESRD to survey and control the current MPB outbreak on the FMA and to continue to target high-risk lodgepole pine stands for harvest on our FMA to reduce beetle threat. The Targets in this VOIT may have to be modified if MPB becomes established on the FMA.

The wording of this VOIT will change slightly in 2014 to reflect agreed upon changes made by the Plan Development Team as part of HWP's new DFMP. The new wording of the VOIT will be as follows:

- Indicator – Amount of area disturbed
- Target – Report on area (ha) affected by natural disturbances such as insect, diseases, fire, wind, hail etc.

ToC

2.1214 Presence of Invasive Non-native Plant Species

DFMP VOIT	Yes
SFI Objective#	Objective #2
ISO Objective and Target?	No
Criterion:	**Criterion #2** – Maintenance and Enhancement of Forest Ecosystem Condition and Productivity
SFM Element:	**2.2 Forest Ecosystem Productivity** – Conserve forest ecosystem productivity and productive capacity by maintaining ecosystem conditions that are capable of supporting naturally occurring species.
Value:	Control invasive species
Objective:	Control invasive non-native plants species (weeds)
Indicator:	Presence of invasive non-native plant species
Target:	Continue to implement the Company's noxious weed program.
Acceptable variance:	Report annually.
Monitoring:	This will be tracked and reported annually in the SFM Stewardship Report

Prohibited noxious weeds and noxious weeds are aggressive, difficult to manage, and invasive plant species. These weeds may displace or significantly alter native plant communities and may also cause economic damage to private and public lands. Legislation in Alberta, specifically the Alberta Weed Control Act, recognizes these two classes of weeds and is in place to keep these problem weeds from being introduced to Alberta or from spreading if they are already present. Each class of weeds is treated differently. Invasive non-native plant species compete with naturally occurring species, which can potentially have negative effects for biodiversity conservation on the FMA. The main objective of this VOIT is to ensure that invasive non-native plants species are controlled or destroyed.

Definitions

A. ***Noxious weed*** – means a plant that is designated under the Alberta Weed Control Regulations as a noxious weed and includes noxious weed seeds. It is required to be controlled. There are 29 noxious weeds listed in the Regulation.
B. ***Prohibited noxious weed*** – means a plant that is designated under the Alberta Weed Control Regulations as a prohibited noxious weed and includes prohibited noxious weed seeds. It is required to be destroyed. There are 46 prohibited noxious weeds listed in the Regulation.

***Inventory* and Analysis**

The Company's Invasive Non-Native Plant Program contains a number of different elements. This includes:

1. **Northern East Slopes Regional Weed Control Program (now YIPI – Yellowhead Invasive Plants Initiative)** – Since 2000/01 Hinton Wood Products has been involved with the "Northern East Slopes Regional Weed Control Program". This is more informally referred to as the Yellowhead Weed Control Program. Alberta Environment Sustainable Resource Development (AESRD) and Yellowhead County provide the direction and prioritize the areas of focus for control of invasive non-native plant species (weeds). They also conduct some inventory work for us. In 2009 this working group was revived and renamed Yellowhead Invasive Plants Initiative.
2. **A Company Weed Control procedure** – The purpose of this procedure is to eradicate all prohibited noxious weeds and to control noxious weeds within the Hinton Wood Products' FMA as directed by the Weed Control Act. The assigned Area Silviculturalist is responsible for the following:

    - An annual plan is created that identifies priorities for inventory, control and prevention of weed spread on the FMA.
    - A yearly report is created summarizing control measures.
    - Co-operating with the AESRD and Yellowhead County to identify yearly priorities for inventory and control measures.
    - Coordinating control and inventory measures with ARSD and Yellowhead County.

- Setting up training and education opportunities for staff and contractors as required.
- Any employee, contractor, or consultant that spots a weed infestation on the FMA completes the Weed Awareness report Form and submits it to the assigned Area Silviculturalist.

A summary of the Company's annual weed control plan is as follows:

- April – AESRD/Yellowhead County organizes workshop to identify priorities.
- May – Hinton Wood Products identifies main roads within priority area and contracts out the weed control.
- June _August– A contractor carries out weed control.
- December – Weed control summary is completed and filed internally (on S: drive).

Target and Strategy

The Target for this Indicator is:

1. *Continue to implement the Company's noxious weed program.*

Basis for Target	The Alberta Weed Control Act requires companies to control noxious weeds and to destroy prohibited noxious weeds so that they can be kept from spreading.
Primary Strategy	Implement the Company's noxious weed program.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

Hinton Wood Products continues to work with the Yellowhead Invasive Plants Initiative (YIPI) as part of a landscape level working group. In 2013, YIPI continued the priority area to include Robb and Cadomin.

All control measures took place between August 7 to 10, 2013 by Spectrum Resources. Herbicide was applied by backpack. This is the 13th year of HWP's Weed Control Program. Over that period, 1,135 km of LOC have been controlled.

Table 2.1214a provides a summary of road right-of-ways treated in 2013. In total, 148.6 kilometres of LOC right-of-way were treated for weed abatement in 2013. The priority was Hawkweed. Additionally, one disposition was sprayed for oxeye daisy. The control agent was Milestone ™ and Tordon 101 ™.

Table 2.1214a *– Road Right-of-Ways Treated in 2013*

LOC	Treatment Location	Kilometers Treated
940797	4-05-309	6.78
940794	4-05-308	1.41
209963	4-07-302	1.2
6309	Judy Creek/Tri Creeks	34.91
32240	3-20-307	1.3
32245	3-20-305	3.99
961494	Pembina Road	14.15
951977	Pembina Road	12.9
940190	Pembina Road	9.1
31523	Beaverdam Road	2.8
20909	4-03-307	1.85
20965	1-019-402C	1.15
970259	3-06-307	1.19

LOC	Treatment Location	Kilometers Treated
970260	3-06-501	4.16
962919	3-06-301/3-06-301	2.6
992103	Rainbow Creek Road	1.65
31729	3-20-309	1.77
870788	Rainbow Creek Road	6.57
1606	Rainbow Creek Road	3.28
901019	Rainbow Creek Road	2.45
32243	3-20-306	1.16
992615	3-14-312	3.15
881214	3-20-301A	1.87
992614	Baily Creek Road	3.18
992620	3-14-312	0.63
992619	Baily Creek Road	2.38
992618	3-14-315	1.95
990242	4-12-304	6.27
990581	Pembina River Road	7.61
990491	Pembina River Road	2.69
992104	Rainbow Creek Road	2.5
MLP070018	w5M-20-054-01-NE	na
	Total Kilometers Treated	**148.6**

Monitoring and Reporting

Updates and results from the Company's noxious weed program will be reported annually in the Stewardship Report. Any new weed concern identified by lands department will be added the following year's weed program and will be prioritized based on consultation with the Province through the Yellowhead Invasive Plants Initiative (YIPI).

Future Development

The name of this VOIT will change in 2014 – it will be called, "Noxious Weed Program". The target will remain the same.

References\Associated Documentation

- Alberta Weed Control Act: http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/acts6156
- http://www.qp.alberta.ca/574.cfm?page=2010_019.cfm&leg_type=Regs&isbncln=9780779748150

ToC

2.1215 Percentage Compliance with Company OGR

DFMP VOIT	Yes
SFI Objective#	Objective #2
ISO Objective and Target?	Yes
Criterion:	**Criterion #3** – Conservation of Soil and Water Resources
SFM Element:	**3.1 Soil Quality and Quantity** – Conserve soil resources by maintaining soil quality and quantity.
Value:	Soil productivity
Objective:	Maintain soil productivity
Indicator:	% Compliance with Company OGR
Target:	Complete compliance with Company Operating Ground Rules that relate to soil & water *(This Target and acceptable variance was revised on Sept 24, 2007)*
Acceptable variance:	+1 incident
Monitoring:	• Internal compliance auditing • Compliance reported annually in SFM Stewardship Report.

Soil productivity conservation is critical to sustainable forest management because soils provide the medium to support plant growth and other biological processes. Damage to soils is therefore of great concern. Application of Best Management Practices to prevent soil damage is an indicator of effective management activities.

With respect to soil conservation, the Company Operating Ground Rules (OGR) requires that HWP be in compliance with the Memorandum of Understanding that HWP has with Alberta Environmental Sustainable Resource Development (AESRD) regarding the Forest Soil Conservation Guidelines.

There are also other sections in the Company OGR, that when followed correctly, minimize or eliminate damage to soil productivity. This includes rules around contingency planning, pre-harvest silvicultural planning, site preparation, access planning, road construction, drainage & erosion control, deactivation & reclamation of roads and watercourse crossing, and gravel pits.

Definitions

A. ***Compliance with Company Operating Ground Rules that relate to soil & water*** - For the purposes of this indicator, complete consistent will mean no contraventions during the calendar year of Sections 6, 7.6, 9, and 11 of the 2011 Operating Ground Rules.
B. ***Forest Soil Conservation Guidelines*** – These guidelines were developed by a joint task force of the Alberta Forest Products Association and the AESRD. The Guidelines are applicable to temporary roads and decking areas, harvesting/skidding, and reforestation. They were adopted as standard in the 2002 Harvest Planning and Operating Ground Rules. The Alberta Soil Conservation Guidelines came into effect in 1996. One of the major objectives of the Guidelines is to keep rutting to less than 2% of the block areas as measured by linear transects. Since that time, all blocks have been inspected as part of the regular block inspection process. In addition, Hinton Wood Products performs internal and external audits on harvest and reforestation operations. Areas with degraded soils are reported through the Company environmental incident report process.
C. ***Contingency Planning*** – Sometimes the Company encounters problems with operating on a cutblock due to wet soils – this problem is normally encountered in the spring (June/July). Operating on wet soils has the potential to cause detrimental soil disturbance. As part of the planning process, the Company identifies those "contingency" blocks that can be operated during wet weather without soil damage (normally due to their soils having a high content of gravel). If wet weather and soil disturbance issues arise, the Company moves into the contingency blocks. The OGR contains guidelines on contingency planning.
D. ***Pre-harvest silvicultural planning*** – A pre-harvest silviculture plan is a plan applied to a cutblock that sets out the most ecologically appropriate method to harvest and reforest the cutblock. It would typically include instructions on how to harvest the site, in what season the site should be harvested and by what equipment, how the site should be prepared after harvesting, whether it should be planted or naturally regenerated, and what other future stand tending activities might need to take place (e.g. brushing). The OGR contain standards and operating practises to ensure soil productivity is considered when deciding on a silvicultural plan.
E. ***Site preparation*** – Site preparation involves the preparing of a forested site for reforestation (either by

planting or natural regeneration). Site preparation normally involves some type of mechanical manipulation of the soil to prepare suitable spots for tree seeds or seedlings. The OGR contain standards and operating practises to ensure site preparation is conducted promptly and in an environmentally responsible manner consistent with the Soil Conservation Guidelines.

F. ***Access planning*** – Access planning involves the planning of access into a compartment that is coordinated with other resource users. The OGR contain standards and operating practises to ensure access is planned and managed in a balance manner recognizing the loss of productive area is minimized.

G. ***Road construction*** – Road construction is required to access timber, but must be carried out in a manner that minimizes the loss of soil productivity. The OGR contain standards and operating practises that ensure all roads are constructed in a manner, consistent with the Soil Conservation Guidelines.

H. ***Drainage & erosion control*** – The drainage and erosion control standards found in the OGR prevent sediment from the road drainage from entering water bodies. See also VOIT # 16.

I. ***Deactivation & reclamation of roads and watercourse crossing*** – After use of roads and watercourse crossings is finished they are often deactivated or reclaimed. The intent of the standards and operating practices found within the OGR are to return the site to the original or near original landform, drainage and productivity, and to stabilize disturbed soil and minimize the risk of erosion. Roads that are within a block and are no longer required to access other blocks (called in-block roads) are totally reclaimed – the soil is rolled back onto the road, the road is site prepared, and either planted or left for natural regeneration.

J. ***Gravel pits*** – Gravel pits are built to supply gravel for roads. The intent of the standards and operating practices found within the OGR is to minimize the impact (extent, erosion, etc) of gravel pits on the productive landbase. Depleted gravel pits are reclaimed and reforested.

K. ***Non-Compliance*** -

L. ***Non-Conformance*** -

Inventory and Analysis

In 2004, HWP started a process of independent compliance audits of all of our operational contractors and employees (i.e. those persons that work on the forested landbase carrying out harvesting, hauling, site preparation, etc.). A contractor was hired to carry out audits on our operational activities. In 2007, the procedures around these compliance audits were changed – they are now being done by staff rather than a contractor (as a cost saving measure). These compliance audits are documented and a follow-up action plan to address shortcomings is required.

In addition to these compliance audits, HWP's Operations Supervisors routinely carry out block inspection reports. These inspection reports involve systematically working through a checklist to ensure various aspects of the logging operations are taking place according to the plan and in compliance with Company procedures and government regulations.

Any major non-conformance or non-compliance with the Company's Operating Ground Rules is reported to AESRD. All non-conformances/non-compliances are addressed through the HWP environmental incident reporting procedure, where each incident is investigated and action plans are developed to reduce the likelihood of the incident reoccurring.

Target and Strategy

The Target is:

1. *Complete compliance with Company Operating Ground Rules that relate to soil & water*

Basis for Target	Government legislation and the Company's 2009 Operating Ground Rules are the basis for this target.
Primary Strategy	The strategy for implementing this Target is multi-faceted and includes: ➢ The Company maintains and implements its own cutblock inspection system (100% of blocks and roads are inspected). ➢ The compliance auditing program – these are internal audits completed at regular

intervals.
- A continual training program for HWP workers and supervisors (see VOIT #36).
- Investigating any non-conformance (see VOIT #37) of HWP OGR and developing and implementing action plans to address each non-conformance.

2013 Annual Report **Target Met** ☐ **Target Not Met** ☒

There were three incidents that specifically contravened the Company's Operating Ground Rules that relate to soil & water (Sections 6, 7.6, 9, and 11). Descriptions of these three incidents are outlined in Table 2.1215a below:

Table 2.1215a – *Non-compliance with Company Operating Ground Rules that relate to soil & water*

Event #	Date Reported	Type	Description	Effect[1]
1112-0140	Jan 29, 2013	HWP – Watercourse crossing variance	See incident 1112-0137. Block was self-reported due to inadequate buffer. ESRD identified concern with bridge when they went to inspect buffer. ESRD took pictures on 28 Nov 2012. ESRD concern was that logs were placed in the watercourse. Bridge was pulled on 13 Dec 2012. ESRD staff was on site when work commenced however were not present when the crossing was removed. Installation of crossing during non-frozen period likely contributed to this issue. Subsurface flow may have been impeded, resulting in the upstream pooling of water observed be ESRD. ESRD reported that stream returned to normal flow levels and location. No environmental damage was noted.	High
0713-0141	July 12, 2013	HWP - Erosion	On July 12, 2013 an ESRD Forest officer (Greg Tough) conducting a routine LOC inspection on 861172 (Polecat Road) came across an incident of erosion on a road bank causing sediment to spread off the disposition into the surrounding forest (See attached photos). This erosion incident occurred as a result of large volumes of rain water moving down the 8% ditch grade after severe storms were experienced earlier in the week. On Thursday, July 18th ESRD notified us of this inspection and incident. On Friday, July 19th a formal reclamation notice was issued by ESRD along with a formal notice of investigation citing contravention of section 56(1) of the Public Lands Act "A person who as the holder of a disposition contravenes a provision of the disposition, is guilty of an offence". (See attached documents) Clean up efforts of the erosion incident commenced on Friday, July 19th.	Medium
0813-0142	Aug 17, 2013	HWP - Spill	A mechanical failure in the spray equipment caused a load of herbicide not to be sprayed in an approved opening. The pilot was unaware of this and came back to mixsite to get another load. Mixer started to add water for next load, which caused the tank to overfill and spill herbicide solution. NO additional herbicide concentrate was added. Most of the spill occurred at mixsite, on road, but possibility of some spill in the adjacent harvest block.	Medium

Any incident that occurs is thoroughly investigated by HWP staff and a corrective action plan is developed for each incident. This action plan is then referred to HWP's Stewardship Committee, who further reviews the plan and add on any additional action items that they think may be necessary to prevent a reoccurrence. This action

plan is then reviewed by the Woodlands Manager, who might further amend the plan. Once the Woodlands Manager has signed off on the incident and its corrective plan, those action items begin to be implemented by staff.

The following is a summary of the correction actions taken to address the two incidents noted in Table 2.1215a.

Corrective Actions

As part of HWP's commitment to continual improvement, and in order to try to prevent similar incidents from occurring in the future, the following action items for this incident were developed, and have been, or are in the process of being, implemented:

Incident #1112-0140
- Remove bridge
- Complete a joint inspection with ESRD

Incident #0713-0141
- Conduct emergency preliminary sedimentation control work (i.e. diversion ditches, sediment traps)
- Conduct secondary sedimentation control measures (i.e. armouring of the ditch line, potentially putting in a diversion cross drain upslope)
- Respond to ESRD with our action plan on their Reclamation Notice

Incident #0813-0142
- HWP Mixsite Supervisor tried to minimize the event by directing the pilot over the road as the soil would bind the glyphosate and prevent its uptake by vegetation.
- Pilot was allowed to spray out the load in approved treatment block, once overflow stopped.
- Window was closed and both machines where shutdown.
- Airborne was notified.
- Engineer was sent out to inspect wiring, pumps, tanks, etc.
- Incident investigation started with pictures taken to document by HWP.
- Incidents reviewed internally and then with Airborne and outcomes discuss.
- Airborne to fill out their own incident report and provide copy to HWP
- Review OTA event with other Airborne pilots and mixers on our FMA for rest of 2013 program.
- Advise AESRD of OTA using the Excursion Reporting Form.
- Currently job pre-works talk about our expectations of the pilots. Should add a section about our expectation of the mixers.
- OTA/Monitoring flight list to include 3-006-0146 and 3-006-3099.
- Add this OTA incident to the pre-work material for next year's contract.

Monitoring and Reporting

The compliance with this Indicator and Target will be monitored as part of the HWP internal compliance auditing program. Compliance with the Company OGR will be reported annually in the SFM Stewardship Report.

Future Development

No future development of this VOIT is planned at this time.

References\Associated Documentation

- Hinton Wood Products' Operating Ground Rules (October, 2011)

2.1216 Incidence of Soil Erosion and Slumping

DFMP VOIT	Yes
SFI Objective#	Objective #2
ISO Objective and Target?	Yes
Criterion:	**Criterion #3** – Conservation of Soil and Water Resources
SFM Element:	**3.1 Soil Quality and Quantity** – Conserve soil resources by maintaining soil quality and quantity.
Value:	Minimize soil erosion
Objective:	Minimize soil erosion
Indicator:	Incidence of soil erosion and slumping
Target:	Complete compliance with Forest Soil Conservation Guidelines and Stream Crossing Guidelines.
Acceptable variance:	0%
Monitoring:	Internal compliance auditing Compliance reported annually in SFM Stewardship Report.

Overview

Soil productivity conservation is critical to sustainable forest management because soils provide the medium to support plant growth and other biological processes. Soil erosion affects soil productivity and is therefore of great concern. Slumping is a form of soil erosion from slope failures that result in soil and parent material moving downhill from an original location. Slumping occurs naturally but also when roads cut across a slope, especially if there are springs near the surface. The objective of this VOIT is to apply best management practices to minimize or eliminate slumping and soil entry into water bodies.

Definitions

A. ***Forest Soil Conservation Guidelines*** – see definition in VOIT#15.
B. ***Soil erosion*** – Soil erosion is the wearing away of the land surface by wind or water. Erosion occurs naturally from weather or runoff, but can be intensified by land-clearing practices related to road building or timber cutting.
C. ***Slumping*** – Slumping is a form of soil erosion related to slope failures that result in soil and parent material moving downhill from an original location
D. ***Stream Crossing Guidelines*** – The Alberta Stream Crossing Guidelines were developed in 1989 and are still the guidance document for the Operating Ground Rules. Other relevant documents include the Fish Habitat Protection Guidelines for Stream Crossings (1995) and the Code of Practice for Watercourse Crossings (2000). The Code of Practice is part of the Alberta Water Act.

Inventory and Analysis

Incidents of slumping and sediment entry into watercourses are detected by several Company programs:

- The cutblock inspection system (100% of new blocks and roads are inspected).
- The compliance auditing program.
- The annual road and stream crossings inspection program (See VOIT # 7).
- The Foothills Research Institute stream crossings program (HWP is a charter member – see VOIT # 6).
- Incidents noticed by HWP staff and contractors during the course of normal work in the forest.
- Incidents documented by AESRD inspections and audits (Forest Operations Monitoring Program and Silviculture ARIS Monitoring: FOMP/SAM).

Any non-conformance with the Forest Soil Conservation Guidelines or Stream Crossing Guidelines would be reported to AESRD. All non-conformances (see VOIT # 37) are addressed through the HWP environmental incident reporting procedure, where each incident is investigated and action plans are developed to reduce the likelihood of the incident reoccurring.

Slumping associated with roads is relatively uncommon and usually fairly small in extent and impact. Slumping incidents are noted and repaired through the Road Maintenance Program as they occur. In the past these have

not been tracked. Tracking will be added to the road inspection program and reported in future versions of the SFM Stewardship Report.

Target and Strategy

The Target for this Indicator is:

1. *Complete compliance with the Forest Soil Conservation Guidelines and the Stream Crossing Guidelines*

Basis for Target	The basis for this target is the Forest Soil Conservation Guidelines and the Stream Crossing Guidelines.
Primary Strategy	The strategy for implementing this Target is multi-faceted and includes: ➢ The Company maintains and implements its own cutblock inspection system (100% of blocks and roads are inspected). ➢ The compliance auditing program – these are internal audits completed at regular intervals. ➢ A continual training program for HWP workers and supervisors (see VOIT #36) including the development and distribution of a guidebook on forest operations (that addresses soil disturbance) and a stream crossing guidebook. ➢ Visually review each logged block – only those that appear to have soil disturbance greater than 2% are surveyed. ➢ Investigating any non-conformance (see VOIT #37) of HWP OGR and developing and implementing action plans to address each non-conformance.

2013 Annual Report **Target Met** ☐ **Target Not Met** ☒

This target was not met, as there was one contravention of the Soil Conservation Guidelines in 2013 – Table 2.1216a below outlines the one contravention.

Table 2.1216a – *2013 Contraventions of the Soil Conversation Guidelines*

Event #	Date Reported	Type	Description	Effect1
0713-0141	July 12, 2013	HWP - Erosion	On July 12, 2013 an ESRD Forest officer (Greg Tough) conducting a routine LOC inspection on 861172 (Polecat Road) came across an incident of erosion on a road bank causing sediment to spread off the disposition into the surrounding forest (See attached photos). This erosion incident occurred as a result of large volumes of rain water moving down the 8% ditch grade after severe storms were experienced earlier in the week. On Thursday, July 18th ESRD notified us of this inspection and incident. On Friday, July 19th a formal reclamation notice was issued by ESRD along with a formal notice of investigation citing contravention of section 56(1) of the Public Lands Act "A person who as the holder of a disposition contravenes a provision of the disposition, is guilty of an offence". (See attached documents) Clean up efforts of the erosion incident commenced on Friday, July 19th.	Medium

Any incident that occurs is thoroughly investigated by HWP staff and a corrective action plan is developed for each incident. This action plan is then referred to HWP's Stewardship Committee, who further reviews the plan and add on any additional action items that they think may be necessary to prevent a reoccurrence. This action plan is then reviewed by the Woodlands Manager, who might further amend the plan. Once the Woodlands Manager has signed off on the incident and its corrective plan, those action items begin to be implemented by staff.

The following is a summary of the correction actions taken to address the one incident noted in Table 2.1216a.

Corrective Actions

As part of HWP's commitment to continual improvement, and in order to try to prevent similar incidents from occurring in the future, the following action items for this incident were developed, and have been, or are in the process of being, implemented:

Incident #0713-0141

- Conduct emergency preliminary sedimentation control work (i.e. diversion ditches, sediment traps)
- Conduct secondary sedimentation control measures (i.e. armouring of the ditch line, potentially putting in a diversion cross drain upslope)
- Respond to ESRD with our action plan on their Reclamation Notice

Monitoring and Reporting

The compliance with this Indicator and Target will be monitored as part of HWP internal compliance auditing program. Compliance with the OGR will be reported annually in SFM Stewardship Report.

Future Development

No future development of this VOIT is planned at this time.

References\Associated Documentation

- Hinton Wood Products' Operating Ground Rules (October, 2011)
- Memorandum of Understanding - Soil Conservation Guidelines - November 24, 2003
- Alberta Stream Crossing Guidelines - http://www.environment.alberta.ca/documents/WatercourseGuide.pdf
- Alberta Code of Practice for Watercourse Crossings: http://www.qp.alberta.ca/documents/codes/CROSSING.PDF

ToC

2.1217 Watershed Basins

DFMP VOIT	Yes
SFI Objective#	Objective #3
ISO Objective and Target?	Yes
Criterion:	**Criterion #3** – Conservation of Soil and Water Resources
SFM Element:	**3.2 Water Quality and Quantity** – Conserve water resources by maintaining water quality and quantity.
Value:	Water resources
Objective:	Keep changes to quantity and timing of water yields within reasonable limits.
Indicator:	Watershed Basins
Target:	All watershed basins to be within acceptable impact thresholds as per the 1999 DFMP – Hydrology Assessment Model analysis.
Acceptable variance:	0% - Harvest schedule will be adjusted so all basins will be within acceptable impact thresholds
Monitoring:	The percent of watershed basins within acceptable impact thresholds will be reported annually in the SFM Stewardship Report based on the calendar year.

Overview

Forest management activities have both direct and indirect impacts on hydrology and aquatic ecosystems. Impacts increase with the amount of disturbance in a watershed basin and the effects are most pronounced for smaller basins. Impacts occur in response to natural disturbances (e.g. forest fires) and management activities (e.g. harvesting, roads). This VOIT addresses the cumulative effect of disturbances on fish habitat, stream geomorphology, and human infrastructure. The VOIT also indirectly addresses the issue of water quality.

Definitions

A. ***Watershed basin*** – A watershed basin is a surface land area that is drained by a watercourse, where all land upstream of a designated point on a stream drains into that stream.

B. ***Impact thresholds*** - Impact thresholds are those thresholds (limits) associated with disturbance (either through management activities or natural disturbances) in a watershed basin that lead to undesirable effects on the watershed basin if they are exceeded. Impact thresholds were set as low, moderate, or high or each variable measured, and an acceptable threshold was set as low or medium effect for each variable. A basin is within acceptable impact thresholds if all variable and measurement effects for the basin are moderate or lower. The percent of watershed basins within acceptable impact thresholds will be reported on an annual calendar year basis.

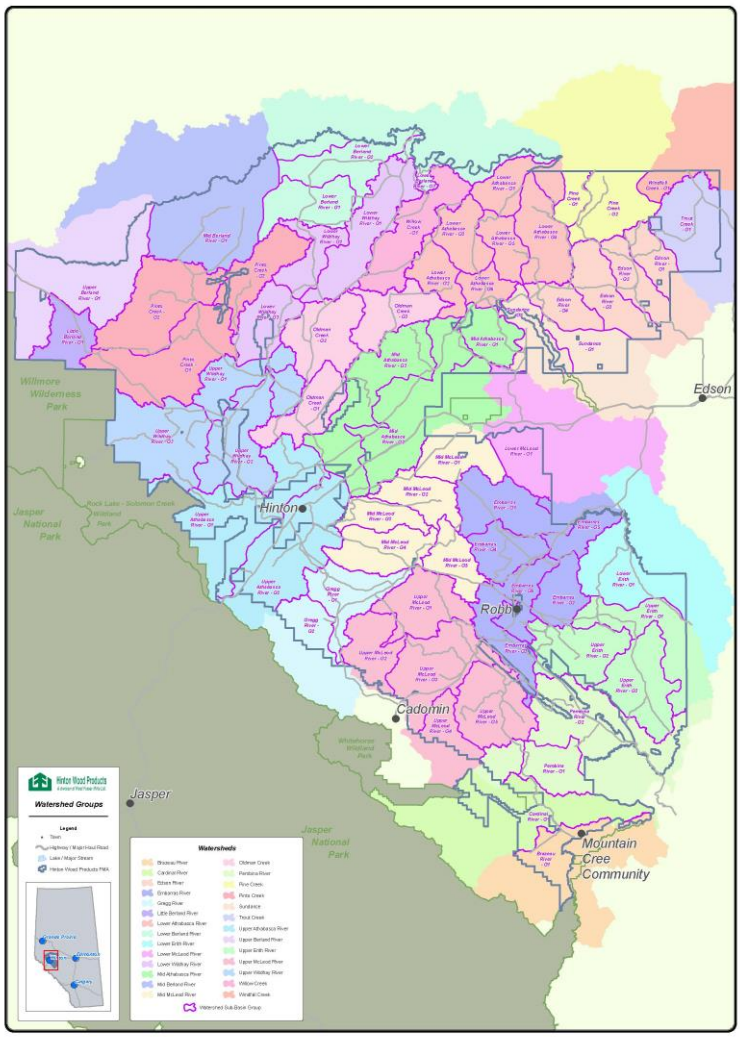
C. ***Stream geomorphology*** – This refers to the shape and forms of a stream, and how the nature of the stream relates to its origin, development, and change over time. In order to determine a stream geomorphology, factors influencing the stream's geomorphology need to be evaluated. These can include: discharge volume/velocity, sediment volume/size, geometry (width/depth), slope, and streambed roughness. Numerous classification systems exist for assessing streams and other waterways.

Inventory and Analysis

In the 2010 MPB FMP amendment, water yield impacts of timber harvesting were modelled for the period between 2008 and 2027. Projected water yield changes were assessed using three different sizes of watersheds:

- 27 major basins (average: 38,361 ha - maximum: 77,360 ha - minimum: 4,676 ha)
- 67 watershed groups (average: 15,419 ha - maximum: 33,315 ha - minimum: 4,676 ha)
- 222 watersheds (average: 4,653 ha - maximum: 11,977 ha - minimum: 5 ha)

The watershed groups are the most appropriate for the purposes of the FMP amendment water yield assessment. The major basins are too large and the watersheds tend to be too small for the scale of assessment completed. As the name suggests, the watershed groups were created by grouping smaller watersheds together with the intent to create units of approximately 10,000 ha in size. Groupings were limited to adjacent units that contained watercourses which flowed to a common outlet. For some watersheds along very large watercourses (e.g. Athabasca River), the groups were simply the smaller watersheds that flowed into the larger watercourse. Particular attention was focused on creating reasonable watershed groups in locations impacted during the first ten-years of the spatial harvest sequence. The watershed group results are presented in this section. The following figure illustrates the geographic extent of the 67 watershed groups within the Hinton FMA.



The Alberta ECA model was used to evaluate potential impacts of the spatial harvest sequence on water yield. Base precipitation and base yield estimates were obtained from a report completed for the Hinton FMA area (Strategic Planning Tools for Hydrologic Resources Phase 2 Study, Golder Associates Ltd. 1999.) Base yield estimates were provided for three hydrologic zones, which covered the extent of the FMA:

- Front Range: 279 mm
- Upper Foothills: 267 mm
- Lower Foothills: 112 mm

Base precipitation estimates were provided for ten selected basins. These estimates were extended to all 222 watersheds in this assessment, based on the relative proximity of each watershed to the original ten (from the Golder study).

The results of the watershed assessments are presented in Table 2.1217a.

Table 2.1217a – *Results from the 2010 MPB FMP Amendment hydrology analysis.*

Watershed	Base Precipitation (mm)	Base Water Yield (mm)	Total Area in Watershed (ha)	Total 20-year Harvest Sequence (ha)	Total Area Harvested Since 2008*	Percent of 20 year Sequence Harvested	Maximum Water Yield Increase if entire 20 year Sequence is Harvested
Brazeau River - G1	621	273	10,189	536	0	0%	1.3%
Cardinal River - G1	621	272	18,595	817	0	0%	0.9%
Edson River - G1	567	112	7,675	1,930	204	11%	8.6%
Edson River - G2	567	112	9,820	924	61	7%	3.3%
Edson River - G3	567	112	14,751	2,322	115	5%	5.4%
Edson River - G4	567	112	8,876	2,110	504	24%	10.3%
Embarras River - G1	468	112	17,420	1,831	328	18%	4.8%

Watershed	Base Precipitation (mm)	Base Water Yield (mm)	Total Area in Watershed (ha)	Total 20-year Harvest Sequence (ha)	Total Area Harvested Since 2008*	Percent of 20 year Sequence Harvested	Maximum Water Yield Increase if entire 20 year Sequence is Harvested
Embarras River - G2	621	267	9,831	3,177	1085	34%	4.4%
Embarras River - G3	621	267	11,326	2,690	0	0%	3.8%
Embarras River - G4	621	267	11,039	977	182	19%	1.5%
Embarras River - G5	468	112	7,238	807	170	21%	4.3%
Embarras River - G6	621	112	9,654	1,787	306	17%	10.5%
Gregg River - G1	621	267	15,280	1,144	5	0%	1.3%
Gregg River - G2	621	271	8,243	949	0	0%	2.2%
Little Berland River - G1	596	279	9,911	981	0	0%	1.7%
Lower Athabasca River - G1	567	112	11,357	1,623	0	0%	6.4%
Lower Athabasca River - G2	567	112	9,368	2,811	320	11%	8.5%
Lower Athabasca River - G3	567	112	10,973	3,313	431	13%	7.8%
Lower Athabasca River - G4	567	112	15,792	346	0	0%	1.0%
Lower Athabasca River - G5	567	112	8,311	760	0	0%	5.3%
Lower Athabasca River - G6	567	112	6,247	1,719	396	23%	9.2%
Lower Berland River - G1	596	267	14,328	4,333	1434	33%	4.1%
Lower Berland River - G2	594	254	15,313	3,914	605	15%	2.6%
Lower Berland River - G3	579	174	10,515	2,598	24	1%	5.5%
Lower Erith River - G1	468	112	19,990	2,144	20	1%	4.6%
Lower McLeod River - G1	469	112	11,016	463	0	0%	1.6%
Lower Wildhay River - G1	567	112	22,083	5,934	1194	20%	12.2%
Lower Wildhay River - G2	596	267	9,754	2,715	642	24%	4.7%
Lower Wildhay River - G3	596	267	12,780	3,061	1309	43%	3.0%
Mid Athabasca River - G1	567	112	10,034	1,791	122	7%	5.6%
Mid Athabasca River - G2	486	112	28,468	4,368	587	13%	3.8%
Mid Athabasca River - G3	486	229	30,435	1,962	237	12%	0.8%
Mid Berland River - G1	596	267	33,316	6,740	603	9%	3.1%
Mid McLeod River - G1	472	112	11,557	1,807	525	29%	5.2%
Mid McLeod River - G2	478	159	10,988	1,745	460	26%	3.5%
Mid McLeod River - G3	468	267	8,148	322	0	0%	0.3%
Mid McLeod River - G4	545	224	14,934	1,962	540	28%	1.9%
Mid McLeod River - G5	621	267	9,909	1,022	180	18%	1.1%
Oldman Creek - G1	486	267	13,039	48	0	0%	0.1%
Oldman Creek - G2	572	267	17,927	3,254	796	24%	2.2%
Oldman Creek - G3	567	267	13,533	1,492	240	16%	1.5%
Pembina River - G1	621	266	10,483	155	0	0%	0.4%
Pembina River - G2	621	269	32,690	2,653	0	0%	1.4%
Pine Creek - G1	567	267	4,974	1,230	414	34%	3.6%
Pine Creek - G2	567	112	15,595	5,930	338	6%	20.4%
Pinto Creek - G1	596	267	28,496	4,135	617	15%	2.5%
Pinto Creek - G2	596	267	25,545	5,565	279	5%	4.1%
Pinto Creek - G3	596	267	14,005	5,590	771	14%	4.1%
Sundance - G1	567	112	10,715	4,035	500	12%	11.0%
Sundance - G2	567	112	10,483	2,034	420	21%	6.5%
Trout Creek - G1	567	112	19,057	4,588	621	14%	8.3%

Watershed	Base Precipitation (mm)	Base Water Yield (mm)	Total Area in Watershed (ha)	Total 20-year Harvest Sequence (ha)	Total Area Harvested Since 2008*	Percent of 20 year Sequence Harvested	Maximum Water Yield Increase if entire 20 year Sequence is Harvested
Upper Athabasca River - G1	553	161	28,515	781	0	0%	0.9%
Upper Athabasca River - G2	573	133	30,893	1,132	130	12%	1.0%
Upper Berland River - G1	596	273	32,405	9,724	0	0%	6.3%
Upper Erith River - G1	508	152	16,226	2,424	153	6%	3.4%
Upper Erith River - G2	621	192	17,301	4,650	378	8%	5.8%
Upper Erith River - G3	591	267	19,531	4,521	0	0%	3.4%
Upper McLeod River - G1	621	267	16,021	1,274	97	8%	1.3%
Upper McLeod River - G2	621	267	12,237	1,807	0	0%	2.7%
Upper McLeod River - G3	621	269	22,874	4,649	0	0%	3.2%
Upper McLeod River - G4	621	279	6,978	623	0	0%	1.2%
Upper McLeod River - G5	621	267	19,292	5,873	793	14%	7.0%
Upper Wildhay River - G1	596	267	11,977	1,978	706	36%	2.3%
Upper Wildhay River - G2	555	267	21,502	974	102	10%	0.4%
Upper Wildhay River - G3	596	271	31,023	6,882	854	12%	2.3%
Willow Creek - G1	567	112	19,644	3,975	238	6%	7.6%
Windfall Creek - G1	567	112	4,676	1,575	110	7%	17.0%

* - Harvest area from May 1, 2008 to January 30, 2014

Target and Strategy

The Target is:

1. *All watershed basins to be within the 15% acceptable impact thresholds as per the 2010 MPB FMP Amendment.* When the projection is outside the acceptable range further discussions with SRD will take place to determine an action.

Basis for Target	Acceptable impact thresholds were designed to maintain changes in hydrological variables within ranges that conserve three management objectives: aquatic ecosystems, water quantity and quality, and downstream infrastructure.
Primary Strategy	The strategy is to complete new assessments on watershed basins as required to ensure the Target is met through the harvest design and/or harvest schedules. In addition, the harvest schedule specified in the Forest Management Plan will be implemented as well as the Development Plan and Annual Operating Plan. See also future development section below

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

Based on the 20 year spatial harvest sequence, only *Pine – Creek G2* and *Windfall Creek - G1* water basins have a potential water yield increase above 15%. HWP discussed these results with AESRD and they were deemed acceptable because only a portion of the watershed is within the FMA, therefore the increased water flows are largely based on administrative lines. The heaviest MPB attacks on the FMA have occurred close to the Windfall Creek – G1 and Pine Creek – G2 watersheds, therefore the ability to control the level of harvest in this area is likely limited. The total area harvested in those locations has yet to be determined. All other watersheds operated in since this indicator was developed, were within acceptable impact thresholds.
Our MPB strategy includes three phases: beetle management, pine management, and salvage. HWP will continue to review potential impacts on individual watershed basins. Implementation of pine management (and possible beetle management) in 2013 did not have any known adverse watershed impacts. Any potential watershed impacts that exceed the thresholds described in the 2010 FMP amendment will be examined prior to harvest.

Monitoring and Reporting

The percent of watershed basins within acceptable impact thresholds will be reported annually in the SFM Stewardship Report based on the calendar year.

Future Development

This VOIT will be changed in 2014 to reflect the changes agreed upon by the Plan Development Team as part of the 2014 DFMP process. The new VOITs will be as follows:

- Objective – Evaluate impact of timber harvesting on water yield
- Indicator – Maximum percent increase in annual water yield
- Target – All identified watershed basins within the FMA will undergo an Alberta "Equivalent Clear-cut Area" (ECA) analysis. For each watershed, HWP will report on the maximum annual water yield increases projected by the Alberta ECA model.

- Objective – Limit impact of timber harvesting on water yield
- Indicator – Compliance with the Water Act and the DFMP
- Target – Zero Water Act penalties and complete compliance with DFMP

References\Associated Documentation

1. 2010 Mountain Pine Beetle Forest Management Plan Amendment (found on the HWP website at www.westfraser.com/hintonforestry by following the forest operations/planning/FMP links).

ToC

2.1218 Reforestation Delay

DFMP VOIT	Yes
SFI Objective#	Objective #2
ISO Objective and Target?	Yes
Criterion:	**Criterion #4** – Forest Ecosystem Contributions to Global Ecological Cycles
SFM Element:	**4.1 Carbon Uptake and Storage** – Maintain the processes that take carbon from the atmosphere and store it in forest ecosystems
Value:	Ecological processes
Objective:	Maintain the ecological processes that are responsible for recycling water, carbon, nitrogen and other life sustaining elements
Indicator:	Reforestation Delay
Target:	Commence reforestation on 80% of Hinton Wood Products harvested area within 1 year of harvest, and 100% of harvested area within 2 years of harvest
Acceptable variance:	± 5% for first harvest year and 0% for second year
Monitoring:	The average period in days between skid clearance and initiation of reforestation activities will be reported annually on a timber operating year basis (May 1–April 30) in the SFM Stewardship Report.

Overview

Prompt reforestation contributes towards many Sustainable Forest Management goals. In particular, it indicates that the timber resource is being maintained, and that the goal of ensuring the contribution of the forest to carbon sequestering is maintained.

Definitions

A. ***Reforestation delay*** – This is the time period between skid clearance (completion of harvesting) and initiation of reforestation activities. It is determined by calculating the time (in days) between final skid clearance and the initiation of reforestation activities (generally site preparation) on the site. The operating year for reforestation is May 1–April 30, and regulations allow two full operating years for reforestation treatment after the year in which skid clearance is obtained.
B. ***Site preparation*** – Site preparation involves the preparing of a harvested site for reforestation (either by planting or natural regeneration). On HWP's FMA, site preparation normally involves some type of mechanical manipulation of the soil, but could also include a chemical site preparation.
C. ***Reforestation*** – Reforestation refers to the process of reforesting a harvested area after it has been logged. For the majority of HWP's operations, this first means some type of site preparation activity. After site preparation, the blocks are either planted or allowed to regenerate naturally. On the HWP FMA, approximately 70% of the blocks logged are planted and the other 30% are planned for natural regeneration (allowing the seeds from the immediate area to regenerate for conifers and deciduous trees to sucker after harvest). In Alberta, the government requires companies to monitor tree growth after the block has been harvested. The first survey, called an "Establishment Survey", must be conducted at a maximum of 8 years from harvest. Trees growing on these blocks must have grown to a government regulated height and density to pass the establishment survey. Then within 14 years from the time of harvest, another survey, called the Performance Survey will determine if the trees have continued to grow well, are a pre-determined height and density, and that they are growing free of other competition. If surveys determine that the block is not meeting established targets, then the Company has to take measures (e.g. re-planting), and continue to take measures, until the block is satisfactorily regenerated and free of competing vegetation.

***Inventory* and Analysis**

Skid clearance and reforestation initiation dates are tracked for all blocks. The reforestation delay information was originally within the SRMS database, which tracked skid clearance dates and dates for silviculture treatments for each block. We changed the information system in the 2006-07 timber year to a new data management system (TFM) and together with ongoing data clean-up came an opportunity to query our data more effectively. This cleaning, together with updating areas for disturbances such as oil & gas, fire and coal mining activities, continues to cause some minor changes to the results as reported in previous SFM Stewardship Reports.

Target and Strategy

The target for this VOIT is:

1. *Commence reforestation on 80% of Hinton Wood Products harvested area within 1 year of harvest, and 100% of harvested area within 2 years of harvest*

The strategy to ensure this Target is achieved is the same as the target. In order to carry out this strategy, HWP Area Silviculturalists are assigned specific working circles (geographic areas - there are five on the Company's FMA) and are responsible to implement the required reforestation activities in a timely manner. Dates of all silviculture activities are recorded so checks can be made to ensure blocks have not been missed. For the purpose of this VOIT, a Leave-for-Natural (LFN) declaration on deciduous blocks is considered a first treatment.

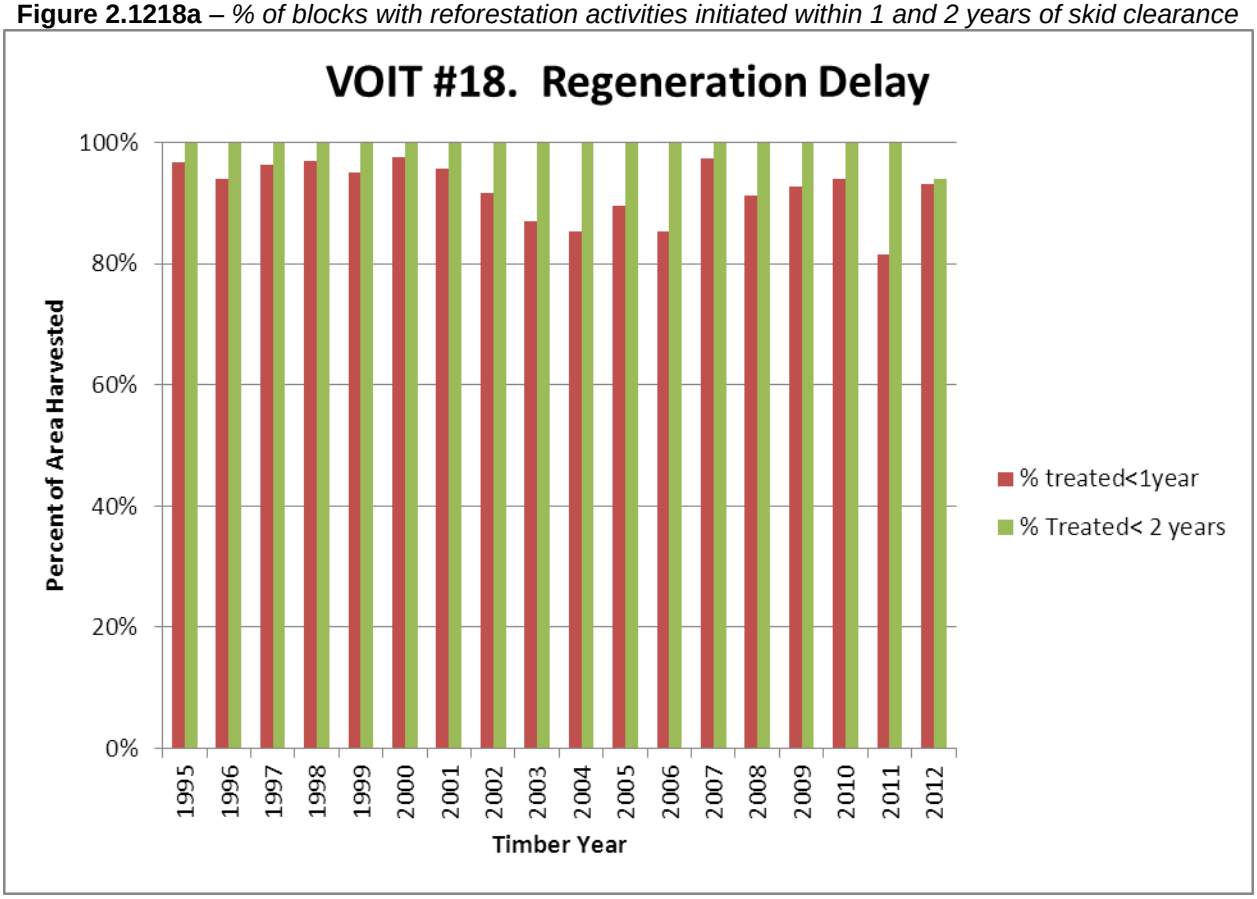
Basis For Target:	HWP is under legal obligation to initiate the reforestation process within two years of harvest, under the authority of the following documents: • The Forest Act • The Timber Management Regulations • The HWP Operating Ground Rules • The 2010 FMP amendment assumed there was a 2 year regeneration lag for regenerated stand which includes natural regeneration Additionally, prompt reforestation of harvested areas is an important activity for demonstrating the Company's commitment for forest sustainability.
Primary Strategy:	HWP Silviculture Foresters are assigned specific working circles (there a five on the Company's FMA) and are responsible to implement the required reforestation activities in a timely manner. At least 80% of the harvested area is treated within the first year.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

Figure 2.1218a displays the percentage of blocks treated within a one year period from the 1995 to 2012 operating (timber) years (May to April), as well as the percentage of blocks treated within a two-year period from 1995 to 2012. The majority of blocks are normally treated within the first year, with the remainder (<15%) treated in the second year. For the 2012 timber year blocks, as of January 2013, 93 % of all blocks harvested met the one year treatment target and 93% met the two-year target. The 2012 operating year blocks may have a skid clearance date as late as April 30, 2013; therefore, for purpose of tracking VOIT #18, we have up until April 30, 2014 to potentially meet the two year target window.

Of the 4,467 blocks harvested from 1995 to the 2012 operating years, initial treatment took place within one year of skid clearance in 90% of cases. Although only 19% of blocks harvested since May 1, 2011 were treated when reporting this VOIT in January 2012, an aggressive site preparation program allowed us to catch up to the 80% target in 2012.

Figure 2.1218a – *% of blocks with reforestation activities initiated within 1 and 2 years of skid clearance*



Monitoring and Reporting

The average period in days between skid clearance and initiation of reforestation activities will be reported annually on a timber operating year basis (May 1–April 30) in the SFM Stewardship Report.
There are currently 16 untreated openings (i.e. cutblocks or portion of a cutblock) from the 2012 Operating year. Thirteen of those blocks are from the Marlboro area where the 2012 and 2013 spray season did not take place. As we reported in the 2012 stewardship report, spring planting or the planting of 2+0 is intended to be used by Blue Ridge Lumber as a way of addressing block age versus tree age this VOIT implies to monitor.

Future Development

Systems will continue to be developed for tracking and reporting on this Indicator. There are a number of pressures on the 80% target. Harvest planning has been more dynamic over the last few years, which has created issues for planning seedling stock order levels and for matching seedlots to the seven seed zones found on the FMA under the "Alberta Forest Genetic Resource Management and Conservation Standards" seed deployment requirements. In-block piling of debris takes up more productive space in a block now that all blocks are being road-side processed. The amount and distribution of residuals will likely decrease site occupancy of regeneration. Burning of silviculture piles and of roadside slash, when it lags behind planting and site preparation, has bigger short-term and long-term consequences to the tracking and planting of the burned-over piles which is most problematic in reporting VOIT 18 in LFN declared deciduous blocks.

Although over the last two years we have excelled at keeping current with site preparation, there is a lot of pressure on the "effective regeneration lag" currently assumed to average 2 years in the Forest Management Plan. Planting can be the first activity on a larger portion of blocks now that more chemical site preparation is scheduled as a first treatment in the Marlboro. Weather conditions are often problematic mostly due to wind conditions during the spray windows. More scheduling of summer 2+0 stock and more spring planting in the Marlboro block will help manage the regeneration lag VOIT Target.

ToC

2.1219 Scientific Advancements and Policy Development Pertaining to Carbon Sequestration and Modeling

DFMP VOIT	Yes
SFI Objective#	Objective #2
ISO Objective and Target?	Yes
Criterion:	**Criterion #4** – Forest Ecosystem Contributions to Global Ecological Cycles
SFM Element:	**4.1 Carbon Uptake and Storage -** Maintain the processes that take carbon from the atmosphere and store it in forest ecosystems
Value:	Climate change
Objective:	Maximize forest carbon sequestration
Indicator:	Scientific advancements and policy development pertaining to carbon sequestration and modeling
Target:	HWP will report on activities undertaken to stay current with scientific advancements and policy development pertaining to carbon sequestration and modeling. *(This is a new VOIT developed on June 2, 2008)*
Acceptable variance:	n/a
Monitoring:	Annually report in the SFM Stewardship Report.

This VOIT was dropped in 2013. It will no longer be reported on. The “reforestation delay” indicator will now be used for a target for this Objective.

ToC

2.1220 Annual Timber Harvest

DFMP VOIT	Yes
SFI Objective#	Objective #1
ISO Objective and Target?	No
Criterion:	**Criterion #5** – Multiple Benefits to Society
SFM Element:	**5.1 Timber and Non-Timber Benefits** – Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits
Value:	Maintain sustainable timber supplies
Objective:	Maintain the sustainable productive capacity of ecosystems
Indicator:	Annual Timber Harvest (m3)
Target:	Establish appropriate Annual Allowable Cut (AAC) using the process and standards described in Annex 1 & 2 of the AESRD Planning Manual and comply with cut control requirements specified in the Forest Management Agreement.
Acceptable variance:	As per the Forest Management Agreement
Monitoring:	Cut control will be reported according to the cut control period annually in the SFM Stewardship Report.

Overview

Establishing an appropriate annual timber harvest is a complicated process, but is one of the fundamental tenets of Sustainable Forest Management (SFM) – in order to be successfully practising SFM, one needs to establish a cutting rate that is sustainable, taking into account all the values of the forest. The authorized annual timber harvest is established as part of the Forest Management Plan and is called an Annual Allowable Cut (AAC).

Definitions

A. ***Annual Allowable Cut (AAC)*** – The AAC is the amount of timber harvest that can be obtained from a forest area on a perpetual sustained yield basis. The total area of the forested land available for harvest and the growth rates of the trees strongly influence the AAC. In order to calculate an accurate AAC, the Company must have good information about the location of different tree species in the forest and their associated growth rates. HWP has some of the best data in the world on the growth of lodgepole pine (the main species on the FMA) due to over 3000 growth & yield plots that have been continually established on the FMA starting in the mid-1950's. These plots calibrate growth models which allow us to project how fast trees on our managed land will grow back after they have been harvested or after they regenerate following a fire.
B. ***Cut Control*** - Cut control is the term used to compare actual cut (harvested volume) to the AAC and is therefore a measure of long-term sustainability of the timber resource. The Forest Management Agreement specifies cut control requirements as a minimum harvest to be achieved (to ensure use of the resource for the economic benefit to Albertans), and a maximum harvest, (to protect against over-harvest).

***Inventory* and Analysis**

AACs are calculated based on standing green inventory; therefore, care must be taken to ensure all charges (depletions) against the AAC are accounted. Actual harvest includes the volume delivered across the weigh scale and a number of "depletion factors", including a scale conversion, losses due to other industrial activities (e.g. oil & gas activities) and utilization standard variances.

The historical and current AACs for the Hinton FMA are shown in Table 2.1220a. The AAC has changed over time due to changes in the FMA area and utilization standards.

The current AAC is based on analyses completed as part of the 2010 Forest Management Plan mountain pine beetle amendment. For further information see Volume II of the 2010 Forest Management Plan mountain pine beetle amendment.

Table 2.1220a – *Annual Allowable Cut for the Hinton FMA Landbase.*

DFMP Year	AAC (m^3/year)	
	Coniferous	Deciduous
1961	701,000	n/a

DFMP Year	AAC (m^3/year)	
	Coniferous	Deciduous
1986	1,302,000	n/a
1991	1,900,000	126,000
1999	2,236,129	169,449
2006	1,772,840	169,449
2007	1,772,840	169,449
2008	1,535,000	169,449
2010	1,766,576	249,832

Target and Strategy

The Target for this VOIT is:

1. *Establish appropriate Annual Allowable Cut (AAC) using the process and standards described in Annex 1 & 2 of the AESRD Planning Manual and comply with cut control requirements specified in the Forest Management Agreement.*

Basis for Target	The establishment of an appropriate AAC is a requirement of Alberta government's Planning Manual
Primary Strategy	Follow the methodology outlined in Annex 1 & 2 of the AESRD Planning Manual.

2013 Annual Report **Target Met** ☐ **Target Not Met** ☒

The objective of the 2010 mountain pine beetle forest management plan amendment (also called the MPB Plan) was to reduce MPB risk and recommend a new AAC, while ensuring that water, caribou, trumpeter swan and grizzly bear issues were addressed. The selected management strategy was the best practical feasible option for reducing the risk of a catastrophic MPB outbreak while maintaining the economic viability of the FMA. The accelerated harvest was constrained to reflect anticipated limitations for utilization of the fibre as well as providing a reasonable AAC fall-down. The 20-year accelerated conifer harvest level was determined to be 1,766,576 m^3/yr. The associated deciduous harvest was determined to be 249,832 m^3/yr. These AACs were effective May 1, 2010.

The actual annual and cumulative AAC performance is reported in Table 2.1220b below:

Table 2.1220b –*Timber Production System Reported Harvest*

Species	Harvest Period	Target Harvest Level (m3)	Reported Harvest (m3)	Percentage over (+) or under (-) year Target
Conifer	May 1, 2012 - April 30, 2013	1,766,576	1,497,422	-15.2%
	May 1, 2008 - April 30, 2013	8,369,728	6,176,827	-26.2%
Deciduous	May 1, 2011 - April 30, 2012	249,832	162,257	-35.1%
	May 1, 2008 - April 30, 2013	1,088,394	701,962	-35.5%

The reported conifer harvest of 1,497,422 m3 for the 2012/13 timber year (May 2012 to April 2013) includes volume charged against the conifer AAC to reflect areas removed from the FMA for new industrial dispositions. Likewise, the reported deciduous harvest of 162,257 m3 for the 2012/13 timber year includes volume charged against the deciduous AAC to reflect areas removed from the FMA for new industrial dispositions.

The May 1, 2008 to April 30, 2013 timeframe represents the completion of the 5 year harvest period and its associated targeted harvest level of 8,369,728 m3 of coniferous volume and 1,088,394 m3 of deciduous volume. As shown in the above table, HWP has undercut its coniferous 5-year targeted harvest level by 15.2% as well as its targeted deciduous cut by 35.5% – meaning that HWP has not met its target for this VOIT. HWP will be applying to move this undercut volume forward into the next 5-year quadrant. The primarily reason for

the undercut was the ramping down of sawmill production during the economic recession that took place throughout the entire five year quadrant.
The criteria for the establishment of the annual allowable cut in Hinton Wood Products' 2014 Forest Management Plan will be consistent with the process and standards described in the AESRD Planning Manual.

Monitoring and Reporting

Cut control will be reported according to the cut control period (2008-2013) annually in the SFM Stewardship Report, HWP's GDP Summary Document, and in the General Development Plan (GDP) – all of these documents are posted on West Fraser's website annually:
http://www.westfraser.com/responsibility/local-forest-management/divisional-plans-publications-0/hinton-fma.

Future Development

Alberta's Timber Production Reporting System will continue to be used to track and report on cut control.
The annual allowable cut will be re-evaluated in the 2014 forest management plan.

ToC

2.1221 FireSmart Cooperative Initiatives

DFMP VOIT	Yes
SFI Objective#	Objective #2
ISO Objective and Target?	No
Criterion:	**Criterion #5** – Multiple Benefits to Society
SFM Element:	**5.2 Communities and Sustainability** – Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and to participate in their use and management
Value:	Reduce the risk to communities from wildfire
Objective:	To reduce wildfire threat potential by reducing fire behaviour, fire occurrence, threats to values at risk and enhancing fire suppression capability
Indicator:	FireSmart cooperative initiatives
Target:	Cooperate with all AESRD FireSmart initiatives around communities within or bordering the DFA.
Acceptable variance:	Report annually.
Monitoring:	Work carried out on FireSmart initiatives will be reported on annually in the SFM Stewardship Report.

Overview

Communities within or bordering the FMA are situated in a forest setting, which makes them vulnerable to forest fires. The Forest Protection Division of Alberta Environment Sustainable Resource Development (AESRD) is leading a program called FireSmart to reduce forest fire threats to communities in the wildland-urban interface. FireSmart activities often include forest thinning or harvest in the surrounding FMA and other forested areas. The Company will cooperate with FireSmart activities for the following local communities: Hinton and associated subdivisions, Robb, Cadomin, Brule, and Mercoal.

Definitions

A. ***FireSmart*** – The FireSmart philosophy focuses on mitigating the likelihood of large, high-intensity, high-severity fires and the risk associated with the use of prescribed fire.

B. ***Wildland-Urban Interface*** – a popular term used to describe an area where various structures (most notably private homes) and other human developments meet or are intermingled with forest and other vegetative fuel types.

C. ***FireSmart Community*** – a FireSmart community has addressed seven components designed to reduce fire risk. These are fuel management, education, legislation, development, planning, training, and interagency cooperation.

Inventory and Analysis

As this is a management activity indicator and the Company is a co-operator for an external program there is no inventory and analysis needed.

Target and Strategy

The Target for this VOIT is:

1. *Cooperate with all AESRD FireSmart initiatives around communities within or bordering the DFA.*

Basis for Target	The basis for this Target is the requirement in AESRD's planning manual. The manual requires a Company to set a target with an objective or reducing in Fire Behaviour Potential area within the FireSmart Community Zone.
Primary Strategy	The Company will cooperate with FireSmart activities for the following local communities: Hinton and associated subdivisions, Robb, Cadomin, Brule, and Mercoal.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

There are currently three active community protection plans within the Foothills Wildfire Management Area that Hinton Wood Products is involved with. The Hinton/Yellowhead plan was initiated in 2004. HWP's involvement continued through 2006, but was not needed in 2007 and 2008. Supporting harvest plans for the FMA portion of the plans were approved in late 2006 and harvest operations were completed in 2006. The Hinton/Yellowhead plan was completed in 2007.

The Robb plan was initiated in 2005 and continued into 2011. As part of this plan, HWP completed commercial thinning in selected areas surrounding Robb in 2006 and harvested selected areas in early winter 2010-2011. Additional work for this project is now on hold pending proposed coal mine development in the area.

The Carldale plan was initiated in 2008. The plan encompasses the Carldale and Pedley subdivisions located east of Hinton between Highway 16 and the Athabasca River. HWP completed harvest of FireSmart blocks for this plan in 2009-2010.

At ESRD's request, HWP harvested one remaining cutblock immediately west of Highway 40 South just north of Cold Creek. Planning of this cutblock was completed in 2012. The cutblock was harvested in the winter of 2012/13.

Monitoring and Reporting

HWP FireSmart activities will be recorded and reported on annually in the SFM Stewardship Report.

Future Development

There are no plans for further changes to this indicator at this time.

References\Associated Documentation

- Alberta FireSmart program http://www.srd.alberta.ca/ManagingPrograms/PreventingFightingWildfire/WildfirePreventionEnforcement/Default.aspx

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2.1222 Regenerated Stand Yield Compared to Natural Stand Yield

DFMP VOIT	Yes
SFI Objective#	Objective #1 and 2
ISO Objective and Target?	No
Criterion:	**Criterion #5** – Multiple Benefits to Society
SFM Element:	**5.2 Communities and Sustainability** – Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and to participate in their use and management
Value:	Forest Productivity
Objective:	Maintain Long Run Sustained Yield Average
Indicator:	Regenerated stand yield compared to natural stand yield
Target:	Average regenerated stand yield is greater than or equal to average natural stand yield. *(This new VOIT was developed on February 25, 2008)*
Acceptable variance:	n/a
Monitoring:	Monitoring will be carried out primarily through PGS plots in regenerating and natural stands and will be implemented through HWP's new Alternative Regeneration Standards (ARS) up until 2009 and the Regeneration Standards of Alberta (RSA) Performance surveys

Overview

Fire-origin stands (so called because they originated naturally after a forest fire) and stands that are regenerated by humans after they have been harvested (or burned) may have different yields (defined as a growth rate per hectare). Typically, stands that are regenerated after harvesting have a higher yield (or growth rate) than fire-origin stands, simply because they are tended by forest managers – this is similar to the different in growth rate one might expect in two gardens, where one was let to grow without human intervention and the other was tended.

The intent of this VOIT is to measure both the growth rate (yield) in regenerated (managed) stands and natural (unmanaged) stands, and to ensure that the average yield in regenerated stands is greater or equal to the average yield in fire-origin stands.

Definitions

A. ***Long Run Sustained Yield*** – The Long Run Sustained Yield (LRSY) is one measure of forest productivity. It represents the theoretical long term timber growth of the forest. The LRSY is the average growth of a forest (m3/ha/yr) multiplied by the area (ha). It essentially tells you how much a forest is growing (m3) each year and is a major factor in determining the Annual Allowable Cut for any defined area.
B. ***Stand Yield*** – The stand yield is the merchantable volume and is typically expressed as cubic metres of growth per hectare (m3/ha)
C. ***RSA-Reforestation Standard of Alberta*** –New regeneration standards (2009) that better tie regeneration performance to projected growth and yield of the stand(s), and therefore lead to better Annual Allowable Cut (AAC) projections. The intent of the RSA is to link the performance of regenerated blocks to AAC. This is done by comparing performance survey results to target growth & yield for each species class as set out in the DFMP. When performance surveys are compared to target yield in the DFMP and they aren't met – this may affect the future AAC for those stand types.
D. ***Mean Annual Increment*** – Mean Annual Increment is a measure of growth m3/ha /year

Inventory and Analysis

Forest growth expectations are defined as part of the annual allowable cut determination process in the Forest Management Plan. Typically, the forest area is stratified into many similar forest types (e.g. pure pine stands, spruce-aspen mixed-wood stands, etc.). Each of these groups has a distinct growth assumption, often illustrated in graphical form and referred to as a "yield curve". The mean annual increment for a given stratum is calculated by dividing yield (m3/ha) by the age (years) at which the yield is achieved. Mean annual increment (m3/ha/yr.) is a common measure of forest productivity. Yield curves are derived from point sample data or through the use of forest growth models. HWP has a well-established grid of Permanent Growth Sample (PGS) plots on the

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FMA which have decades of growth measurements. These plots have been the primary source of data for the development of the Hinton FMA yield curves.
Post-harvest forest stands typically have higher yield expectations than natural, fire-origin stands. This is due, in part, to achieving better spacing of regenerating trees than would occur naturally. With more room to grow, the trees perform better, especially in diameter growth, in early stand development.

One measure of forest sustainability is the Long Run Sustained Yield Average (LRSYA). LRSYA is calculated as the product of area and mean annual increment. The productive forested landbase that contributes to the AAC is defined in the forest management plan. Although the contributing landbase may be refined slightly during the term of the management plan, there is typically a high level of confidence in the landbase; consequently, the primary variable which can be assessed to evaluate maintenance of the LRSYA is the mean annual increment.

HWP has been actively engaged with the Department of Alberta Sustainable Resource Development on the creation of a new regeneration assessment system for harvested cutovers, originally named Alternative Regeneration Standards are now RSA, a Provincial Standard requirement. The regeneration survey data used in combination with forest growth models through a compiler which provides an estimate of mean annual increment for the regenerating forest stands. These assessments will be compiled annually. Every five years, the mean annual increment values will be compared against yield assumptions included in the forest management plan.

Target and Strategy

The Target for this VOIT is:

1. *Average regenerated stand yield is greater than or equal to average natural stand yield.*

Basis for Target	Regenerated stand yield should be equal or above natural (fire-origin) stand yields, because we are actively managing regenerated stands (harvested areas). The target is derived from data collected under HWP's extensive PSP plot program.
Primary Strategy	The primary strategy to meet this Target is to continue to collect data in HWP's PSP plot program, as well as monitor and measure growth & yield performance through HWP's Regeneration Standards of Alberta (RSA) program. If yield is not meeting or exceeding natural stand (fire-origin) yield then there may be impacts to HWP's AAC – this provides the incentive to ensure (through adequate tending activities) that regenerated yield does not fall below natural stand yield.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

AESRD has decided that a consistent utilization standard (15/10/30 – 15 cm stump diameter, 10 cm stump diameter and 30 cm stump height) will be used for performance survey reporting and reconciliation.
Only one block had a legislated performance survey completed on the Hinton FMA in 2013-14. The results for the areas surveyed to the performance standard during the 2012/2013 survey season are as follows:

Table 2.1222a – *Forest Growth Forecast*

Declared regenerating forest type	**Target Mean Annual Increment*(Preliminary 15/10/30 utilization standard)**		**Forecast Mean Annual Increment projected from survey data (15/10/30 utilization standard*)**	
	Conifer	**Deciduous**	**Conifer**	**Deciduous**
Pure conifer	2.65	0.00	3.15	0.82
Conifer dominated mixedwood	1.83	0.58	n/a	n/a
Deciduous dominated mixedwood	1.24	1.32	n/a	n/a
Pure deciduous	0.52	2.40	n/a	n/a

*** this is the target MAI in the current Managed Regeneration Yields in the FMP ie not the natural regenerated yield curve.**

Monitoring and Reporting

This indicator is monitored through evaluation of HWP's yield curves, PSP program and RSA program. Reporting on this Indicator will take place annually in the Stewardship Report.

Future Development

To date this VOIT the Forecast Mean Annual Increment projected from survey data has been compared to the target regenerated MAI associated with the Forest Management Plan (not the fire origin curves as states as an the indicator of this VOIT). The 2014 Forest Management Plan will explicitly state a fire origin yield curve for each of the applicable yield group to be compared to yield forecasted based on performance survey results.

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2.1223 Aboriginal Consultative Activities

DFMP VOIT	Yes
SFI Objective#	Objective #18
ISO Objective and Target?	Yes
Criterion:	**Criterion #6** – Accepting Society's Responsibility for Sustainable Development
SFM Element:	**6.1 Aboriginal and Treaty Rights** – Recognize and respect Aboriginal and treaty rights **6.2 Respect for Aboriginal Forest Values, Knowledge and Uses** – Respect traditional Aboriginal forest values and uses identified through the Aboriginal input process
Value:	Respect for Aboriginal and treaty rights & Aboriginal consultation
Objective:	Respect and accommodate the special and unique rights and needs of aboriginal peoples in forest management decisions.
Indicator:	Aboriginal Consultative Activities *(This Indicator was amended Sept 29, 2008)*
Target:	1. Annually conduct consultative activities as required under Alberta's "*First Nations Consultation Guidelines on Land Management and Resource Development*" and as directed by Alberta annually as part of the HWP's GDP submission and as outlined in approved HWP Aboriginal Consultation Plans. 2. Hinton Wood Products may also conduct consultative activities voluntarily with other local Aboriginal communities.
Acceptable variance:	1. None – Report annually. 2. Report annually.
Monitoring:	Reported on annually in the SFM Stewardship Report.

Overview

Sustainable Forest Management must ensure a balance of resources and users within the FMA landbase. Decisions in forest management must respect the spiritual, economic, and cultural interests of Aboriginal peoples. To understand Aboriginal peoples' interests and to allow open communication, we must ensure that Aboriginal people are engaged in a meaningful and active process. In accordance with current Alberta Government policy, HWP Aboriginal consultative activities are focused on issue-specific discussion related to the impacts on tradition use and rights of local Aboriginal groups. Details of HWP's consultation activities are outlined in HWP's Aboriginal Engagement Program, as well as any other approved Aboriginal Consultation Plans.

Definitions

A. ***Aboriginal consultative activities*** – Aboriginal consultative activities can be defined as having dialogue with communities of local Aboriginal persons regarding the impacts of HWP activities on tradition uses and rights – Aboriginal persons as identified in Section 35(2) of the Constitution Act, 1982. This includes status, non-status, Métis and Inuit persons who reside in or near the FMA landbase and have expressed interest in being involved. Consultative activities involves dialogue and exchange of views with the intent to understand and influence each other but does not necessarily require or imply consent being given. Aboriginal consultation is ultimately the responsibility of the provincial government; however, some of the government's requirement to consult can be delegated to other stakeholders (e.g. HWP, oil & gas companies, etc.). The provincial government has prepared a document called "*Alberta's First Nations Consultation Guidelines on Land Management and Resource Development*", which outlines what consultative activities are required by industry – this document can be downloaded at http://www.aboriginal.alberta.ca/571.cfm.

B. ***HWP's Aboriginal Engagement Program*** – HWP's Aboriginal Engagement Program was approved by AESRD in May 2008, but was amended in September 2009, when AESRD added two additional First Nations to HWP's Aboriginal Engagement Program. Currently, HWP's Aboriginal Engagement Program is centred around the following two plans:

a. Forest Management Plan (DFMP) – With respect to HWP's DFMP or any major amendments of the DFMP (e.g. the MPB Plan), HWP is required by AESRD to dialogue with the following First Nations (or equivalent) – Alexis Nakota Sioux Nation, Aseniwuche Winewak Nation, Ermineskin Tribe, and the O'Chiese First Nation. HWP has an approved Aboriginal Consultation Plan associated with the submission of our next DFMP (2014).

HWP may also voluntarily undertake additional consultative activities on the DFMP (or any major DFMP amendments) with other Aboriginal communities (i.e. in addition to the four required by AESRD mentioned above). Currently, HWP also regularly seeks feedback from three other Aboriginal communities on a voluntary basis – these communities are the Nakcowinewak Nation, the Foothills Ojibway, and the Mountain Cree.

b. General Development Plan (GDP) - With respect to HWP's GDP, HWP is required by AESRD to consult with the following First Nations (or equivalent) – Alexis Nakota Sioux Nation, Aseniwuche Winewak Nation, Ermineskin Tribe, and the O'Chiese First Nation. Letters will be sent to each group along with the GDP Summary Document, which provides an easy to understand overview of the harvesting and road construction activities being proposed by HWP. The above noted four Aboriginal communities will be asked for input and will be offered future meetings to discuss any details or concerns they may have.

   HWP may also voluntarily undertake additional consultative activities on the GDP with other Aboriginal communities (i.e. in addition to the four required by AESRD mentioned above). Currently HWP also regularly seeks feedback from three other Aboriginal communities on a voluntary basis – these communities are the Nakcowinewak Nation, the Foothills Ojibway, and the Mountain Cree.

All interaction (i.e. field trips, meetings, phone calls, etc.) between HWP and any Aboriginal community are documented – records are kept and stored at HWP's Woodlands Office (see Section 13.3).

C. *Principles for Aboriginal Relationships Document* – This document outlines HWP's principles for Aboriginal relationships. A full copy of this document can be found in Section 13.1(3).

Inventory and Analysis

The intent to initiate issue-specific consultation with recognized Aboriginal groups was accomplished in 2001. It had been a target of a previous SFM Plan to meet with each group three times annually through a round table forum. However, this proved not to be achievable as all communities did not have desire or capacity to participate and there were more communities with an interest than previously known. The target was modified for 2002 to develop and implement a policy regarding Aboriginal relationships. A strategy titled "Principles for Relations with Aboriginal Peoples" was developed and subsequently implemented on March 18, 2003. The targets for this Indicator were again modified in 2004 as the previous targets had been met.

In 2008, HWP submitted its Aboriginal Engagement Program to AESRD for approval. The Program was approved in May 2008; however, it was amended again in September 2009 by AESRD (an additional two First Nations were added to HWP's official consultation list). Currently, AESRD also contacts HWP each year and outlines in writing which Aboriginal communities the Company must consult with.

Targets and Strategies

The Targets for this VOIT are:

1. *Annually conduct consultative activities as required under Alberta's "First Nations Consultation Guidelines on Land Management and Resource Development" and as directed by Alberta annually as part of the HWP's GDP submission and as outlined in approved HWP Aboriginal Consultation Plans.*

Basis for Target	This target is based on the based on the Alberta government's First Nations Consultation Guidelines. The Aboriginal communities that HWP undertakes consultative activities with are those specifically identified annually by AESRD or as requested.
Primary Strategy	The Company will implement its approved Aboriginal Engagement Program (previously described in the "Definitions" section). As a part of the Program, a Company representative will contact via letter each of the previously noted Aboriginal organizations. When seeking Aboriginal feedback on the Company's General Development Plan, the letter will contain the

following:

- An explanation of the purpose of the GDP.
- A copy of the annually produced GDP Summary Document, which outlines in an easy to understand manner, compartments where harvesting may occur during the next five years and major road construction for the upcoming year (class 2 and 3).

When seeking Aboriginal feedback on the Company's Forest Management Plan (DFMP), the consultation will include at a minimum the following:

- An easy to understand (i.e. in plain language) explanation of the purpose of the DFMP (or any major amendment to the DFMP), including:
  - ❑ what stage in the process the DFMP is at
  - ❑ the location of the FMA,
  - ❑ how the DFMP may impact Aboriginal interests,
  - ❑ what a VOIT is, how they are incorporated into the DFMP, and which ones are directly related to Aboriginal engagement (including the current copy of the VOIT table),
  - ❑ Approved DFMP Terms of Reference
  - ❑ an explanation of how they can provide feedback, and an invitation for a further face-to-face meeting, if so desired,
  - ❑ a reasonable time to respond to the request for further information and/or a face-to-face meeting

2. *Hinton Wood Products may also conduct consultative activities voluntarily with other local Aboriginal communities.*

Basis for Target	The Aboriginal communities chosen for consultation are a mix of non-status and status communities that have some degree of traditional interest within the FMA landbase, although they are not communities AESRD requires HWP to consult with.
Primary Strategy	The primary strategy will be the same as the primary strategy for Target #1.

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Target #1 **Target Met** ☒ **Target Not Met** ☐

Target #2 **Target Met** ☒ **Target Not Met** ☐

Target #1 and #2 were changed slightly in 2013 as part of HWP's DFMP development process. HWP now has a separate consultation plan for the DFMP. This plan was approved in 2013.

GDP Consultation

From January 1, 2013 to December 31 of 2013, HWP undertook Aboriginal consultative activities on its General Development Plan and stand tending activities with the nine Aboriginal communities outlined in Table 2.1223a.

Table 2.1223a – *HWP Aboriginal Consultation List*

Aboriginal Group	Mandatory or Voluntary Consultation
Alexis Nakota Sioux Nation	Mandatory (i.e. required by government)
Aseniwuche Winewak Nation	Mandatory (i.e. required by government)
Ermineskin Tribe	Mandatory (i.e. required by government)
O'Chiese First Nation	Mandatory (i.e. required by government)
Foothills Ojibway	Voluntary (i.e. not required by government)
Mountain Cree	Voluntary (i.e. not required by government)
Nakcowinewak Nation	Voluntary (i.e. not required by government)

In 2013, these GDP consultative activities included the following:

- A Company representative contacted (via letter dated March 1, 2013) each of the above noted organizations (with later meetings possible depending on the response). Within the letter to each organization, in plain language, there was:
  - An explanation of the purpose of the GDP.
  - A copy of the document titled 2013/2014 GDP & Stand Tending Summary Document, which provided the following information:
    - the operating areas (compartments) where HWP is planning to operate for the next 5 years
    - major roads construction in the next five years
    - previously harvested blocks that are being planned for a mechanical or chemical stand tending treatment in the next operating year (May 1, 2013 to April 30, 2014)
  - This Summary Document also outlined other important information contained within the GDP, such as:
    - An overview of the General Development Plan
    - Cut control numbers (i.e. actual harvested volumes versus what is allowable)
    - Plans to address other important non-timber values: water, caribou, trumpeter swans, and grizzly bear
    - An explanation of the stand tending process, including the difference between chemical and mechanical stand tending.
    - A description of the numerous ways that the public can have direct input into HWP's operations.
  - An invitation to meet and discuss any issues related to concerns around traditional rights and use, and how the GDP may impact these rights and uses.
- If any of the above Aboriginal communities noted in Table 2.1223a requested a meeting, then the following was discussed at those meetings:
  - An explanation and review of the purpose of the GDP
  - A review of the 2013/2014 GDP and Stand Tending Summary Document.
  - Copies of any additional maps requested would be provided.
- Depending on the circumstances, additional meetings (including field trips) and correspondence may have been required to address concerns and answer questions.
- Aboriginal feedback received (whether written or via meetings) was considered and possible methods to avoid or mitigate potential adverse impacts was identified.

<u>DFMP Consultation</u>

From January 1, 2013 to December 31 of 2013, HWP undertook Aboriginal consultative activities on its Detailed Forest Management Plan (tentatively scheduled for submission in 2014) with the same nine Aboriginal communities outlined in Table 2.1223a. In 2013, these DFMP consultative activities included the following:

- A Company representative contacted (via letter dated March 1, 2013) each of the above noted organizations (with later meetings possible depending on the response). Within the letter to each organization, in plain language, there was:
  - An explanation of the purpose of the DFMP.
  - A copy of the approved Terms of Reference between ESRD and HWP for the development of this 2014 DFMP.
  - A copy of the document titled 2014 DFMP Summary Document, which provided the following information on the following topics:
    - The landbase determination
    - The 20-year spatial harvest sequence
    - The Annual Allowable Cut calculation
    - Strategies for major non-timber values on the FMA

- Values, Objectives, Indicators, and Targets (VOITs), including a VOIT dealing directly with Aboriginal consultation

➢ The attached Summary Document also contains information on HWP's management philosophy regarding the approximation of natural disturbance patterns, and details about incorporating a new way of managing riparian areas in the 2014 DFMP based on natural disturbance principles.
➢ An invitation to meet and discuss any issues related to concerns around traditional rights and use, and how the DFMP may impact these rights and uses.

❑ If any of the above Aboriginal communities noted in Table 2.1223a requested a meeting, then the following was discussed at those meetings:

➢ An explanation and review of the purpose of the DFMP
➢ A review of the 2014 DFMP Summary Document.
➢ Copies of any additional maps requested would be provided.

❑ Depending on the circumstances, additional meetings (including field trips) and correspondence may have been required to address concerns and answer questions.
❑ Aboriginal feedback received (whether written or via meetings) was considered and possible methods to avoid or mitigate potential adverse impacts was identified.

Monitoring and Reporting

Documentation of consultation efforts and meetings will be recorded by the Hinton Wood Products' Aboriginal Coordinator and filed in the Woodlands vault and/or filed digitally. Summaries of all consultation activities undertaken under the DFMP and GDP will be submitted to AESRD when each plan is being submitted for approval. Each Target will be reported on annually.

Future Development

The wording in this Target is not expected to change in the near future

References\Associated Documentation

- Principles for Aboriginal Relationships Document
- Hinton Wood Product's Aboriginal Engagement Program
- GDP-AOP Aboriginal Documentation (found on L Drive)
- AESRD-HWP Aboriginal Documentation (found on L Drive)

DFMP-SFMP Aboriginal Documentation (found on L Drive)

ToC

2.1224 Consultation Opportunity and Participation

DFMP VOIT	Yes
SFI Objective#	Objective #17
ISO Objective and Target?	No
Criterion:	**Criterion #6** – Accepting Society's Responsibility for Sustainable Development
SFM Element:	**6.3 Public Participation** – Demonstrate that the SFM public participation process is designed and functioning to the satisfaction of the participants
Value:	Conduct meaningful public involvement
Objective:	Implement public involvement program ensuring broad participation of interested parties in forest management decision-making processes.
Indicator:	Consultation Opportunity and Participation
Target:	1. Develop, implement, monitor, and report on a public participation process that meets the requirements of CSA Z809-02 Standard 2. Conduct three open houses annually to provide opportunities for the public to review plans, provide feedback, and ask questions about Hinton Wood Products' sustainable forest management practises. 3. Annually, report publicly on FRAG's activities. 4. Annually publicly solicit new membership groups/organizations not already represented on FRAG. Conduct three open houses annually to provide opportunities for the public to review plans, provide feedback, and ask questions about Hinton Wood Products' sustainable forest management practises.
Acceptable variance:	1. None - report annually 2. +/- one open house (Grande Cache is optional) 3. None - report annually 4. None - report annually
Monitoring:	Continue with the current public participation process while exploring further opportunities for other types of consultation. Report annually in the SFM Stewardship Report.

Overview

A strong public participation process is a vital component of sustainable forest management in Canada. Involvement of interested parties is the best way to ensure that the broad views of society and the local communities are recognized and addressed. Hinton Wood Products recognizes that we operate on publicly owned forests and our ability to continue to operate on that land depends on the public's understanding and knowledge that we are managing their forests responsibly and that their values are being incorporated in our planning – it is our job to develop, maintain, and continually improve a public participation process that meets the public's demanding requirements.

The Company's public involvement program is multi-faceted and includes communication components such as newspaper advertisements, interactive components such as our recreation program, open houses, and a divisional website, as well as a multi-stakeholder consensus-based decision making process called the Forest Resources Advisory Group (FRAG).

Hinton Wood Products is committed to integrating public values into our management activities. The goals of the Public Involvement Program are as follows:

- To give the public an opportunity to become proactively involved in the management of the Forest Management Area.
- Use the public participation process to help improve the Hinton Wood Product's Sustainable Forest Management System (SFM) for the Hinton Division Forest Management Area.
- To provide awareness regarding the opportunity for interested parties to participate in forest management decision making – this could take place through a local public advisory group member ((i.e. FRAG) or by direct communication with HWP.
- Collect, consider and respond to all input provided by interested parties.
- Establish a list of interested parties to participate in continual improvement of the Hinton Wood Products' SFM System.
- To increase general awareness and understanding of sustainable forest management

Definitions

A. ***Consultation opportunity*** – A consultation opportunity is any opportunity provided to the public that allows them input into Hinton Wood Products' forest management activities.

B. ***Consultation participation*** - Consultation participation is defined as the participation by the public in forest management issues. Offering the opportunity for the public to provide input and feedback is a cornerstone of sustainable forest management and provides a measure of how seriously the Company values input from other sources.

C. ***Forest Resources Advisory Group (FRAG)*** – The Forest Resources Advisory Group was established to provide organized and regular public input into the Company's Woodlands department planning and operations. FRAG is also established to select or respond to issues, consider and recommend actions and policies to Hinton Wood Products. FRAG is the main avenue for public participation as required and outlined in the CAN/CSA Z809-02 standard. FRAG agreed to a set of Basic Operating Rules, which can be supplied on request. The Group is made up of various stakeholders including those that represent landbases that are adjacent or within our FMA.

D. ***General Development Plan (GDP)*** – The Hinton Forest Management Area (FMA) is divided into 135 geographic areas called compartments. The GDP provides a five-year projection of the compartments that HWP may be harvesting in, as well as any proposed main road construction – this information is highlighted in the map found in the middle of this document. The GDP also describes HWP's cut control by reporting on the status and forecast of the coniferous and deciduous Annual Allowable Cut, and briefly summarizes how HWP will manage for a number of other values found on the FMA.

E. ***Detailed Forest Management Plan (DFMP)*** – The DFMP is the highest level plan – it plans over a 200 year time horizon and provides direction to all other plans below it. An Annual Allowable Cut (AAC) is recommended in the DFMP. All important non-timber values (e.g. biodiversity, recreation, etc.) are identified and strategies identified to manage them. The DFMP contains a 20 year spatial harvest sequence (this means proposed cut block locations are shown on a map for the first 20 years of the plan). DFMPs are generally redone every 10 years (although there are exceptions). HWP's current (1999) DFMP was approved in 2000 and then amended in 2010 – the submission date for the next DFMP is September 2014.

F. ***Open Houses*** – These are public open houses hosted by Hinton Wood Products each year (usually in March). They are normally held in Hinton and Edson (and sometimes Grande Cache) at easily accessed venues such as the shopping mall in Hinton and Grande Cache and the Recreation Complex in Edson. At the open house, copies of Hinton Wood Products' SFM Plan, planned or approved Final Harvest Plans, the GDP Summary Document, HWP's herbicide plans, and general information about the Woodlands Department will be available for the public to view and comment on. These sessions are an excellent opportunity for the public to provide input into the planning process, ask questions of staff, or look at detailed maps of current and/or planning development.

Inventory and Analysis

Hinton Wood Products has established a public consultation program to promote dialogue between the public and the staff of the Woodlands Department and to provide input into the development of this SFM Plan. The main elements of Hinton Wood Products' public involvement program are outlined below:

1. Forest Resources Advisory Group (FRAG) – At the end of 2013, FRAG has representation from the following stakeholders (this membership list is subject to change, and changes from year to year):

   - Hinton & District Chamber of Commerce
   - United Steel Workers
   - Hinton Ministerial Association
   - Coal Assoc. of Canada
   - Town of Hinton
   - Alberta Trapper's Association
   - Friends of Switzer Park
   - Communications, Energy and Paperworkers Union of Canada
   - Whisky-Jack Bird Club
   - Fox Creek Development Association
   - Robb Hamlet Preservation Association
   - Athabasca Watershed Council
   - Hinton Historical Society Hinton Historical Society
   - Hinton Fish & Game Association
   - Hinton All-Terrain Vehicle Society

   There are also a number of agencies that sit on FRAG and act in an advisory role (i.e. they are non-voting members). These are: There are also a number of agencies that sit on FRAG and act in an advisory role (i.e. they are non-voting members). These are:

- Foothills Research Institute
- Coalspur Mines
- Alberta Environment and Sustainable Resource Development

Hinton Wood Products has publicly reported on FRAG's activities since the year 2000. This is done by taking out an ad in the local newspaper that explains who the group is and outlines the group's activities for the past year. FRAG has annually solicited for new membership since 2005.

2. Letters to Stakeholders (DFMP) – The Company developed a list of stakeholders that we felt may have an interest in participating in the development of VOITs for previous SFM Plans and HWP's new Detailed Forest Management Plan. Letters were sent to each person or organization on the list describing in plain language the major elements of the plan being developed (most recently the DFMP and 2013 GDP) and noting the ability to be involved in the development of the identification of values, objectives, indicators, and targets (VOITs) included as part of the plan. The letter also contained information on how they could participate in that process.
3. Letter to Stakeholders (GDP) – The Company annually sends letters to the same stakeholder list advising them of the submission of our GDP, which includes a plain language description of the GDP, including maps, major non-timber value strategies, cut control reporting, and contact information for questions or concerns. In this letter, HWP also invites the stakeholders to attend our annual Open Houses to further discuss the contents of the GDP or any other concerns or questions they might have.
4. Open Houses – Copies of approved Final Harvest Plans, and general information about the Woodlands Department will be available for the public to view and comment on. These sessions are an opportunity for the public to provide input into the planning process, ask questions of staff, or look at detailed maps of current and/or planning developmentHinton Wood Products has held open houses for over 15 years. Open houses are generally held in Hinton and Edson (and sometimes Grande Cache), but the Company has held open houses in other local communities when the need arises (e.g. when harvesting plans more directly affect those communities). For example, the Company has previously held open houses in the communities of Brule, Robb and Cadomin. The need for additional open houses will be dealt with on a case by case basis. Stakeholders are invited to open houses by letters, while the general public is notified via ads in the local papers.
5. Aboriginal Consultation Process – HWP follows Alberta First Nation consultation guidelines. In 2013, HWP developed and ASRD approved an Aboriginal Consultation Plan for the development of HWP's 2014 DFMP.
6. Public Notification of the Initiation of the Compartment Planning Process – When HWP initiates planning in a new compartment, or when 2nd or 3rd pass planning is beginning in a compartment, advertisements seeking public input are placed in local newspapers. The advertisement contains a map of the area being planned and the scheduled date for plan completion. The public is solicited to provide local knowledge of terrain and resources, resource use patterns and timing, inter-resource conflicts of which they are aware, preferences, and opinions.
7. 1-800 Number – The Company provides a toll free telephone (1-800-293-6955) number – all contacts received are responded to and tracked. This toll-free telephone line is staffed during office hours and has voice recording during all other hours. Any complaints, comments, questions, or suggestions will be forwarded to the appropriate person and promptly dealt with. Hinton Wood Products has made a commitment to track all inquiries on this telephone line in writing and, wherever feasible, respond within 24 hours.
8. Recreation Program – The Company strongly believes that providing the public with opportunities to recreate on the FMA in a safe, secure, and enjoyable environment, although not required by the provincial government, is part of our mandate as forest stewards of this land, and a key component of our sustainable forest management vision. The Company, as part of our participation in the Foothills Recreation Management Association (FRMA) currently manages 23 recreation sites (15 campgrounds and 8 multi-purpose trails) under FRMA's recreation program. We continue to use opportunities within our recreation program, such as kiosks, interpretive trails, and trail maps, to inform and educate the public on our forest stewardship and sustainable forest management practices. Through FRMA, we have produced, and annually give away, over 5000 recreation maps for our Forest Management Area that also contain information about sustainable forest management.
9. GDP Summary Document – The GDP Summary Document provides an overview of the General Development Plan. In 2010, the AOP portion of this Summary Document was dropped; therefore, moving forward the document will summarize HWP's annually produced GDP (and is called the GDP Summary Document). This document is intended to provide a simple overview of the general areas the Company

plans on developing during the upcoming operating year (May to April), as well as showing areas where approval has already occurred. The document is given out at the open houses held in the spring.

10. DFMP Summary Document – As part of the development of its 2014 DFMP, HWP has also produced a DFMP Summary Document, which has been distributed to stakeholders and available at our open houses. This Summary Document provides an overview of the DFMP and the planning process in general. It contains a summary of the main components of DFMP, including the landbase determination, the Annual Allowable Cut calculation, the 20-year Spatial Harvest Sequence, and the VOIT (Values, Objectives, Indicators and Targets) process. It also contains a description of the numerous ways that the public can have direct input into HWP's operations. DFMP Summary Documents were prepared and distributed in 2012 and 2013.

Targets and Strategies

The Targets for this VOIT are:

1. *Develop, implement, monitor, and report on a public participation process that meets the requirements of CSA Z809-02 Standard*

Basis for Target	Substantial and meaningful public participation in the development of a SFM System is a fundamental component of the CSA Z809-02 Standard. In addition, the provincial government has mandated forest companies to adhere to the public participation sections of the Standard when developing new Forest Management Plans (FMPs).
Primary Strategy	The strategy to meet this Target is to implement the Company's public participation process that is outlined in detail in the "Inventory and Analysis" section above. Public consultation opportunities and participation will be monitored on an ongoing basis and reported annually in the SFM Stewardship Report.

2. *Conduct three open houses annually to provide opportunities for the public to review plans, provide feedback, and ask questions about Hinton Wood Products' sustainable forest management practises.*

Basis for Target	Public participation is a cornerstone of sustainable forest management. Holding open houses provides the public with a mechanism to meet company personnel and provide them with feedback.
Primary Strategy	Hold an open house in Edson, Hinton, and Grande Cache (optional) annually in the winter (before the submission of our AOP and GDP). Hold these open houses in venues that naturally have significant numbers of people (e.g. malls, recreation centres, etc.). The main tactic for notifying people of the open house will be through advertising in the local newspapers and through letters to important stakeholders (e.g. trappers, etc.). Various staff representing operations, silviculture, and planning will be present at each open house to answer questions. Comment forms will be provided – all written submissions will be responded to (where appropriate). Open houses will be held for at least 4 hours in Grande Cache and Edson, and at least 5 hours in Hinton.

3. *Annually, report publicly on FRAG activities.*

Basis for Target	FRAG represents the public; therefore a report on FRAG's activities to the public on an annual basis is a reasonable tactic.
Primary Strategy	A report is published in the local newspaper (Hinton Parklander or Hinton Voice). This report outlines: who FRAG is, what their mandate is, what they have done in the previous year, and

how to join FRAG if a member of the public is interested in doing so.

4. *Annually publicly solicit new membership groups/organizations not already represented on FRAG.*

Basis for Target	Part of good forest stewardship is providing the public with ample opportunities to become involved in decisions affecting the landbase in which they live – FRAG is one of the Company's main avenues for public input; therefore, ensuring that the public is aware of FRAG and knows how to participate if they choose to do so, is another important aspect of responsible forest stewardship.
Primary Strategy	The annual FRAG report to the community (a notice in the local newspaper) outlines how the public can apply to join FRAG.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

The table below outlines what was carried out in 2013 with respect to public participation:

Table 2.1224a – *Public Participation in 2013*

Public Participation Mechanism	Results
Forest Resources Advisory Group	In 2013, there were eight FRAG meetings. Topics discussed during the FRAG meetings held in 2013 included: • HWP Business Updates – At the beginning of every FRAG meeting, senior staff from the Sawmill and Woodlands provided business updates for FRAG members. • FRAG Membership – On July 8, 2013, HWP was notified by Jasper National Park that they had decided to resign from FRAG stating a lack of resources to continue with the group. On September 30, 3013, FRAG members voted for the acceptance of Coalspur Mines as an advisory member of FRAG. On November 25, 2013, FRAG members voted for the acceptance of the Hinton Historical Society as the newest member on FRAG. • Field trip to view the new sawmill upgrades – On March 21, 2013, Rob Baron, general manager of the HWP mill gave interested FRAG members a tour of the sawmill highlighting the numerous and significant upgrades made in the sawmill over the last two years • Coalspur Mine Vista Project – On March, 25, 2013, Curtis Brinker and Stephanie Mitchell from Coalspur Mines gave FRAG members a detailed update on the Vista Coal Project. • Standing Plans for 2013 – On June 5, 2013, Tim Trahan, an Area Silviculturalist for HWP, provided an update to FRAG members on HWP's stand tending activities for 2012 and 2013. Tim's presentation focused on two main topics: a review of the 2012 stand tending program (mechanical and chemical tending) and a review of the proposed stand tending program for 2013. • Riparian Management Science - On June 5, 2013, Dr. Dave Andison, the Program Lead, for the Foothills Research Institute's Healthy Landscape Program, gave FRAG members a presentation outlining some of issues around removing or excluding disturbance from riparian areas (in the Foothills area of Alberta). • HWP's Riparian Management Strategy – Aaron Jones gave FRAG members detailed descriptions of, and answered questions about, HWP's proposed Riparian Management Strategy, at the following FRAG meetings in 2013: ➢ January 28, 2013 ➢ February 25, 2013 • Riparian Monitoring and Measuring Program – On July 8, 2013, Aaron Jones provided a detailed overview of the current status of the monitoring and measuring program that HWP was developing as part of its Riparian Management Strategy. Jones noted that the monitoring and measuring program was still in its initial development stages and may change over time. On September 30, 2013, Jones gave an update on the new direction HWP was taking with respect to developing a monitoring and measuring program for HWP's Riparian Management Strategy. The new direction would be adapting the British Columbia's existing monitoring and measuring system, called the, "Riparian Management Routine Effectiveness Evaluation). On October 28, 2013, Dr. Rich McCleary, of McCleary Aquatic Systems Consulting, gave a presentation outlining and summarizing the riparian assessment

Public Participation Mechanism	Results
	protocols he had adapted for use by HWP for the monitoring of the implementation of the Company's proposed Riparian Management Strategy. • Detailed Forest Management Plan – Aaron Jones gave presentations reviewing certain VOITs that will be included in the 2014 DFMP. This DFMP information was provided to FRAG at the following meetings: ➢ January 28, 2013 – VOIT review (FRAG members were provided HWP VOIT Table for VOITs 6,7,9,14,15,16,20,21,22,& 42). ➢ March 25, 2013 - HWP reviewed proposed VOIT#48 (to meet ESRD VOIT#2) – patch size distribution. ➢ July 8, 2013 – FRAG members were provided with detailed information on VOIT #1 – area by seral stage; including: HWP's forest cover type definitions, seral stage definitions, and the proposed target for the VOIT. ➢ July 8, 2013 – FRAG members were provided detailed information on VOIT #2 – patch sizes by subunit, including: HWP's patch size classes and how old patches would be measured. ➢ July 8, 2013 – FRAG members were provided detailed information on VOIT #3 – old interior forest. Aaron noted that ESRD had agreed that they would calculate OIF for HWP using HWP's Spatial Harvest Sequence. ➢ September 30, 2013 – VOIT #4, open all-weather forestry road density by subunit, was discussed with FRAG members. ➢ September 30, 2013 – VOIT #10, stand structure retention, was discussed with FRAG members. FRAG members had no major concerns with this VOIT as proposed. • General Development Plan (GDP) and Stand Tending Plan Summary Document – On March 4, 2013, copies of HWP's "2013/14 GDP & Stand Tending Summary Document" and "2014 DFMP Summary Document" were mailed to FRAG members, along with a covering letter that asked FRAG members to contact HWP if they had any questions or concerns about the GDP, DFMP, HWP's stand tending activities, or, would like more details regarding any of the information provided. This letter also included an invitation to attend HWP's open houses held in Edson and Hinton on March 27 and 28, 2013 respectively. • FRAG Member Survey – A survey of FRAG member's satisfaction with the FRAG process was carried out at the June 5 2013 FRAG meeting. • Mountain Pine Beetle Update – On September 30, 2013, Andrea Sharpe, Forest Health Officer for AESRD, gave FRAG members a presentation summarizing the current status of mountain pine beetle in the Foothills region. • Obed Mine containment pond release – On November 25, 2013, John Schadan, Vice President Operations for Sherritt, gave a recap of the events surrounding the October 31, 2013 containment pond release at the Obed Mine. • Caribou – On November 25, 2013, Laura Finnegan, the Program Lead for the Caribou Program at the Foothills Research Institute, gave an update on the current status of caribou in Alberta and described some of the research that was ongoing or that she would be initiating. A quarter page notice was placed in the Hinton Voice newspaper outlining who FRAG is, what the group had being doing in the last 12 months, and providing contact information for anyone interested in joining FRAG. In 2013, FRAG had one stakeholder group resign (Jasper National Park) and two new members accepted (Hinton Historical Society and Coalspur Mines).
Open Houses	In 2013, open houses were held in the communities of Edson and Hinton on March 27th and 28th respectively. Copies of Hinton Wood Products' 2012 Stewardship Report, the "2013/2014 GDP and Stand Tending Plan Summary Document", the 2014 DFMP Summary Document, planned or approved Final Harvest Plans, HWP's herbicide plans, and general information about the Woodlands Department were available for the public to view and comment on. In order to ensure interested parties knew about the open houses, HWP undertook the following: • Advertised the open houses in the March 25, 2013 edition of the Edson Leader, the March 25, 2013 edition of the Hinton Parklander. There was also an article in the March 25, 2012 edition of the Hinton Parklander discussing the upcoming open houses. • Sent a letter dated Mar 4, 2013 to all FRAG members, all trappers on the FMA, and a number of other significant stakeholders – The letter invites the recipient to attend the Open Houses in either Edson (March 27) or Hinton (March 28). The letter notes that HWP will be seeking feedback on the following three plans: HWP's 2013-2014 General Development Plan (GDP), 2014 DFMP, and HWP's Stand Tending Plan. Attached to the letter provided were a copy of HWP's "2013/2014General Development Plan and Stand Tending Plan Summary Document" and a copy of HWP's "2014 DFMP Summary Document". In Edson and Hinton we had 7 and 19 people respectively attending the open houses. HWP received

Public Participation Mechanism	Results
	written or verbal comments from people regarding the following items or issues: 1. The owner of trapline 2110 located to the east of the Medicine Lodge Road came to the open house. A HWP representative talked to her for about 20 minutes and was able to tell her that he didn't believe HWP had any proposed logging on her trapline in this timber year. He took Wilma's phone number and told him he would call her to confirm. He later called the trapline owner on March 28 and confirmed that HWP had no planned harvest areas in her trapline area in the 2013 timber year. 2. An Edson resident representing a group of independent logging contractors talked to HWP representative at the Edson Open House. He was interested in two thing: ➢ For HWP to support a carry-forward on the CTP volume that was not cut in the last five year period. He left us with a letter outlining his position. ➢ To become a member of FRAG. He was sent a FRAG application form the following day via email.
Recreation Program	The Foothills Recreation Management Association (FRMA) currently manages 23 recreation sites (15 campgrounds and eight multi-purpose trails) under its recreation program and continues to use opportunities within the recreation program, such as recreation maps and interpretive trails to inform and educate the public on our forest stewardship and sustainable forest management practices. Communication tools, such as the Recreation Map, have information on sustainable forest management and contact information such as HWP's website, e-mail address, telephone numbers, and mailing address. Annually, approximately 3000-5000 recreation maps, as well as additional trail maps, are given away. In 2013, FRMA had 8,799 paid camping parties use its campgrounds and received 49 written comments from these users.
GDP Summary Document	Each year Hinton Wood Products produces and distributes a GDP Summary Document, in order to provide an overview of the Company's annual planning in a less technical and detailed format. A map in the middle of the document shows the Forest Management Area – this map is subdivided into 135 compartments and is colour-coded to provide information about HWP's future harvesting and road building plans. For the 2013 timber year, a new document titled "2013/2014 GDP & Stand Tending Summary Document" was produced in the spring and released roughly concurrent with the General Development Plan (GDP) submission to Alberta and our open houses (March 27-28). This Summary Document provided the following information: ➢ the operating areas (compartments) where HWP is planning to operate for the next 5 years ➢ major roads construction in the next five years ➢ previously harvested blocks that are being planned for a mechanical or chemical stand tending treatment in the next operating year (May 1, 2013 to April 30, 2014) ➢ An overview of the General Development Plan ➢ Cut control numbers (i.e. actual harvested volumes versus what is allowable) ➢ Plans to address other important non-timber values: water, caribou, trumpeter swans, and grizzly bear ➢ An explanation of the stand tending process, including the difference between chemical and mechanical stand tending. ➢ A description of the numerous ways that the public can have direct input into HWP's operations. In 2013, HWP mailed out the "2013/2014GDP & Stand Tending Summary Document" to approximately 136 stakeholders consisting primarily of trappers, local and regional politicians, Aboriginal communities, contractors, media, energy companies, and FRAG members - a limited number were also produced for our open houses.
2014 DFMP Summary Document	For the 2013 timber year, a new document titled "2014 DFMP Summary Document" was produced in the spring and released roughly concurrent with the General Development Plan (GDP) submission to Alberta and our open houses (March 27-28). This DFMP Summary Document provided the following information: ➢ An explanation of the purpose of the DFMP. ➢ The landbase determination ➢ The Annual Allowable Cut calculation ➢ The 20-year spatial harvest sequence ➢ Strategies for major non-timber values on the FMA ➢ Values, Objectives, Indicators, and Targets (VOITs), including a VOIT dealing directly with Aboriginal consultation ➢ The attached Summary Document also contains information on HWP's management philosophy regarding the approximation of natural disturbance patterns, and details about incorporating a new way of managing riparian areas in the 2014 DFMP based on natural disturbance principles.

<table>
<tr><th>Public Participation Mechanism</th><th>Results</th></tr>
<tr><td></td><td>➢ An invitation to meet and discuss any issues related to concerns around traditional rights and use, and how the DFMP may impact these rights and uses.

In 2013, HWP mailed out the “2014 DFMP Summary Document” to approximately 136 stakeholders consisting primarily of trappers, local and regional politicians, Aboriginal communities, contractors, media, energy companies, and FRAG members - a limited number were also produced for our open houses.</td></tr>
<tr><td>Aboriginal Program</td><td>Consultation on HWP’s GDP and 2014 DFMP was sought from the following Aboriginal communities in 2013:

<table>
<tr><th>Aboriginal Group</th><th>Mandatory or Voluntary Consultation</th></tr>
<tr><td>Alexis Nakota Sioux Nation</td><td>Mandatory (i.e. required by government)</td></tr>
<tr><td>Aseniwuche Winewak Nation</td><td>Mandatory (i.e. required by government)</td></tr>
<tr><td>Ermineskin Tribe</td><td>Mandatory (i.e. required by government)</td></tr>
<tr><td>O’Chiese First Nation</td><td>Mandatory (i.e. required by government)</td></tr>
<tr><td>Foothills Ojibway</td><td>Voluntary (i.e. not required by government)</td></tr>
<tr><td>Mountain Cree</td><td>Voluntary (i.e. not required by government)</td></tr>
<tr><td>Nakcowinewak Nation</td><td>Voluntary (i.e. not required by government)</td></tr>
</table>

Documentation of consultation efforts and meetings were recorded by the HWP’s Aboriginal Coordinator and filed in the Woodlands vault and/or filed digitally. Summaries of all consultation activities undertaken under the DFMP and GDP is submitted to AESRD when each plan is being submitted for approval</td></tr>
</table>

Monitoring and Reporting

Public consultation opportunities and participation will be monitored on an ongoing basis and reported annually in the SFM Stewardship Report.

Future Development

This VOIT was changed in 2013 – it was combined with HWP VOIT #42. VOIT #42 was dropped.

ToC

2.13 Mandatory VOIT Performance Review

Table 2.131 summarizes the progress in 2013 in meeting the mandatory Targets, as described in the VOIT reports in section 2.1201 to section 2.1224. In 2013, 29 out of 35 Targets were successfully met.

Section 2.14 describes the targets that were not met and describes why the Targets weren't met, and where feasible, what measures HWP will take to ensure they are met in the future.

Table 2.131 – Mandatory Indicator & Target *Performance Review Summary*

VOIT #	Indicator	Target	Target Met in 2013
1	Seral Stage	Maintain all seral stage amounts by major forest type and landbase scale within Range of Natural Variation according to the 1999 DFMP analysis.	Yes
2	Uncommon plant communities	Apply operational procedures to conserve uncommon plant communities for 100% of known and encountered occurrences	Yes
3	Unsalvaged natural stand replacing disturbances	1. The cumulative total area of unsalvaged natural stand replacing disturbances to be at least 25% of area disturbed based on a 20 year rolling average. 2. Apply operational procedures to address unsalvaged trees and patches at salvage planning stage.	Yes Yes
4	Compliance with the riparian-related sections of the current Operating Ground Rules.	100% consistent and compliant with the DFMP and the Hinton Wood Products Operating Ground Rules.	No
5	Protected Area	Identify and document special features through HWP's Standard Operating Procedures and Special Places in the Forest Program - develop a management strategy for each identified site within 12 months	Yes
6	Non-HWP water course crossings	1. Participate in the Foothills Stream Crossing Partnership.	Yes
7	Company watercourse crossing	1. Implement and be in compliance with the Company's Stream Crossing Program and water crossing SOP; and be in compliance with the provincial government's Code of Practice for Water Course Crossings, and compliance with the Fisheries Act (Federal). 2. Remediate Company stream crossings not meeting current standards (condition #1 – safety, erosion, and where fish are present, fish passage) on watercourses according to the annual action plan.	Yes Yes
8	Provenances and genetic lines in gene banks and trials	Active conservation program for all species on the FMA that have a tree improvement program.	Yes
9	Stakeholder consultation	Follow existing consultation processes: 1. Forest Resources Advisory Group (FRAG) 2. Final Harvest Plan process 3. Recreation Program 4. West Yellowhead Mountain Pine Beetle Coordinating Committee 5. FireSmart 6. Long Term Access Plans	 Yes Yes Yes Yes Yes Yes
10	Annual % of SR regeneration surveys	90% of blocks surveyed (establishment surveys) will be Satisfactorily Restocked (SR) on the first survey	Yes
11	Cumulative % of reforested areas that meet reforestation target	90% of post-91 blocks surveyed (establishment surveys) will be Satisfactorily Restocked (SR)	Yes
12	Amount of change in the forest landbase	Maintain or limit the loss of forest landbase by: 1. Annually review and update all existing Long Term Access Plans. 2. On a net basis, maintaining the merchantable landbase (contributing to the AAC) at 650,163 ha. 3. Limit the net FMA landbase withdrawals for use by Crown to be < 2% of total FMA landbase as of Jun-88 4. Undertake assessments of 139 industrial sites currently identified as being "returned" to the FMA; identify sites that are ecologically suitable and operationally feasible to reforest within the next three years. 5. Implement silviculture strategy for afforestation of previously forested shrub communities.	 No Yes Yes No Yes
13	Amount of area disturbed	Limit combined annual loss to fire and epidemic insect/disease outbreaks to a maximum of 0.1% of the FMA contributing landbase (based on a 20 year rolling average).	Yes
14	Presence of invasive non-native plant species	Continue to implement the Company's noxious weed program.	Yes

VOIT #	Indicator	Target	Target Met in 2013
15	% Compliance with Company OGR	Complete compliance with Company Operating Ground Rules that relate to soil & water	No
16	Incidence of soil erosion and slumping	Complete compliance with Forest Soil Conservation Guidelines and Stream Crossing Guidelines.	No
17	Watershed Basins	All watershed basins to be within acceptable impact thresholds as per the 1999 DFMP – Hydrology Assessment Model analysis.	Yes
18	Reforestation Delay	Commence reforestation on 80% of Hinton Wood Products harvested area within 1 year of harvest, and 100% of harvested area within 2 years of harvest	Yes
19	Scientific advancements and policy development pertaining to carbon sequestration and modeling	VOIT DELETED	
20	Annual Timber Harvest (m3)	Establish appropriate AAC using the process and standards described in Annex 1 & 2 of the AESRD Planning Manual and comply with cut control requirements specified in the Forest Management Agreement.	No
21	FireSmarting cooperative initiatives	Cooperate with all AESRD FireSmart initiatives around communities within or bordering the DFA.	Yes
22	Regenerated stand yield compared to natural stand yield	Average regenerated stand yield is greater than or equal to average natural stand yield.	Yes
23	Aboriginal Consultative Activities	1. Annually conduct consultative activities as required under Alberta's "First Nations Consultation Guidelines on Land Management and Resource Development" and as directed in AESRD's September 1, 2009 letter regarding HWP's Aboriginal Consultation Program. 2. Hinton Wood Products may also conduct consultative activities voluntarily with the various other Aboriginal communities, as required.	Yes Yes
24	Consultation Opportunity and Participation	Develop, implement, monitor, and report on a public participation process that meets the requirements of CSA Z809-02 Standard	Yes

ToC

2.14 Action Plan for Mandatory VOITs Not Met

Table 2.141 on the following page describes the three mandatory VOITs that were not met and outlines why the Targets were not met, and what measures HWP will take to ensure that they are met in the future.

ToC

ToC

Table 2.141 – Mandatory VOITs that were not met in 2013 and the Corrective Actions
Table 1 – Objectives, Indicators, Targets, or other Action Items that were not met in 2013

VOIT #	Objective	Indicator	Target(s) Not Met	Reason(s) Not Met	Corrective Action(s)
Mandatory VOITs not met in 2013					
4	Retain ecological values and functions associated with riparian zones	Compliance with HWP Riparian Operating Ground Rules	100% consistent and compliant with the DFMP and the Hinton Wood Products Operating Ground Rules.	There was one incident that specifically contravened the riparian related sections (sections 6.0, 7.5 and 11.4) of the Operating Ground Rules (OGR)	• Remove bridge • Complete a joint inspection with ESRD
12	Limit conversion of forest landbase to other uses	Amount of change in the forest landbase	**Target #1:** Annually review and update all existing Long Term Access Plans (LTAPs)	No LTAP's was provided to the government in 2013. HWP will be submitting the Road Corridor Plan component of access management (i.e. future required roads) to the government as part of the DFMP, but the long term requirement component (i.e. whether we want to maintain, deactivate or reclaim a given road) will be kept internal.	With respect to the LTAP process, five Long Term Access Plans have been drafted as part of the completion of the 2014 DFMP. They are for Company use and will not be submitted to government for approval. HWP continues to participate in the Foothills Landscape Management Forum. HWP will be submitting the Road Corridor Plan component of access management (i.e. future required roads) to the government as part of the DFMP.
			Target #4: Undertake assessments of 139 industrial sites currently identified as being "returned" to the FMA; identify sites that are ecologically suitable and operationally feasible to reforest within the next three years.	In 2013 there have been no changes to the status of this VOIT. Due to the current economic climate and resource constraints HWP did not meet this target.	There are 37 sites that are older then two years and still require a field assessment. At this time HWP made a conscious decision to defer treating on the outstanding 37 sites, unless they are in direct proximity to active planting operations. HWP still maintains the abandoned lands ledger. HWP commits to conducting Management Opportunity Surveys (MOS) on the remaining 37 sites within two years and treating within the next five years where ecologically suitable and operationally feasible.

VOIT #	Objective	Indicator	Target(s) Not Met	Reason(s) Not Met	Corrective Action(s)
15	Maintain soil productivity	% Compliance with Company OGR	Complete compliance with Company Operating Ground Rules that relate to soil & water	There were three incidents that specifically contravened the Company's Operating Ground Rules that relate to soil & water (Sections 6, 7.6, 9, and 11)	**1. HWP – Watercourse crossing variance** See incident 1112-0137. Block was self-reported due to inadequate buffer. ESRD identified concern with bridge when they went to inspect buffer. ESRD took pictures on 28 Nov 2012. ESRD concern was that logs were placed in the watercourse. Bridge was pulled on 13 Dec 2012. ESRD staff was on site when work commenced however were not present when the crossing was removed. Installation of crossing during non-frozen period likely contributed to this issue. Subsurface flow may have been impeded, resulting in the upstream pooling of water observed be ESRD. ESRD reported that stream returned to normal flow levels and location. No environmental damage was noted. **2. HWP – Erosion** On July 12, 2013 an ESRD Forest officer (Greg Tough) conducting a routine LOC inspection on 861172 (Polecat Road) came across an incident of erosion on a road bank causing sediment to spread off the disposition into the surrounding forest (See attached photos). This erosion incident occurred as a result of large volumes of rain water moving down the 8% ditch grade after severe storms were experienced earlier in the week. On Thursday, July 18th ESRD notified us of this inspection and incident. On Friday, July 19th a formal reclamation notice was issued by ESRD along with a formal notice of investigation citing contravention of section 56(1) of the Public Lands Act "A person who as the holder of a disposition contravenes a provision of the disposition, is guilty of an offence". (See attached documents) Clean up efforts of the erosion incident commenced on Friday, July 19th. **3. HWP – Spill** A mechanical failure in the spray equipment caused a load of herbicide not to be sprayed in an approved opening. The pilot was unaware of this and came back to mixsite to get another load. Mixer started to add water for next load, which caused the tank to overfill and spill herbicide solution. NO additional herbicide concentrate was added. Most of the spill occurred at mixsite, on road, but possibility of some spill in the adjacent harvest block.
16	Minimize soil erosion	Incidence of soil erosion and slumping	Complete compliance with Forest Soil Conservation Guidelines and Stream Crossing Guidelines.	This target was not met, as there was one contravention of the Soil Conservation Guidelines in 2013	**1. HWP Erosion** On July 12, 2013 an ESRD Forest officer (Greg Tough) conducting a routine LOC inspection on 861172 (Polecat Road) came across an incident of erosion on a road bank causing sediment to spread off the disposition into the surrounding forest (See attached photos). This erosion incident occurred as a result of large volumes of rain water moving down the 8% ditch grade after severe storms were experienced earlier in the week. On Thursday, July 18th ESRD notified us of this inspection and incident. On Friday, July 19th a formal reclamation notice was issued by ESRD along with a formal notice of investigation citing contravention of section 56(1) of the Public Lands Act "A person who as the holder of a disposition contravenes a provision of the

VOIT #	Objective	Indicator	Target(s) Not Met	Reason(s) Not Met	Corrective Action(s)
					disposition, is guilty of an offence". (See attached documents) Clean up efforts of the erosion incident commenced on Friday, July 19th.
20	Maintain the sustainable productive capacity of ecosystems	Annual Timber Harvest (m3)	Establish appropriate Annual Allowable Cut (AAC) using the process and standards described in Annex 1 & 2 of the AESRD Planning Manual and comply with cut control requirements specified in the Forest Management Agreement.	The May 1, 2008 to April 30, 2013 timeframe represents the completion of the 5 year harvest period and its associated targeted harvest level of 8,369,728 m3 of coniferous volume and 1,088,394 m3 of deciduous volume. As shown in the above table, HWP has undercut its coniferous 5-year targeted harvest level by 15.2% as well as its targeted deciduous cut by 35.5% – meaning that HWP has not met its target for this VOIT.	The primarily reason for the undercut was the ramping down of sawmill production during the economic recession that took place throughout the entire five year quadrant. The criteria for the establishment of the annual allowable cut in Hinton Wood Products' 2014 Forest Management Plan will be consistent with the process and standards described in the AESRD Planning Manual.

ToC

2.2 Voluntary VOITs

This section of the Stewardship Report describes VOITs that are voluntary, but are included in current SFM Plan and will be part of HWP's new DFMP. HWP has developed these voluntary VOITs in consultation with the Company's Forest Resources Advisory Group (FRAG) as a best practise and to reflect the Company's commitment to sustainable forest management (i.e. managing for all the values in the forest, not just timber). Although, HWP is not required to develop or report on these VOITs, the Company will continue to report on all of voluntary VOITs each year.

HWP is not asking that AESRD approve the annual reports for the VOITs outlined in this section of the Stewardship Report.

2.21 VOIT Table & Definitions

Table 2.211 on the following pages illustrates how the AESRD mandatory Values, Objectives, Indicators, and Targets are linked together (VOIT). The VOIT descriptions found in the table include the following information:

- **Summary Table** – This table located at the beginning of each VOIT description, describes briefly which section of which standard (i.e. CSA, ISO, or SFI) the VOIT applies to. The table then outlines the Criterion, Element, Value, Objective, Indicator, Target, acceptable variance and Monitoring strategy for each VOIT.
- **Overview** – a brief overview of the VOIT.
- **Definitions** – This section contains definitions of certain words or terms used within the VOIT. Any word that is underlined in the VOIT description will either contain a definition in this section, or in the glossary. All underlined words will be in the glossary.
- **Inventory & Analysis** – This section outlines any inventory or analysis of the VOIT that has previously been carried out.
- **Target, Basis for Target, and the Primary Strategy(s)** – This section describes the Target(s) and the primary strategy that will be implemented to meet the Target. This section also describes the basis for choosing the Target.
- **Monitoring and Reporting** – This section describes how the indicator will be monitored and reported on.
- **Annual Report** – This section reports on how the Company did in meeting the Targets set out under the VOIT. If the VOIT was not met, this section of the report will also describe why the VOIT was not met, and where feasible, plans to ensure the VOIT is met in the future.
- **Future Development** - . This section contains information on future improvements or activities that may be planned or contemplated related to the VOIT.
- **References\Associated Documentation** – This section gives a list of references or documentation associated with the VOIT.

This Stewardship Report also includes a definition section that describes the more technical words or terms used within the VOIT description – this is found in Appendix 1.

2.22 VOIT Reports

Following Table 2.211, there is a detailed report on each of the voluntary VOITs that are contained within HWP's current SFM Plan and will be part of the Company's new DFMP. These detailed VOIT descriptions and reports are found in sections 2.2225 to 2.2247 of this report.

Table 2.211 – Voluntary VOIT Table

CSA SFM Elements	VOIT #	Value	Objective	Indicator	Target
1.1 Ecosystem Diversity – Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally occur in the DFA.	25	Viable populations of identified species (both plants & animals)	Conserve genetic diversity within species	Species Conservation Strategies	1. Complete species conservation strategies for all species at risk (SARA and Alberta designations) within 6 months of designation and update strategies at least every 2 years. 2. Report on results of strategies annually.
4.2 Forest Land Conversion – Protect forestlands from deforestation or conversion to non-forests.	26	Mix of forest goods and services	Integrate industrial and commercial development on the FMA	Non-forestry disposition area by disposition type	1. Measure and track the non-forestry industrial footprint by disposition type. 2. Implement Long Term Access Plan (LTAP) process, including stream crossings.
5.1 Timber and Non-Timber Benefits – Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits **5.2 Communities and Sustainability** – Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and to participate in their use and management **5.3 Fair Distribution of Benefits and Costs** – Promote	27	Cultural & historical resources	The protection and/or conservation of cultural & historical areas	Protected cultural & historical areas	Identify and document cultural and historical sites through HWP's Standard Operating Procedures (Cultural & Historical Site SOP & Form – EM-0056), HWP's Special Places in the Forest Program and through the Company's archaeological assessment procedure - develop a management strategy for each identified site within 12 months
	28	Mix of forest goods and services	Balance the management and use of timber and other resources.	Timber Salvage (ha)	1. Salvage all accessible timber damaged by fire, insects, diseases, or blowdown, as defined in the Development Plan and the Annual Operating Plan, greater than 1 ha (that meets quality criteria and hasn't been reserved for ecological value) within 2 years of damage being identified. 2. Recover salvage trees from 100% of industrial dispositions where merchantable timber has been committed, is decked and accessible.
	29	Provide opportunities to derive benefits and participate in use and management of the forest	Integrate other uses and timber management activities	Recreation Infrastructure	Implement the action plan for year one of the annually produced Recreation Action Plan.
	30	Provide opportunities to derive benefits and participate in use and management of the forest	Integrate other uses and timber management activities	Overnight visits	Annually target to have a minimum of 7500 well distributed paid overnight visits at Hinton Wood Products managed campgrounds.
	31	Management reflects social	Minimize the short-term visual impacts of timber management	Visual Impact Assessments	Conduct visual impact assessments for areas with high visual sensitivity prior to Final Harvest Plan submission.

Table 2.211 – Voluntary VOIT Table

CSA SFM Elements	VOIT #	Value	Objective	Indicator	Target
the fair distribution of timber and non-timber benefits and costs		values	in identified priority areas of high visual sensitivity.		
	32	Management reflects social values	HWP activities do not significantly impact the enjoyment of the forest resource by the public.	Public complaints regarding HWP activities	Zero public complaints as a result of new HWP activities.
	33	Competitive resource businesses	Maintain a sustainable, perpetual supply of timber for wood products.	Piece size into the sawmill	Annually maintain an average piece size into the sawmill of 0.128 m3/piece
	34	Competitive resource businesses	Maintain long-term economic viability of the HWP enterprise.	Average Haul Distance	Maintain an average haul distance of 67.3 km for wood harvested from the FMA over a five year cut control period (Jun 15/03 – Jun 14/08).
	35	Mix of forest goods and services	Contribute to the economic and social health of the region.	Hinton Wood Products Contributions	Report annually on the contributions to economic and social health of the region.
	36	Increased knowledge	Increase levels of education, knowledge, and awareness of sustainable forest management	Training and Education	All forest workers (Company staff & contractors) will meet minimum training requirements within timelines as identified by Hinton Wood Products.
	37	Comply with government regulations and policies	Comply with all relevant legislation and regulations, as enforced by government.	Non-compliance incidents	Zero non-compliance incidents on an annual basis.
	38	Management reflects social values	Reduce, Reuse, and Recycle.	Waste Management	Annually review and improve the Waste Management Program to include new initiatives to reduce, reuse, and recycle – report on the results of these initiatives.
	39	Management reflects social values			This VOIT has been deleted in 2013.
	40	Management reflects social values	Avoid endangering human life and property as a result of forest management activities.	Woodlands Safety Plans and Prime Contractor's Safety Audits	1. Annually develop and implement safety plans for the Woodlands Department 2. Hinton Wood Products' prime contractors will successfully pass a PIR or COR audit.
6.1 Aboriginal and Treaty Rights – Recognize and respect Aboriginal and treaty rights	41	Increased knowledge	Foster mutual understanding on the concepts and benefits of sustainable forest management among policy makers, practitioners, researchers and the public	Participation in SFM events	Hold one field trip at a minimum bi-annually that targets policy makers, practitioners, researchers, media, and/or the public and fosters mutual understanding of SFM.
6.2 Respect for Aboriginal Forest Values, Knowledge and Uses – Respect traditional	42	Decision-making input			This VOIT has been deleted in 2013.
	43	Effective consultation &			This VOIT has been deleted in 2013.

Table 2.211 – Voluntary VOIT Table

CSA SFM Elements	VOIT #	Value	Objective	Indicator	Target
Aboriginal forest values and uses identified through the Aboriginal input process **6.3 Public Participation** – Demonstrate that the SFM public participation process is designed and functioning to the satisfaction of the participants **6.4 Information for Decision-Making** – Provide relevant information to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.		communication			
	44	Increased knowledge			This VOIT has been deleted in 2013.
	45	Increased knowledge	Continual improvement of sustainable forest management planning and practices	Standard Operating Procedure (SOP) Review	Annually review 100% of HWP's Standard Operating Procedures
	46	Increased knowledge			This VOIT has been deleted in 2013.
	47	Increased knowledge	Achieve and maintain a local, provincial, national and international reputation for excellent forest stewardship	Certification Status	Maintain and improve the SFM System and continue to meet the requirements of ISO 14001:02, CSA Z809:02, Sustainable Forestry Initiative (SFI), FORESTCARE, and any other certification standards that are subscribed to by HWP.

ToC

2.2225 Species Conservation Strategies

DFMP VOIT	Yes
SFI Objective#	Objective #4
ISO Objective and Target?	Yes
Criterion:	Criterion #1 – Conservation of Biological Diversity
SFM Element:	1.2 Species Diversity – Conserve species diversity by ensuring that habitats for the native species found in the DFA are maintained through time that naturally occur in the DFA.
Value:	Viable populations of identified species (both plants & animals)
Objective:	Conserve genetic diversity within species
Indicator:	Species Conservation Strategies
Target:	1. Complete species conservation strategies for all species at risk (SARA and Alberta designations) within 6 months of designation and update strategies at least every 2 years. 2. Report on results of strategies annually.
Acceptable variance:	1. 0% 2. 0%
Monitoring:	Review and revision of species conservation strategies will be reported on an annual calendar year basis. Direction from the strategies will be incorporated into a new forecast prepared every 10 years as part of the Forest Management Plan (FMP) revision.

Overview

Species conservation is a cornerstone of biodiversity conservation. If species are conserved, genetic diversity and the ecosystem diversity that is needed to conserve species are also likely to be conserved. Prosperity of all native species is part of a "fine filter" biodiversity conservation strategy.

The coarse filter component of the Hinton Wood Products approach to biodiversity conservation is based on maintaining seral stages and habitat supply within the natural range of variation. Additional management emphasis is needed for species that have been designated as being a species at risk, to ensure that their needs are either met by implementation of the coarse filter component or through identification and implementation of additional fine filter actions where appropriate.

HWP addresses species at risk by developing a Species Conservation Strategy for each species at risk as designated by legislation, plus additional species voluntarily selected by the Company. Each Species Conservation Strategy document describes how HWP will act alone and in cooperation with others to conserve the species. Currently there are five species at risk designated by legislation that occur on the Forest Management Area (Table 2.2225a).

This indicator addresses the HWP strategy to conserve five species ar risk and nine other species – Columbia spotted frog, wolverine, northern long-eared bat, black-throated green warbler, Pinto Creek mountain goat herd, bull trout, rusty blackbird, bank swallow, and Arctic grayling.

Definitions

A. ***Species at risk*** – A species at risk is defined as a species designated as *threatened* or *endangered* in Canada (Canada Species at Risk Act designation) or Alberta (Alberta Wildlife Act designation). Species at risk do not include species identified as potentially threatened or potentially endangered until they have been designated under the relevant legislation. For the purposes of this indicator, species at risk do not include species identified as *special concern*, vulnerable, lower risk, or sensitive by any other process, including federal or Alberta processes, IUCN rankings, ACIMS rankings, and as a result of a local species status evaluation. However, HWP may choose to develop species conservation strategies for species in this group (e.g. Pinto Creek mountain goat herd) and the target will apply to these species as long as HWP chooses to keep them on the species conservation strategy list.
B. ***Species conservation strategy*** – A species conservation strategy is a document that provides information on the status and conservation of a species at risk that occurs on the Forest Management Area (FMA) landbase, in relation to HWP responsibilities and commitments. These strategies extend to habitat conservation, HWP activities, and co-operation with accountable government agencies to address actions of others and population management issues.

C. ***Endangered Species*** – A species facing imminent extirpation or extinction.
D. ***Threatened Species*** – A species likely to become endangered if limiting factors are not reversed.
E. ***Special Concern Species*** – A species of special concern because of characteristics that make it particularly sensitive to human activities or natural events.

Inventory and Analysis

Literature review, habitat inventory, and status of species at risk (caribou, trumpeter swan), and 6 other species of special concern (Columbia spotted frog, grizzly bear, wolverine, northern long-eared bat, black-throated green warbler, Pinto Creek mountain goat herd) were developed for the 1999 FMP. The information was used to prepare the first version of the species conservation strategies. The strategies for caribou and the Pinto Creek mountain goat herd were incorporated into the 1999 FMP analysis. The 1999 FMP Analysis Report contains additional information about the analysis. As this is a management activity indicator, there is no forecast.

Table 2.2225a outlines the current status of HWP species conservation strategies and the current status under federal and provincial legislation of the species identified under this indicator.

Table 2.2225a – *Species conservation strategies for Hinton Wood Products FMA*

Species	SARA[1] designation	Alberta Wildlife Act designation	West Fraser Strategy	
			Version #	Date
Species at Risk:				
Woodland caribou	Threatened[2]	Threatened	4	Jul 25, 2006[8]
Trumpeter swan	Not at risk	Threatened	5a	Oct 1, 2013[5]
Grizzly bear	Special concern	Threatened	3	Jan 31, 2014[7]
Common nighthawk	Threatened[10]	Not designated		Jan 31, 2014[5]
Olive-sided flycatcher	Threatened[10]	Not designated		Jan 31, 2014[5]
Species of special concern:				
Wolverine	Special concern	Data deficient[3]	4	Jan 30, 2007
Black-throated green warbler	Not designated	Special concern[4]	3	Jan 30, 2007
Bull trout[5]	Not designated	Special concern[4]	1	Jun 19, 2006
Arctic grayling[5]	Not designated	Special concern[4]	1	Jun 19, 2006
Additional species:				
Columbia spotted frog	Not designated	Not designated	3	Feb 1, 2007
Northern long-eared bat[6]	Not designated	Not designated	3	Jan 30, 2007
Pinto Creek mountain goats	Not designated	Not designated	5	Oct 21, 2009
Athabasca rainbow trout	Not designated	Threatened[9]		
Bull trout	Not designated	Threatened[10]		
Rusty blackbird	Threatened	Not designated		
Bank swallow	Threatened[12]	Not designated		

[1] Canada Species at Risk Act, Schedule 1
[2] Threatened: A species likely to become endangered if limiting factors are not reversed.
[3] Data deficient: A species for which there is insufficient scientific information to support status designation.
[4] This is the proposed status as recommended by the Alberta Endangered Species Conservation Committee. There are currently no categories for special concern or data deficient under the Alberta Wildlife Act. Special concern species: a species of special concern because of characteristics that make it particularly sensitive to human activities or natural events.
[5] Draft versions.
[6] The northern long-eared bat was called the northern myotis in previous reports.
[7] The strategy was reviewed in 2007 but not updated from the March 9, 2004 version. The Alberta Endangered Species Conservation Committee recommended in 2002 that the Alberta status of the grizzly bear should be "threatened". The Alberta government did not make a listing decision then but did commission a Recovery Team to prepare an Alberta Grizzly Bear Recovery Plan. The Recovery Team submitted a draft Recovery Plan to the Minister of Sustainable Resource Development in 2006 and the Recovery Plan was approved in 2008. The Alberta government designated grizzly bear as Threatened in 2010. The Hinton Wood Products grizzly bear species conservation strategy was reviewed in 2006, 2007, 2008, and 2009. Now that the listing designation has been made the HCS revision will be completed in 2014.
[8] The West Central Alberta Caribou Landscape Plan was submitted in May 2008 for Alberta government approval. West Fraser participated in the development of the WCACLP. As of December 31, 2013 the government approval had not been granted. In September 2013 the Alberta government launched a new caribou range plan process that will replace the WCACLP. The HCS Revision will be deferred until the range plan is approved or replaced. HWP has already started to implement some of the recommendations in the WCACLP and is participating in the range plan process.

[9] In 2009, the Athabasca rainbow trout (the only native population of rainbow trout in Alberta) was recommended for Threatened status in Alberta. However, the legal designation was not finalized as of December 31, 2013. HWP is participating on the Recovery Team for this species and will incorporate direction from the Recovery Plan into a future species conservation strategy.
[10] Bull trout was recommended for Threatened status in Alberta in 2010. However, the legal designation was not finalized as of December 31, 2013. Should the designation be finalized, HWP will incorporate direction from the Recovery Plan into a future species conservation strategy.
[11] Common nighthawk and olive-sided flycatcher were designated as Threatened under SARA in 2010. HWP developed draft species conservation strategies for these species in 2013.
[12] Assessed by COSEWIC as threatened. The SARA process is in progress.

Target and Strategy

The Targets under this Indicator are:

1. *Complete species conservation strategies for all species at risk (SARA and Alberta designations) within six months of designation and update strategies at least every 2 years.*

Basis for Target	HWP is legally required to comply with provisions of Recovery Plans developed under authority of the Alberta Wildlife Act, and in certain cases, the Canada Species at Risk Act. In addition to the five species officially designated as *Threatened*, the Company also voluntarily completed species conservation strategies for other FMA species that the Company feels warrant special attention.
Primary Strategy	Complete species conservation strategies for all species at risk (SARA and Alberta designations) within six months of designation and update strategies at least every 2 years.

2. *Report on results of strategies annually.*

Basis for Target	To provide results for the species conservation strategies, so that the public, and are other stakeholders are aware not only of the species conservation strategies, but the results from their implementation.
Primary Strategy	Report annually in the SFM Stewardship Report.

2013 Annual Report

Target #1 **Target Met** ☐ **Target Not Met** ☒

All species conservation strategies were not revised within the past two years (Table 2.2225a).
The grizzly bear species conservation strategy was reviewed in 2009, but revision of it was delayed pending the 2010 listing decision by the Alberta government. Work to update the strategy commenced in 2013 but is not complete.
West Fraser participated in the development of the West Central Alberta Caribou Landscape Plan (WCACLP), which was submitted in May 2008 for Alberta government approval. As of December 31, 2013, the government approval had not been finalized. In September 2013 the Alberta government launched a new caribou range plan process that will replace the WCACLP. The HCS Revision will be deferred until the range plan is approved or replaced. HWP has already started to implement some of the recommendations in the WCACLP and is participating in the range plan process.
The Pinto Creek Mountain Goat species conservation strategy was revised and approved in 2009. Update of the strategy was commenced in 2013 and will be completed in 2014.
The trumpeter swan species conservation strategy was reviewed in 2013. Update of the strategy was commenced in 2013 and will be completed in 2014.
Draft species conservation strategies for olive-sided flycatcher and common nighthawk were completed in early 2014.

There were three new FMA "species at risk" designations in 2010: grizzly bear (Alberta Wildlife Act), common nighthawk (SARA) and olive-sided flycatcher (SARA). In 2009 and 2010, respectively, the Endangered Species Conservation Committee recommended that the Athabasca rainbow trout and bull trout should be designated as Threatened in Alberta, but the designations were not finalized as of December 31, 2013. If the Alberta government designates these species, species conservation strategies will be developed.
In 2014 rusty blackbird was added to SARA Schedule 1 and COSEWIC assessed bank swallow as threatened. Species conservation strategies for these species will be completed in 2014.
Species conservation strategies for six additional species were last updated and revised in 2007.

Target #2 **Target Met** ☒ **Target Not Met** ☐

Woodland caribou – The FMA caribou snow-tracking program was discontinued in the late winter of 2004-2005 and replaced with seven new GPS collars deployed in March 2006 (one collar) and December 2006 (six collars). These animals were monitored throughout 2009, 2010, 2011 and 2012. Planning for the Highway 40 Demonstration Project (see www.foothillsresearchinstitute.ca) was completed in 2008. However due to the increase of Mountain Pine Beetle in Alberta and considering the ongoing development of the West Central Caribou Landscape Plan, Hinton Wood Products deferred all harvesting in FMA caribou range, including the Highway 40 Demonstration Project Area, in March 2007. The harvesting deferral remained in effect in 2013.

The Foothills Landscape Management Forum is a multi-stakeholder partnership dedicated to promoting coordinated caribou conservation and industrial development in the ranges of west central caribou herds, which include the Little Smoky and A la Peche caribou herds that overlap the Hinton FMA. FLMF projects continued in 2013. The FLMF (see www.foothillsresearchinstitute.ca) had six forest companies, 11 oil and gas companies, and one Aboriginal community as members as of December 31, 2013. West Fraser also cooperated with the government-led Alberta Caribou Range Planning process in 2013.

West Fraser is one of the founding partners and signatory to the Canadian Boreal Forest Agreement (http://canadianborealforestagreement.com). There are commitments made in this agreement to defer harvesting in caribou areas pending the outcome of this process. The deferral referred to above is actually larger than the deferral that is part of the CBFA.

Trumpeter Swan – There was one pair of nesting trumpeter swans on the FMA in 2005. Four other FMA ponds surveyed by Alberta Fish and Wildlife Division had no nesting trumpeter swans. The number of nesting swans in the greater region surveyed roughly doubled from 27 in 2000 to 53 in 2005. The Alberta government has now moved to a five-year swan inventory schedule. A HWP biologist observed two adult swans, but no cygnets, on one of the known nesting ponds in the Marlboro Working Circle on July 17, 2008 and July 17, 2009. In 2010 there were two adults and three cygnets on this pond on July 2nd. No swans were observed on the other two known FMA nesting ponds. In 2011 two adult swans were observed on one of the Marlboro nesting ponds, but no cygnets were observed. No swans were observed on the other two known FMA nesting ponds. In 2012 a pair of adult swans with 5 cygnets was observed. In 2013 nesting pond surveys were expanded to include ponds on the Edson Forest Products FMA.A revision to the trumpeter swan species conservation strategy was commenced in in 2013.

Grizzly bear – West Fraser provided direct support to the Foothills Research Institute's grizzly bear research program (www.foothillsresearchinstitute.ca) in 2013 and also continued to provide in-kind support. Habitat, movement, and mortality risk maps produced by the program are being used to assist with the forest management planning process. This includes development of new road plans at larger scales (Long Term Access Plans) and at compartment scales (Final Harvest Plans). West Fraser also incorporated a grizzly bear mortality risk analysis conducted by AESRD into the 2010 Mountain Pine Beetle Amendment to the 1999 Forest Management Plan.

Wolverine – There was no new work related to this species in 2013.

Black-throated green warbler – There was no new work related to this species in 2013.

Columbia spotted frog – The Company supported amphibian surveys conducted by Alberta Fish and Wildlife in 2006, but this program was terminated by Alberta Fish and Wildlife in 2007 due to lack of government funding. The Company continued reduced surveys of a smaller sample of known ponds in spring 2007 and

2008. There were no observations or new occurrence locations of Columbia spotted frog in 2008. All known historic occurrence records for this species were visited several times in spring 2012 and no Columbia spotted frogs were observed. There was no new work related to this species in 2013.

Northern long-eared bat – There was no new work related to this species in 2013.

Pinto Creek mountain goats – Version 5 of the Pinto Creek mountain goat habitat conservation strategy was approved by AESRD in October 2009. Three goat surveys of the Pinto Creek Canyon Natural Area (PCCNA) were continued in 2013. The minimum population estimate for 2013 was 25 goats. The estimate may not be a good estimate of goat population size due to the small sample size of just 3 surveys.

In the winter of 2007/2008, a cut block within the Special Management Area surrounding the PCCNA was harvested; two more cut blocks were harvested in winter 2009-2010; and two more blocks in summer 2010. Goat behaviour response was monitored before, during, and after the harvesting. Goats spent more time listening to the disturbance, but continued to use their traditional cliffs and habitat, including the cliffs closest to the harvest operations.

Bull trout and Arctic grayling – HWP prepared draft species conservation strategies for bull trout and Arctic grayling in 2006. These species are ranked as species of Special Concern in Alberta and they were also focal species for fish and watershed research at the Foothills Research Institute (www.foothillsresearchinstitute.ca) for 16 years. During this period, HWP provided financial support and much valuable information has been obtained. For example, the FRI has identified the most important bull trout and Arctic grayling watersheds in the FMA and the information is used to support forest management planning in those watersheds. The Alberta government revised the Species Status Reports for bull trout in 2009, and in late 2010, the ESCC recommended that bull trout status be moved from Special Concern to Threatened. The official designation had not been changed as of December 31, 2013.

Athabasca rainbow trout – The Athabasca rainbow trout is the only native rainbow trout population in Alberta. Although not genetically different from rainbow trout in the Columbia River and Fraser River watersheds in B.C., the Alberta population is geographically isolated. In late 2010, the ESCC recommended that Athabasca rainbow trout be designated as Threatened; however the official designation was not made as of December 31, 2013. West Fraser is participating on the Recovery Team, which is developing an Athabasca Rainbow Trout Recovery Plan. West Fraser plans to develop a Native Fish Conservation Strategy in 2013, which will include Arctic grayling, Athabasca rainbow trout, and bull trout.

Common nighthawk – The common nighthawk was designated as Threatened under the SARA in 2010. Alberta has not assessed the species. A draft species conservation strategy was completed in early 2014.

Olive-sided flycatcher – The olive-sided flycatcher was designated as Threatened under the SARA in 2010. Alberta has not assessed the species. A draft species conservation strategy was completed in early 2014.

Monitoring and Reporting

Direction from the species conservation strategies will be incorporated into a new forecast prepared every 10 years as part of the Forest Management Plan revision.

The review and revision of species conservation strategies will be reported on an annual calendar year basis in the SFM Stewardship Report. The actual species conservation strategies are posted on the website (http://wfonline.westfrasertimber.ca). Follow the “Managing for other Values”/”Biodiversity” links. The species conservation strategies can be found under the bullet titled “Hinton Wood Products Biodiversity Goals”.

Future Development

Work to develop additional indicators of habitat supply and species status for species at risk is planned. Hinton Wood Products also produces a species status report, to be updated every five years, which provides periodic reports of the status of species at risk on the FMA landbase. The species status report was completed in 2007 and posted on our website in early 2008. Follow the “Managing for other Values”/”Biodiversity” links. The report

titled “Sensitive Species Status on the Hinton Wood Products FMA” can be found under the bullet titled “Hinton Wood Products Biodiversity Goals”.

References\Associated Documentation

- Alberta Endangered Species Conservation Committee
- Alberta Species at Risk http://www.srd.alberta.ca/BioDiversityStewardship/SpeciesAtRisk/Default.aspx
- Canada Species at Risk Act http://www.sararegistry.gc.ca/approach/act/default_e.cfm
- Committee on the Status of Wildlife in Canada (COSEWIC) www.cosewic.gc.ca
- The World Conservation Union (IUCN) http://www.iucn.org/
- Alberta Caribou Committee http://www.albertacaribouccommittee.ca/
- Foothills Research Institute – www.foothillsresearchinstitute.ca
- Canadian Boreal Forest Agreement (http://canadianborealforestagreement.com).

ToC

2.2226 Non-forestry Disposition Area by Disposition Type

DFMP VOIT	No
SFI Objective#	Objective #2
ISO Objective and Target?	Yes
Criterion:	**Criterion #4** – Forest Ecosystem Contributions to Global Ecological Cycles
SFM Element:	**4.2 Forest Land Conversion** – Protect forestlands from deforestation or conversion to non-forests.
Value:	Mix of forest goods and services
Objective:	Integrate industrial and commercial development on the FMA.
Indicator:	Non-forestry disposition area by disposition type *(This is a new Indicator developed on January 5, 2009 – the previous indicator "Common Corridors" has been deleted and will no longer be reported on)*
Target:	1. Measure and track the non-forestry industrial footprint by disposition type. *(This is a new Target developed on January 5, 2009)* 2. Implement Long Term Access Plan process, including stream crossings.
Acceptable variance:	n/a
Monitoring:	This will be measured, recorded and reported on annually in the SFM Stewardship Report.

Overview

Part of Sustainable Forest Management is protecting forestland from being converted to a non-forest use. Unfortunately, the practice of forestry in itself requires roads (for extracting the timber resource), so the total elimination of forestland conversion is impossible; however, to the extent possible, conversion from forests to roads (or other non-forest dispositions) should be minimized. Complicating this goal is the fact that HWP is not the only industry using the forest resource. For example, the oil & gas industry and the mining industry also use and build roads and convert forestland to non-forest through other practises such as mining, pipeline construction and well-site development.

HWP undertakes a number of best practises – the overarching objective of these best practises are to integrate non-forestry industrial use on the FMA. One example of a best practise used to integrate other industrial development is HWP's promotion of the use of common corridors. As the FMA holder on the landbase, all non-HWP disposition applications are vetted through HWP before approved by the provincial government – as part of this vetting procedure, HWP encourages other disposition applicants to use common corridors wherever feasible. For example, this would mean building a pipeline alongside an existing right-of-way corridor, instead of building a new pipeline corridor. The driver for increased use of common corridors is to minimize forest fragmentation, and to reduce cumulative land disturbance. There is less land disturbance when a second linear disturbance, such as a pipeline, is located adjacent to an existing right-of-way (ROW), because a portion of the existing ROW can be used as working space. Reductions of 25 – 33% in subsequent right-of-ways are routine when locating linear dispositions in common corridors. Therefore maximizing use of common corridors is a best practice to reduce the conversion of forestland to non-forest and the cumulative impact on the FMA.

Another best practise used by HWP to coordinate other non-forestry industrial development on the FMA is the development and use of Long Term Access Plans (LTAPs). LTAPs help to accomplish the objective of using common corridors by planning out where future access will take place (i.e. in undeveloped areas). This allows Company planners to better coordinate access with other industrial uses.

The intent of this VOIT is primarily to track, measure, and report on other non-forestry disposition use. By tracking and reporting on other non-forestry dispositions, the public is able to clearly see the impact other industrial users are having on the landbase over an extended time period. Many factors affect the amount of non-forestry disposition area that is constructed every year, such as:

- the demand for oil & gas products (e.g. higher prices generally mean more development)
- government policy (e.g. royalties)
- best practises employed by HWP (e.g. integration of proposed development, common corridors, LTAP implementation)
- best practises employed by the other disposition holders (e.g. directional drilling, multiple drills, low impact seismic)

It is hoped that by annually tracking and reporting on the non-forestry disposition area, the public will be able to see a general trend in the reduction of forest land being converted to non-forest uses (e.g. roads, well-sites, pipelines, etc.), although one must keep in mind that in general most oil, gas and mining dispositions are temporary conversions of forests to non-forest use; dispositions such as pipelines, well-sites, and mines all will eventually be returned to the productive forest landbase through reclamation activities.

Definitions

A. ***Non-forestry disposition area*** – These are industrial or commercial dispositions that have been approved by the provincial government that are not related to HWP's forest management activities; for example, well-sites, pipelines, powerlines, mines, gravel pits, etc.
B. ***Common corridor*** – A common corridor is any corridor where more than one use is occurring – for example, a road and a pipeline.
C. ***Right-of-way*** – Typically this can be thought of as the cleared portion of the road; that is from the edge of the timber on one side of the road to the edge of the timber on the other side of the road, and includes the ditches and running surface.
D. ***Long Term Access Plans*** – A Long Term Access Plan (LTAP) is a plan showing the current and proposed future permanent roads or access corridors for an identified area on the Forest Management Area (FMA). The intent is to address identified access concerns and coordinate access development and management for HWP and other industrial users of the landbase such as the oil & gas industry.
E. ***Directional drilling*** – Targeting a gas pocket that is offset from the vertical enabling a company to capitalize on the target area while minimizing the surface disturbance.
F. ***Multiple drills*** – Drilling more than one hole from the same pad.
G. ***Low impact seismic –*** Also known as avoidance seismic. Meandering lines through the natural timber openings are used to reduce the loss of merchantable timber

***Inventory* and Analysis**

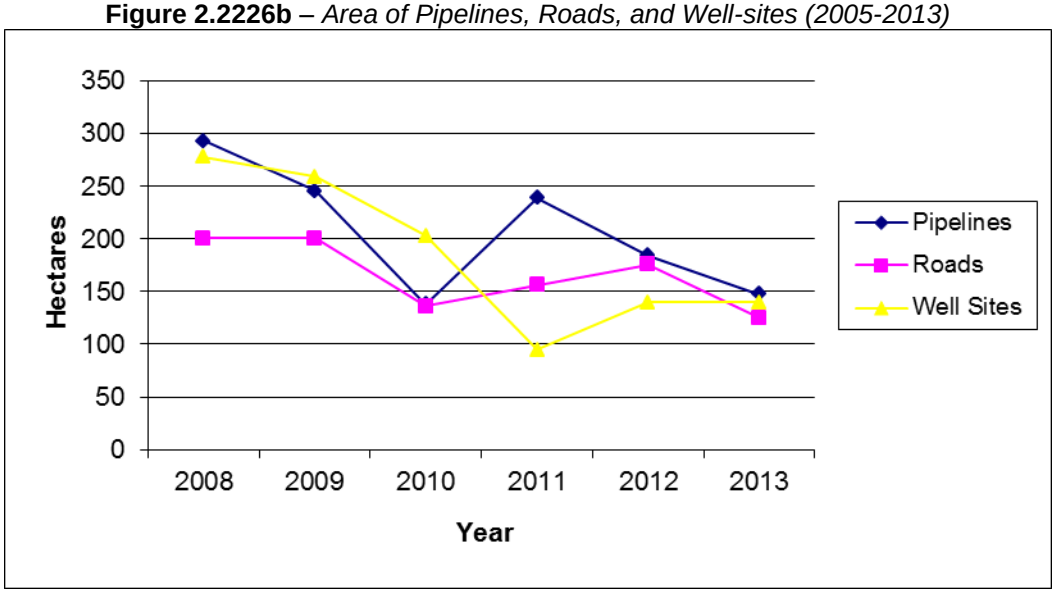
HWP has been publicly reporting non-forestry disposition area since 2005 in its West Fraser Alberta Woodlands Stewardship Report. This document is produced annually and is available on HWP's website (www.westfraser.com/hintonforestry - it is in the publications section under the "About Us" link). Table 2.2226a summarized the number and area of non-forestry industrial dispositions by disposition type for 2008 2009 2010 2011 and 2012 on the Hinton FMA.

Table 2.2226a – *Number and Area of Non-forestry Disposition Types (2010-2013)*

Disposition Type	Industry Average	2010		2011		2012		2013	
		Number	Area (ha)	Number	Area (ha)	Number	Area (ha)	Number	Area (ha)
Non HWP-owned									
Pipelines (PLA)	15m	138	298	239	571	184	833	148	737
Pipeline Installation Lease (PIL)	----	87	4	103	7	57	9	59	14
Seismic Lines	2-4m	0	0	0	0	0	0	1	14
Roads (LOC)	20m	136	198	156	161	176	197	125	161
Well Sites (MSL)	1.44ha	203	317	95	316	140	300	140	323
Mining (MSL/lLOC)	----	2	4	0	0	0	0	0	0
Powerlines (EZE)	20m	4	1	9	47	2	19	6	27
Vegetation Control Easement (VCE)	10m	0	0	3	18	0	0	1	11
Miscellaneous (MLL/MLP)	----	8	12	13	34	16	42	4	8
Other (DRS/PLS/TFA)	----	0	0	181	796	270	34	254	0.2
Gravel Pits (SML/SMC/SME)	----	10	179	5	310	574	77	2	4
Total		**588**	**1,013**	**804**	**2,206**	**1,440**	**1,510**	**740**	**1,299**
HWP-owned									
Miscellaneous (DML)	----	----	----	----	----	6	4	0	0
Gravel Pits (SML/SMC/SME)	----	----	----	----	----	2	36	0	0
Other (DRS/PLS/TFA)	----	----	----	----	----	13	0.3	22	35.8

As discussed previously, there are a number of factors that affect the overall area that is converted to non-forest use by non-forestry disposition types, including current commodity prices (e.g. oil, gas, coal), government royalties, and best practises implemented by both HWP and other industries operating on the FMA (e.g. oil & gas, mining, etc.). Best practises implemented by either HWP and/or other industries are the main factors that can be controlled – Figure 2.2226b on the following page graphs the area of three main types of dispositions over the previous four years (2008-2013).

Figure 2.2226b – *Area of Pipelines, Roads, and Well-sites (2005-2013)*



Target and Strategy

The target for this VOIT is:

1. *Measure and track the non-forestry industrial footprint by disposition type*

Basis for Target	By tracking and reporting on other non-forestry dispositions, the public is able to clearly see the impact other industrial users are having on the landbase over an extended time period, as well as the affect on disposition area industry best practises such as common corridors, direction drilling, and LTAPs are having.
Primary Strategy	The strategy to ensure this Target is met is to track and annually report on non-forestry disposition types in HWP's Stewardship Report.

2. *Implement Long Term Access Plan (LTAP) process, including stream crossings.*

Basis for Target	Long term access plans allow for the coordinated planning of road locations and help minimize the number of stream crossings – this results in less cumulative disturbance. The LTAP process can also help identify practical sites for access control and ultimately reduce the amount of road traffic and hunting/angling pressure in some areas.
Primary Strategy	Implement the Company's Long Term Access Planning process.

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Target #1 **Target Met** ☒ **Target Not Met** ☐

The target is to report on 2013 industrial disposition numbers and disturbance area, by disposition type. Accordingly, Table 2.2226c outlines disposition area by disposition type on the Hinton FMA in 2013. The table also includes a column showing the industry average for the disposition type and the amount of kilometres disturbed.

Table 2.2226c – *Number and Area of Non-forestry Disposition Types 2013*

Non-forestry Disposition Type	Industry Average	2013		
		Number	Area (ha)	Kilometres Disturbed
Pipelines (PLA)	15m	148	737	492
Pipeline Installation Lease (PIL)	----	59	14	0
Seismic Lines	2-4m	1	14	48
Roads (LOC)	20m	125	161	81
Well Sites (MSL)	1.44ha	140	323	----
Mining (MSL/LOC)	----	0	0	----
Powerlines (EZE)	20m	6	27	13
Vegetation Control Easement (VCE)	10m	1	11	11
Miscellaneous (MLL/MLP)	----	4	8	----
Other (DRS/PLS/TFA)	----	254	0.2	----[1]
Gravel Pits (SML/SMC/SME)	----	2	4	----
Total		740	1,299	645km

Target #2 **Target Met** ☒ **Target Not Met** ☐

A review and update of all current permanent roads was done in 2013 for the entire FMA. This review looked at the status of the current roads (i.e. open, de-activated, or reclaimed). Any new roads were also added. This included both HWP roads and external roads. All current permanent roads (those described above) were assessed for long term requirements. Each road was identified as being required left open, de-activated until future need, or to be reclaimed if no future need is foreseen.

A review of future needs of road corridors for areas requiring new permanent roads was done and tentative road locations were identified in TFM. This will be the basis for the Road Corridor plan required for the DFMP.

In 2013, all temporary roads were also assessed for their status (open, deactivated, reclaimed) and updated in TFM.

No LTAP's will be provided to the government in 2013. HWP will be submitting the Road Corridor Plan component of access management (i.e. future required roads) to the government as part of the DFMP, but the long term requirement component (i.e. whether we want to maintain, deactivate or reclaim a given road) will be kept internal.

With respect to the LTAP process, HWP will be going away from the 9 LTAP units they we were previously planning on, and instead looking at access management on a Working Circle basis instead going forward

HWP also participated on the Integrated Industrial Access Plan for the A la Peche and Little Smoky caribou herds through the Foothills Landscape Management Forum which was submitted in 2006, updated in 2007, 2008, and 2009, and approved by the Alberta government in 2008. The Athabasca West LTAP was reviewed in 2006, 2007, 2008, 2009, 2010, 2011, and 2012. Beginning in 2009 and continuing to date we participated in the new Berland Smoky Regional Access Development Plan, which is a joint project between the Foothills Landscape Management Forum and Alberta Environment and Sustainable Resource Development. The RAD Plan was completed and partially approved in late 2011 and the partners are working toward final approval in 2014.

[1] Area disturbed by Temporary Field Authority (TFA) will be calculated by June 30, 2014

Monitoring and Reporting

This will be measured, recorded and reported on annually in the SFM Stewardship Report.

Future Development

This VOIT will be dropped in 2014. Each target will still be measured but they will be part of other VOITs.

ToC

2.2227 Protected Cultural & Historical Areas

DFMP VOIT	No
SFI Objective#	Objective #6
ISO Objective and Target?	No
Criterion:	**Criterion #5** – Multiple Benefits to Society
SFM Element:	**5.1 Timber and Non-Timber Benefits** – Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits
Value:	Cultural & historical resources
Objective:	The protection and/or conservation of cultural & historical areas
Indicator:	Protected cultural & historical areas
Target:	Identify and document cultural and historical sites through HWP's Standard Operating Procedures (Cultural & Historical Site SOP & Form – EM-0056), HWP's Special Places in the Forest Program and through the Company's archaeological assessment procedure - develop a management strategy for each identified site within 12 months.
Acceptable variance:	No acceptable variance
Monitoring:	This will be measured, recorded and reported on annually in the SFM Stewardship Report.

Overview

The protection and/or conversation of cultural and historical sites are an important component of Sustainable Forest Management. These sites should be identified and where it is deemed appropriate by either an archaeologist or an Aboriginal community, conserved or protected.

Definitions

A. ***Historic Resource –*** The Alberta Historical Resources Act defines a Historic Resource as follows: "any work of nature or of humans that is primarily of value for its palaeontological, archaeological, prehistoric, historic, cultural, natural, scientific or aesthetic interest including, but not limited to, a palaeontological, archaeological, prehistoric, historic or natural site, structure or object". Historical resources typically include historic sites, archaeological sites, and palaeontological sites, and include objects, artifacts, and structures.
B. ***Historic Site*** **–** The Historical Resources Act defines a Historic Site as follows: "any site that includes or consists of an historical resource of an immovable nature or that cannot be disassociated from its context without destroying some or all of its value as an historical resource and includes a prehistoric, historic or natural site or structure." Historic Sites generally originated prior to about 1945.
C. ***Cultural Site*** **–** A Cultural Site is a Historic Site related to Aboriginal peoples, or a site that originated after 1945 that has special significance to Aboriginal peoples. As of September 2006, the Alberta government introduced specific guidelines called "The Government of Alberta's First Nations Consultation Policy on Land Management and Resource Development" and "A Framework for Consultation Guidelines" to help identify and protect this class of resource important to First Nations groups.
D. ***Special Places in the Forest Program*** – See VOIT #5 for a definition of HWP's Special Places in the Forest Program.
E. ***Special Places in the Forest Program – Cultural Sites*** – It should be noted that under the Company's Special Places in the Forest Program, cultural and historical sites have been given a different definition from the Historical Resources Act for clarity and ease of understanding by the general public. Under the Special Places in the Forest Program, cultural sites are sites that date from the time before European contact (approximately 200 years ago). These sites are of particular spiritual significance to Aboriginal peoples of Alberta and may include isolated artifact finds (such as arrowheads), toolstone quarries and workshops, campsites, tipi ring sites, isolated hearths and sweat pits, grave sites, cairns, and trails. Over 700 cultural sites have been recorded on the FMA in the last 30 years. Only those sites that have been determined to be of high local significance or regional significance will be classified as Special Places in the Forest. Due to the sensitive nature of these sites, they are not shown on any maps.
F. ***Special Places in the Forest Program – Historical Sites*** – Historical sites are sites that date from the time after European contact with North America. They may include sites with standing structures/structural remains such as towns mining camps, cabins, mines, graves, trails, roads, and railroads. These sites are managed to maintain their historical significance. Only those sites that have been determined to have high local significance or regional will be classified as Special Places in the Forest. Due to the sensitive nature of these sites, they are not shown on any maps.

***Inventory* and Analysis**

Hinton Wood Products employs a number of different methods to identify and manage for cultural and historical resources. The main tactic employed is the Company's archaeological assessment procedure. The procedure involves hiring the services of a professional archaeologist (the company we have contracted is called "Lifeways") to carry out an overview survey of our Forest Management Area. The archaeologists, through air photo interpretation and their expertise, determine which areas have a high, moderate, or low potential to contain cultural or historical sites. Those sites with a high potential are field inspected and sampled by the archaeologist prior to harvesting, site preparation or road building. For those sites with a moderate potential, only a sample are inspected and this occurs after operations. Sites with a low potential are not generally field inspected, but chance discoveries of historical resources are reported.

In addition to the cultural and historic sites discovered through the Company's archaeological assessment procedure, Hinton Wood Products also has a Standard Operating Procedure that outlines the steps to take if a cultural or historical site is discovered by an employee or contractor in the course of normal field work. Table 2.2227a below shows the historical and/or cultural sites identified through the Company's Standard Operating Procedure, or through our Aboriginal Consultation Program, as of December 31, 2009:

Table 2.2227a – *Cultural & Historic Sites identified by Hinton Wood Products employees & contractors, or through the Aboriginal Consultation Program, from 2001 to December 31, 2013*

Site ID Number	Description of Cultural or Historic Site	Special Places in the Forest (Yes/No)
HSAS0074	Archaeological site near Dummy Creek	No
HSAS0075	Archaeological site on Chance and Embarras Creek	No
HSAS0076	Archaeological site on Chance and Embarras Creek	No
HSAS0077	Archaeological site near Robb	No
HSAS0078	Archaeological sites on McPherson Creek	No
HSAS0079	Archaeological sites on McPherson Creek	No
HSAS0080	Archaeological sites on McPherson Creek	No
HSAS0081	Archaeological site on White Creek	No
HSAS0082	Archaeological site on White Creek	No
HSAS0083	Archaeological site on White Creek	No
HSAS0084	Archaeological site on White Creek	No
HSAS0085	Archaeological site at Obed Creek	No
HSAS0087	Archaeological site on Rock Lake Road	No
HSAS0088	Multiple archaeological sites near Maskuta Creek	No
HSAS0089	Multiple archaeological sites near Maskuta Creek	No
HSAS0090	Archaeological site on Hardisty Creek	No
HSAS0091	Archaeological site on White Creek	No
HSCS0070	Lovettville ceremonial site	No
HSNG0066	Aboriginal gravesite	No
HSNG0068	grave	No
HSNG0069	Ashes of a number of persons spread on band of lodgepole pine(0.2ha) forest located on an esker.	No
HSNG0071	Grave – exact location not found	No
HSNG0072	Grave	No
HSNG0073	Aboriginal grave	No
HSNG0106	Grave site in leave strip of timber.	No
HSNG0111	Grave sites.	No
HSNG0115*	3 persons burned to death in this cabin. Treated as a gravesite.	No
GCHS0101	Forest Ranger cabin built 1917 – called the Gregg Cabin	Yes
HSCS0102	Campsite on flats next to Wampus Creek.	No
HSCS0110	Ceremonial site.	No
HSCS0116*	Ceremonial site.	No
HSFO0092	Foothills Ojibway cultural site (spiritual retreat)	No
HSFO0093	Foothills Ojibway cultural site (spiritual retreat)	No

Site ID Number	Description of Cultural or Historic Site	Special Places in the Forest (Yes/No)
HSFO0094	Foothills Ojibway cultural site (spiritual retreat)	No
HSFO0095	Foothills Ojibway cultural site (spiritual retreat)	No
HSFS0104	Fasting site - large sandstone rock outcrops visible from trail.	No
HSLB0067	Log buildings adjacent to x-country ski trails	No
HSPS0103	Prayer sites - several circles made of rock to sit in.	No
HSPS0105	Prayer site - rocky outcropping at height of land.	No
HSPS0107	Prayer site.	No
HSPS0108	Prayer site	No
HSPS0109	Prayer site.	No
HSPS0120**	Prayer site.	No
HSPS0121**	Prayer site.	No
HSPS0122***	Prayer site.	No

*Discovered in 2006 **Discovered in 2011 ***Discovered in 2012

Any cultural or historical site that is found either through the Company's archaeology assessment procedure or through its cultural & historical Standard Operating Procedure will be considered for inclusion in Hinton Wood Products' Special Places in the Forest Program (see VOIT #5)

Target and Strategy

The Target for this VOIT is:

1. *Identify and document cultural and historical sites through HWP's Standard Operating Procedures (Cultural & Historical Site SOP & Form – EM-0056), HWP's Special Places in the Forest Program and through the Company's archaeological assessment procedure - develop a management strategy for each identified site within 12 months.*

Basis For Target:	The Alberta Historical Resources Act and the Company's Special Places in the Forest Program are the basis for this Target.
Primary Strategy:	The Company will follow its Standard Operating Procedures for identifying and assessing Historical and Cultural sites described in the Historical Resources Act, our Aboriginal program and our Special Places in the Forest Program.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

Building on twelve years of successful work in the Hinton Wood Product (HWP) Forest Management Area (FMA), Lifeways of Canada Limited (Lifeways) undertook the 2013 Historical Resources Impact Assessment (HRIA) work as part of HWP's continuing efforts to help record and preserve Alberta's past. This work was completed under guidelines for forestry operators established by Alberta Culture (AC). The 2013 Program focused on cut blocks to be harvested and roads to be built as part of the 2013-2014 Annual Operating Plan (AOP), as well as the post-impact assessment of a selection of previously harvested cut blocks to verify and improve the potential model for the FMA. The HRIA was completed under Alberta Archaeological Research Permit 2013-099.

Field techniques used to assess the high potential areas included pedestrian traverse and inspections of fortuitous exposures for possible cultural materials. In addition, high potential landforms were subjected to shovel testing. All site locations were recorded using GPS, photographs were taken, and detailed sketch maps were created. Assessment of significance relies on a series of site and landform traits related to the size and density of the site, how disturbed the site is, other preservation factors, and the types and ages of artifacts and features recovered or presumed to be present. Non-significant sites were flagged for short-term avoidance and

significant sites were marked for permanent avoidance in the future. A key feature of the work is an annual final report, a requirement of our permitted work, detailing all activities, as well as the updating of the database and GIS layers for use by HWP. This reporting is currently underway and should be completed within the next couple of months.

The 2013 HWP field season was very successful resulting in the identification and recording of 31 new historic resources. The new sites include 28 Precontact sites (three campsites, two lithic scatters with more than 10 artifacts, 11 lithic scatters with less than 10 artifacts, and 12 isolated find sites), two Historic Period sites (one cabin and one horse corral), and one site with both a historic component (Cabin) and Precontact component (lithic scatter with less than 10 artifacts). Two additional abandoned cabin sites were recorded but found to be too recent to qualify as archaeological or historic sites, and are of no further concern. The attached Excel table summarizes the archaeological sites we recorded and included, is a shape file providing the locational information for each of these 31 sites.

The HWP 2013 AOP consists of 569 cut blocks and 170 new roads. Many of the cut blocks in the AOP had been previously assessed; we completed HRIA investigations within 60 blocks in Compartments 2-16, 3-10, 3-13, and 4-20. One road, in a high potential area and outside of any cut block, was assessed. The remainder of the new roads had already been previously assessed, were within cut blocks being assessed, or were to be built in low potential lands. Part of the 2013 field program included the post-impact assessment of three previously harvested cut blocks. This was done as part of the ongoing process to validate and update of the potential model used for the HWP FMA.

The last major overhaul of the potential model was in 2008 and is long overdue. Every year, new information is learned and added to our understanding of the potential model. A major change that will effect how we interpret cut blocks during the prefield overview, particularly in areas where we are not as familiar, will be the use of LiDAR. One of the future goals should be the incorporation of new LiDAR data into our Historical Resources potential model. This, along with the new information we have gathered over the last few of years, will not only vastly improve the potential model but will expedite the HRIA process.

Any other cultural or historical sites that are found though field work by HWP staff (or forestry consultants) or through HWP's Aboriginal consultation process (see VOIT #23) are reported as per HWP's Cultural & Historic Site Standard Operating Procedure and Form (EM-0056).

Monitoring and Reporting

This VOIT will be measured, recorded and reported on an annually in the SFM Stewardship Report.

Future Development

No changes are planned for this Indicator and Target.

References\Associated Documentation

- Cultural & Historic Site Standard Operating Form (EM-0056)
- Special Places in the Forest – VIP Brochure with CD
- Reeves, B and C. Bourges. 2002. Hinton Wood Products Forestry Management Area Historical Resources Overview/Assessment and Proposed Management Plan Final Report. Lifeways of Canada Limited. Calgary, Alberta, Canada Reeves, Copy on file, Archaeological Survey of Alberta.
- Meyer, Daniel A. 2005 Historical Resources Impact Assessment, Hinton Wood Products, A division of West Fraser Mills Ltd., Hinton Wood Products FMA 2004 Developments, Final Report, Permit 04-213. Consultant's report on file, Archaeological Survey of Alberta, Edmonton
- Meyer, Daniel A. and Jason Roe, 2006, Historical Resources Impact Assessment, Hinton Wood Products, A Division of West Fraser Mills, Hinton Wood Products FMA 2005 Developments, Final Report, Permit 05-206

ToC

2.2228 Timber Salvage (ha)

DFMP VOIT	No, but implied in other DFMP VOITs
SFI Objective#	Timber salvage is not specifically addressed in the SFI standard, but is implied in various objectives.
ISO Objective and Target?	No
Criterion:	**Criterion #5** – Multiple Benefits to Society
SFM Element:	**5.1 Timber and Non-Timber Benefits** – Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits
Value:	Mix of forest goods and services
Objective:	Balance the management and use of timber and other resources.
Indicator:	Timber Salvage (ha)
Target:	1. Salvage all accessible timber damaged by fire, insects, diseases, or blowdown, as defined in the Development Plan and the Annual Operating Plan, greater than 1 ha (that meets quality criteria and hasn't been reserved for ecological value) within 2 years of damage being identified. 2. Recover salvage trees from 100% of industrial dispositions where merchantable timber has been committed, is decked and accessible. (This is a new Target developed on March 31, 2008)
Acceptable variance:	1. ± 5%, but the target and variance to be reviewed if MPB outbreak occurs on the FMA. *(This is a revised acceptable variance developed on March 31, 2008)* 2. ± 5% - Target "break-up" bush inventory not to exceed 35,000m (i.e. 33,250 m3 to 36,750 m3) *(This is a new acceptable variance developed on March 31, 2008)*
Monitoring:	By category, annual data change and a cumulative total will be reported annually in the SFM Stewardship Report on an operational year basis (May – April).

Overview

Salvaging damaged timber makes good ecological and economical sense, as this means overall fewer trees have to be harvested in order to meet Annual Allowable Cut (AAC) requirements (i.e. timber that would have died anyway is being utilized instead of cutting down standing live trees). However, it is also recognized that not all damaged timber should be salvaged, as it is important to maintain a component of natural-origin stands as an ecological benchmark. For that reason, HWP also has a Target related to maintaining a component of timber that has been damaged by natural processes (e.g. fire, blowdown – see VOIT #3 "unsalvaged natural stand replacing disturbances")

Timber damage by natural agents is a key component of the ecological processes that support forest ecosystems. Some level of natural disturbance that kills trees must occur to maintain ecological function. Balance between growth, death, and removal of trees for human use must be maintained to support ecological resilience (the capacity of forest ecosystems to absorb change and recover from disturbances). Sustainable forest management is based on the assumption that the amount of timber killed by natural processes can be reduced and replaced by timber harvesting for human use. The AAC is calculated by assuming that all merchantable timber from contributing lands will be harvested. Significant timber damage, such as a large forest fire, would necessitate a new AAC determination and reassessment of ecological objectives.
As well as timber salvaged as a result of natural disturbances, HWP must also salvage the timber that has been harvested as a result of other disposition holder's (e.g. oil & gas) activities on our landbase. The Company wants to salvage all of the timber from other industrial dispositions where that timber is decked and accessible (i.e. we would not salvage trees cut down in the course of hand-cut seismic operations). Any timber salvaged from other disposition holders is charged against the Company's AAC.

Definitions

A. ***Timber Salvage*** – Timber salvage is the recovery and use of merchantable timber that is damaged (killed) by fire, insects, disease, or blowdown. Timber salvage also applies to timber that is cut on the FMA landbase for non-Hinton Wood Products permanent dispositions (roads, wellsites, pipelines, mines, powerlines, etc).
B. ***Damaged Timber*** – Damaged timber is defined as an area ≥ 1 ha in size where most of the trees have been killed or are dying. Damaged timber does not include areas < 1 ha or individual trees that die in forest stands

as a result of natural processes. Damaged timber can encourage the growth of disease or insect populations, and increases fire hazard which could lead to further damage to healthy timber.

C. ***Endangered timber*** – Timber that has been damaged but not salvaged is called endangered timber because it must be salvaged before decay makes it unsuitable for forest products.

Inventory and Analysis

Endangered timber is identified by source through ongoing inventory and survey programs. As such, there is no forecast made for this Indicator. Significant occurrences are mapped and incorporated into the inventory program, and salvage is planned and approved through the planning and approval process. Harvested areas are reforested and tracked through the history and silviculture records system. The status of the Forest Management Area (FMA) landbase is inventoried every 10 years. The 1996 inventory was used as the basis for the 1999 Forest Management Plan (FMP) analysis. The FMP analysis report contains additional information about inventory and analysis procedures.

With respect to timber salvage from industrial dispositions, once the timber is salvaged and decked the disposition owner advises the Land Use department (i.e. commits the wood) at which point it is then scheduled for haul.

Targets and Strategies

The Targets for this VOIT are:

1. *Salvage all accessible timber damaged by fire, insects, diseases, or blowdown, as defined in the Development Plan and the Annual Operating Plan, greater than 1 ha (that meets quality criteria and hasn't been reserved for ecological value) within 2 years of damage being identified.*

Basis for Target	To ensure all merchantable industrial salvage wood is utilized in a timely manner and thereby increase lumber recovery to the mill.
Primary Strategy	Track the volume of committed wood and adjust monthly deliveries to reflect Oil and Gas harvest levels while providing for a steady flow of fresh wood to the mill.

2. *Recover salvage trees from 100% of industrial dispositions where merchantable timber has been committed, is decked and accessible.*

Basis for Target	To ensure all merchantable industrial salvage wood is utilized in a timely manner and thereby increase lumber recovery to the mill by tracking the salvage inventory (merchantable wood) harvested by the other land users – primarily the oil & gas industry) versus log deliveries by operating year.
Primary Strategy	Track the volume of committed wood and adjust monthly deliveries to reflect Oil and Gas harvest levels while providing for a steady flow of fresh wood to the mill.

2013 Annual Report

Target #1 **Target Met** ☒ **Target Not Met** ☐

There was blowdown, hail or fire events were recorded in 2013.

Natural mountain pine beetle attacks occurred on the FMA in 2013, primarily in the northeast, specifically throughout the Marlboro Working Circle. All known mass-attack trees in groups of 3 or more were controlled by ESRD this winter. HWP conducted harvest operations in Marlboro 16 and McLeod 18 to control many of the attacked trees located in those compartments. Another block has been designed in McLeod 12, and harvest operations will be completed as soon as possible. Priority sites that were not harvested will be controlled by single-tree fall and peel operations.

Target #2 **Target Met** ☒ **Target Not Met** ☐

This Target was deleted for 2013, as it added very little value.

Monitoring and Reporting

Each year, on an operational year basis (May – April), endangered timber salvaged and industrial timber salvaged (conifer) delivered to Hinton is tracked and reported on in the SFM Stewardship Report.

Future Development

The second target will be dropped in 2014. It is not a requirement in the new DFMP or the SFI Standard.

ToC

2.2229 Recreation Infrastructure

DFMP VOIT	No
SFI Objective#	Objective #5
ISO Objective and Target?	No
Criterion:	**Criterion #5** – Multiple Benefits to Society
SFM Element:	**5.1 Timber and Non-Timber Benefits** – Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits
Value:	Provide opportunities to derive benefits and participate in use and management of the forest
Objective:	Integrate other uses and timber management activities
Indicator:	Recreation Infrastructure
Target:	Implement the action plan for year one of the annually produced Recreation Action Plan.
Acceptable variance:	A yearly variance of 20% is acceptable, where each project is weighted based on its cost
Monitoring:	Recreation infrastructure is monitored and maintained by a contractor. There will also be periodic inventories to update the recreational inventory database. Status of recreation infrastructure will be reported on an annual calendar year basis.

Overview

Recreation is a significant non-timber value provided by the forest and is increasingly becoming a very important social value. Currently, recreation use on the Forest Management Area is heavy, and is most likely increasing annually (or at least staying the same). Providing opportunities for recreation use for current and future generations is an important component of sustainable forestry. One measure of recreation opportunities is the amount and quality of recreation infrastructure that the Company maintains and manages.

HWP has managed a significant Recreation Program, both on and adjacent to our FMA since 2000. The Program has been funded using Forest Resources Improvement Association of Alberta (FRIAA) funding, combined with revenue collected through camping fees. Currently, the Recreation Program includes 13 government-owned campgrounds, two government-owned trail systems, two HWP-owned campgrounds, and six HWP-owned trails.

In 2010, staff at HWP started to become concerned about the future viability of the Company's recreation program primarily because HWP's FRIAA funds, which support the recreation program, were continuing to dwindle, with no new money being put into the account in almost four years. In the fall of 2010 and winter of 2011, HWP started looking at different options for continuing to fund the Recreation Program. It was at this time that HWP started to explore the idea of bringing on additional partners to help fund the program.

In December 2010 and early 2011, HWP approached the three coal companies that work within or adjacent to the Hinton FMA (Teck, Sherritt, and Coalspur) and the two municipal governments in the Hinton area (Yellowhead County and the Town of Hinton). HWP asked each organization if they would be interested in partnering in the Recreation Program HWP had been running for the past decade. The response from each was overwhelmingly positive and a new association was formed, called the Foothills Recreation Management Association, which has 6 members that commit various levels of funding to the organization on an annual basis. HWP is the managing partner of FRMA and is the main contact with the government and the public.

FRMA
Foothills Recreation Management Association

As of 2013, the Foothills Recreation Management Association operates and maintains 15 campgrounds and eight trail systems, although HWP is still managing partner and the one window contact with Alberta Tourism, Parks, and Recreation. Each year, a Recreation Action Plan is developed and implemented, which addresses the infrastructure of the Recreation Program. For example under this Action Plan, new picnic tables may be built replacing old ones or roofs for wood bins may be constructed. The development of the Recreation Action Plan is done after considering feedback from the general public (via comment forms on the pay registration stubs), from the recreation surveys HWP conducted in 2002, 2006, and most recently in 2013, and after considering strategic direction provided in our Recreation Strategic Plan.

For further information on the Recreation Program please visit West Fraser's website (http://www.westfraser.com/responsibility/recreation).

Definitions

A. ***Recreation infrastructure*** – This is defined as all recreation sites, programs and associated structures that FRMA currently manages and maintains. Improvements to the recreation infrastructure include, but are not limited to, things such as campsites, trails, signs, picnic tables, fire pits, kiosks, toilets, woodbins, and shelters.

B. ***Foothills Recreation Management Association (FRMA)*** – FRMA is a group of companies and organizations committed to providing safe and affordable outdoor recreation opportunities. The partnership, which includes Teck, Sherritt, Coalspur, Yellowhead County, and the Town of Hinton, and manages 15 campgrounds and eight trail systems in the foothills area near the communities of Hinton, Edson, Robb, Cadomin, and Brule.

C. ***Recreation Action Plan*** – A Recreation Action Plan is developed each year. The Action Plan outlines FRMA's plans for maintaining, upgrading, or building new recreation infrastructure. The appendix of the Recreation Action Plan contains a Performance Report – this report will compare the plan from the previous year against actual results. The Recreation Action Plan will continue to be revised annually.

D. ***Recreation survey*** - In the summer of 2001,2002 (2001/2002results were combined), 2006 and most recently in the summer of 2013, HWP carried out a survey of the people using FRMA managed campgrounds, both on and adjacent to our Forest Management Area. The results of these surveys have been used to help determine where and what infrastructure should be upgraded. There have not been any recreational use surveys on the eight trails that FRMA manages, although there is a self-registration box maintained during the ski season at the Spruce Management Trail, and registrations are summarized annually for Hinton Wood Products by the "Friends of Camp 29" (who maintain the trails on behalf of FRMA).

E. ***Recreation Strategic Plan*** – The intent of this Strategic Plan is to provide direction and a framework for the annual production of a Recreation Action Plan. The Recreation Strategic Plan contains a number of goals and objectives centered around providing recreation opportunities on the FMA. The goals and objectives contained in the Strategic Plan are reported on annually as part of the Performance Report found in the Recreation Action Plan.

Inventory and Analysis

Table 2.229a outlines the recreation infrastructure that FRMA currently (Dec 31, 2013) maintains and manages:

Table 2.229a – Foothills Recreation Management Association *Recreation Infrastructure*

Campgrounds	Campsites	Day Use Area	Kiosks	Washrooms	Bear-proof Garbage Bins	Potable Water	Picnic Shelter	Wood bin	Horse Corrals
Coalspur Campground	Closed in 2010 due to mining activity								
Emerson Lake Campground	15	x	✓	✓	✓	✓	x	✓	x
Fairfax Lake Campground[1]	27	✓	✓	✓	✓	✓	x	✓	x
Gregg Cabin Campground	11	✓	✓	✓	✓	✓	✓	✓	x
Little Sundance Campground[2]	group	✓	✓	✓	✓	✓	x	✓	x
Lovett River Campground	17	x	✓	✓	✓	✓	✓	✓	x
McLeod River (North) Campground	22	x	✓	✓	✓	✓	x	✓	x
McLeod River (South) Campground[3]	29	✓	✓	✓	✓	✓	x	✓	x
McLeod Group Campground	group	x	✓	✓	✓	✓	✓	✓	x
Obed Lake Campground	8	✓	✓	✓	✓	✓	x	✓	x
Pembina Forks Campground	20	x	✓	✓	✓	✓	✓	✓	x
Petite Lake Campground[4]	18	✓	✓	✓	✓	✓	x	✓	x
Rock Lake Campground	92	✓	✓	✓	✓	✓	✓	✓	✓
Watson Creek Campground	39	x	✓	✓	✓	✓	x	✓	x
Whitehorse Creek Campground	25	x	✓	✓	✓	✓	x	✓	✓
Wildhay Group Campground	group	✓	✓	✓	✓	✓	✓	✓	x

Campgrounds	Campsites	Day Use Area	Kiosks	Washrooms	Bear-proof Garbage Bins	Potable Water	Picnic Shelter	Wood bin	Horse Corrals
Willow/Wildhay Campground	Closed in 2008 due to lack of use								

Trails	Kilometres	Kiosk	Picnic Sites or campsites	Trail Map Available
Bighorn Trail	20	Yes	Yes	Yes
Happy Creek Trail	6	Yes	No	Yes
Emerson Lake Trail	8	Sign	No	No
Canyon Creek Trail	4	Yes	Yes	No
McLeod River Interpretative Trail	1	Yes	No	Signed trail
Pine Management Trail	6	Yes	No	Yes
Spruce Management Cross-Country Ski Trail	18	Yes	Yes	Yes
Wild Sculpture Trail[5]	2	Yes	No	Yes

[1] Re-designed from a 36-site campground into a 27-site campground in late 2010.
[2] Changed to a group campground in 2010.
[3] This is a new 29-site campground built in 2010.
[4] This campground was expanded from an eight-site to a 18-site campground in 2010.
[5] This maintained portion of this trail was reduced to 2 kilometres in 2011, due to the lack of use past the 2 km point and the expense to continue to maintain and repair the 7 kilometres of trail past the 2-km mark.

There are two overlapping inventories that measure Hinton Wood Products' recreation infrastructure. The first is an inventory completed in 1998 by consultants that inventoried all of the well-used summer recreational sites on the Forest Management Area (FMA). This inventory is kept up to date through an Access database program. This database includes recreation sites that are maintained by Alberta Tourism, Parks and Recreation, by private operators, and West Fraser (Hinton Division), and also some user maintained sites (but not all on the FMA).

In 1999, a more detailed inventory was completed for all of the recreational sites that Hinton Wood Products maintained at that time. This inventory examined in detail the existing infrastructure on all Hinton Wood Products sites, including detailed recommendations for upgrades. All of the recommendations from that 1999 inventory have now been implemented.

In 2001/2002, 2006, and in 2013 a Recreation User Survey was carried out on all the larger campgrounds that FRMA manages and maintains. Results and feedback from this survey are used to develop the subsequent Recreation Action Plans. This survey will be repeated (funding dependent) in another five-to-seven years.

In 2003, a CD was created as part of the Special Places in the Forest Program (see VOIT #5). This CD contains detailed information on all of the recreation sites that Hinton Wood Products manages, including a detailed history of the improvements Hinton Wood Products has made to the site since 2000. This CD was updated in 2005, and will continue to be updated from time to time. It is available to the public.

Target and Strategy

The Target for this VOIT is:

1. *Implement the action plan for year one of the annually produced Recreation Action Plan.*

Basis for Target	Each year FRMA develops a Recreation Action Plan, which includes all of the recreational related work proposed for the next three years. This plan outlines all of the improvements and/or replacements of existing recreation infrastructure. The plan also outlines any new recreation infrastructure that is being proposed. The Recreation Action Plan is developed after considering feedback from the general public (via comment forms on the pay registration stubs), from the recreation surveys HWP conducted in 2001/2002, 2006,and

2013 and after considering strategic direction provided in our Recreation Strategic Plan.

Primary Strategy

The major strategy for implementing the Recreation Action Plan has been the contracting of Fox Creek Development Association to undertake all of the maintenance of the campgrounds (including maintaining a reservation system and collecting camping fees), as well as providing bids on many of the new projects and improvements found in the plan. Other contractors are hired as required to undertake work not suitable for Fox Creek (e.g. the printing of maps, brochures, etc.). Hinton Wood Products (on behalf of FRMA) is responsible for the overall management of the recreation program including the development and implementation of the Recreation Action Plan.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

In 2013, the FRMA partnership was in its third year of operation. In 2013, FRMA had access to $202,000 in partner funding and collected $109,597 in campground revenue. Using these funds, FRMA undertook $295,626 worth of recreational maintenance and upgrades. Of this $295,626 of funding, $228,994 of it was used to provide Aboriginal employment at Fox Creek Development Association, who maintains all of the FRMA recreation sites and also carries out many of the upgrades implemented every year.

The following table outlines the projects that were planned for in Year One of the 2013-2015 Recreation Action Plan and their status as of December 31, 2013:

Table 2.2229b – *Recreation Projects in 2013*

2013 Planned Project Description	Status (December 31, 2013)
Conservation Officers (COs) - Hinton Wood Products contracts the services of two government Conversation Officers for security and enforcement on the campgrounds managed by the Company	**Complete** (total cost $46,821)
Maintenance of 15 campgrounds and 8 trail systems	**Complete** (total cost $224,334)
Renaming of the Spruce Management Trails	**Not Complete –** a decision was made to not rename the trails at this point and use available funding for other projects.
Major Re-Routing of the Bighorn Trail – A portion of the new re-routed trail was flooded in the spring of 2012; therefore, it was apparent that this route location was not suitable. The start of the trail re-route was completed; however, the trail needed to be re-routed again to get it totally out of the floodplain. This was completed in the fall of 2012; however, this new route has not yet been approved by ESRD. Approval of this new route was given in 2013.	**Not Complete** – In the spring of 2013, there was another major flood in the Gregg River valley. One of the results of this flood was a new major logjam that rerouted the Gregg River right over top of the newly approved Bighorn Trail relocation. A decision was made to do nothing to the trail until the logjam issues were sorted out. HWP has applied to government to remove this logjam. If this is successful and the river is moved back into its course, then the Bighorn Trail relocation may take place in 2014. If this isn't successful, then we will look into making the trail shorter – ending it at kilometer 17, where it intersects the Teepee Creek road.
New Recreation Maps and Trail Maps – FRMA Recreation Maps and trail brochures were to be reprinted with minor edits.	**Complete** (total cost $ $7,093) – FRMA Recreation maps and trail brochures were reprinted with minor edits.
Upgrades to the Whitehorse Creek Campground – In 2013, the manure bins will be replaced and made bigger.	**Partially Complete** (total cost $4,170) – In 2013, new manure bins were constructed, but were not installed. Installation will take place in the spring of 2014.
Recreation Survey – A new recreation survey, following up on the surveys from 2001/2001 and 2006 will be carried out.	**Complete** (total cost $4,354) – The recreation survey was completed in the summer of 2013 and results compiled. There were 206 campers surveyed.
Donations • Muskeg Ski Flyers ($1,000 donation)	**Complete** (total cost $1000) – In 2013, a donation of $1000 was made to the Muskeg Ski Flyers; this group runs and maintains the Hornbeck Ski trails located near Edson.

The majority of the projects planned for 2013 were completed and this target has been met within its acceptable variance. The projects that were not completed have either been put on hold or rescheduled for future years.

There was an additional recreation project carried in 2013 that was not part of the official 2013 Action Plan. Table 2.2229c describes each of the additional project and its status:

Table 2.2229c – *Additional Recreation Projects in 2013*

2013 Project Description	Status (December 31, 2013)
Upgrades to the Petite Lake Campground – In 2013, all the picnic tables at Petite Lake were sanded and re-stained. In addition the two fire-pits at the day use area were replaced and the fire-pit at site #10 was replaced.	**Complete** (total cost $6,164)
Upgrades to the Gregg Cabin Campground – In 2013, new doors were put on both washrooms at the Gregg Cabin.	**Complete** (total cost $ $1,035)
Minor upgrade to Fairfax Lake – In 2013, a picnic table was replaced at Fairfax Lake.	**Complete** (total cost $ $656)

Monitoring and Reporting

HWP's recreation infrastructure is maintained by a contractor – Fox Creek Development Association (a non-profit Aboriginal owned and operated company). The detailed information about exactly what infrastructure is at what recreation site is maintained in an Access Database. There are periodic inventories to update this recreational inventory database.

Every year since 2000, Hinton Wood Products has reported on our performance against the commitments made in the Recreation Action Plan. This Performance Report for the previous year can be found in Appendix 4 of the 2014-2015 Recreation Action Plan and is also summarized annually in this SFM Stewardship Report.

Future Development

This Target will continue to be monitored to ensure that it is appropriate.

References\Associated Documentation

- Hinton Wood Products – 2013 Recreation User Survey, Hinton Wood Products of Canada, Hinton, Alberta, Canada
- Hinton Wood Products – 2006 Recreation User Survey, Hinton Wood Products of Canada, Hinton, Alberta, Canada
- Hinton Wood Products 2013-2015 Recreation Action Plan. Hinton Wood Products of Canada, Hinton, Alberta, Canada.
- Hinton Wood Products – Recreation Strategic Plan (version – January 2005), Hinton Wood Products of Canada, Hinton, Alberta, Canada
- Hinton Wood Products – 2001/2002 Recreation User Survey, Hinton Wood Products of Canada, Hinton, Alberta, Canada
- Hinton Wood Products – Special Places in the Forest – CD (version 2003), Hinton Wood Products of Canada, Hinton, Alberta, Canada
- Hinton Wood Products 1999. 1999 Recreation Site Inventory. Hinton Wood Products of Canada, Hinton, Alberta, Canada.

ToC

2.2230 Overnight Visits

DFMP VOIT	No
SFI Objective#	Objective #5
ISO Objective and Target?	No
Criterion:	**Criterion #5** – Multiple Benefits to Society
SFM Element:	**5.1 Timber and Non-Timber Benefits** – Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits
Value:	Provide opportunities to derive benefits and participate in use and management of the forest
Objective:	Integrate other uses and timber management activities
Indicator:	Overnight visits
Target:	Annually target to have a minimum of 7500 well distributed paid overnight visits at Hinton Wood Products managed campgrounds. *(This Target was amended on January 7, 2008)*
Acceptable variance:	15% - to allow for unforeseen events, such as bad weather, forest fires, etc.
Monitoring:	Campground receipts will be summarized annually in December of each year to determine the number of overnight visits

Overview

This VOIT directly measures the public's use of the majority of Hinton Wood Products' recreation camping sites. The eight trails that Hinton Wood Products maintains are free, so we have no easy way to measure the use of these facilities, although there is a self-registration box maintained during the ski season for the Spruce Management Trail, and registrations are summarized annually for Hinton Wood Products by the "Friends of Camp 29" (who maintain the trails on behalf of the Company).

However, the fifteen campgrounds that the Company does manage have an overnight fee that is collected and tracked. An overnight visit is defined as one paid visit at one of our campgrounds – there may be anywhere from one to numerous people represented by a visit, although our 2006 recreation survey indicated that 70% of the time a visit represents between two and four people staying at the site.

In 2004, 7000 visits was chosen as a base line target for acceptable use of HWP campgrounds based on statistics gathered since 2000. The Target of 7000 overnight visits was changed to 7500 for 2007 because of the change in how overnight visits are being counted for group campgrounds (i.e. one group night fee equals 10 overnight visits) and because HWP started charging a fee for the Petite Lake campground, which was previously free, and therefore overnight visits were not counted. If this number varies negatively by more than 15% (this is a buffer to account for things like poor weather, forest fires, etc.), then HWP will need to decide if our activities are causing this decline and take necessary actions to reverse it.

Definitions

A. ***Well distributed paid overnight visits*** – The term "well-distributed" has been used to ensure HWP is tracking overnight visits by campground, not just overall. In other words, it could be possible that this indicator is not met, even though the number "7500" has been. For example, if one or two campgrounds suddenly experience a dramatic reduction in overnight visits, then HWP must determine the likely cause of this and address it, even though the total of 7500 may still be met.

***Inventory* and Analysis**

In 2001/2002 and again in 2006, Hinton Wood Products carried out a recreation survey during the summer camping season in order to determine the public's satisfaction with the management of our recreation facilities. The results from this survey have helped direct future improvements to our recreation infrastructure. The survey results are available on our website at www.westfraser.com/hintonforestry (follow the "Recreation" link, then the "Recreation Survey Results" link) and have been, and will continue to be, incorporated into our Recreation Action Plans.

In addition to the above noted surveys, there have been three previous analyses of recreation use on Hinton Wood Products' FMA landbase. These analyses are titled as follows:

1. Recreation in the Foothills Model Forest: The 1996 On-site Camping Study – Draft
2. An overview and non-market valuation of camping in the Foothills Model Forest
3. Camper Characteristics and Preferences at Managed and Unmanaged Sites in the Foothills Model Forest

All three of these analyses were conducted by the Foothills Research Institute on their landbase (of which the Hinton Wood Products FMA landbase is a major part) and take in at least a portion of Hinton Wood Products' landbase.

The history of overnight visits from 2002 to 2010 is shown in Table 2.2230a. The overnight visit information is only collected on those campgrounds where fees are collected. The Company started collecting fees for its campsites in 2000, when we were operating 14 campgrounds, but only collecting fees (and hence overnight visit information) on eight of those campgrounds. By 2003, the Company was operating 16 campgrounds and collecting fees from 14 of those. In 2007, the Company shut down the Willow/Wildhay campground (which was free) due to non-use and started charging a fee at the Petite Lake campground. In 2010, the Coalspur campground was shut down due to the Coal Valley mine expansion; however, a new campground was built within the McLeod River PRA (called the McLeod River (South) Campground), but wasn't open for operation until 2011.

Please note the data in the table below has changed from previous years, as we are now counting each group campground overnight fee, as ten overnight visits. This is because group campgrounds have more than one party camping at them (usually a minimum of ten, but at times there can be many more). The table has been corrected back to 2002.

Table 2.2230a – *Overnight Visits 2003-2012*

Campground	Overnight Visits										Comments
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Whitehorse Creek PRA*	1456	397	1156	1208	1259	1119	1399	1209	1193	1168	In 2004 closed most of the season due to mine
Watson Creek PRA	851	769	695	778	838	699	646	490	441	524	
Gregg Cabin	264	471	423	417	489	555	702	593	498	573	Fees started in 2003
McLeod Group PRA	230	380	290	460	354	390	450	753	360	365	Group campground
McLeod Rec. N PRA	548	520	531	663	824	827	823	753	680	730	
McLeod Rec. S PRA	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	727	702	Opened in 2011
Coalspur PRA	173	122	362	195	209	174	136	n/a	n/a	n/a	Closed in 2010
Lovett PRA	205	185	1083**	218	209	184	182	199	102	124	
Fairfax Lake PRA	1019	925	1159	1218	883	869	864	1000	683	782	
Pembina Forks PRA	406	243	221	324	266	314	277	326	223	191	
Obed Lake PRA	379	432	418	551	561	495	486	417	398	548	Fees started in 2002
Little Sundance PRA	109	155	95	314	210	121	130	136	67	83	Fees started in 2001
Emerson Lakes PRA	567	558	505	426	319	584	482	354	394	387	Fees started in 2001
Petite Lake	no fee	no fee	no fee	no fee	486	496	516	468	668	526	Fees started in 2007
Willow/Wildhay River	no fee	no fee	no fee	no fee	n/a	n/a	n/a	n/a	n/a	n/a	Closed 2007
Wildhay Group PRA	150	130	270	280	150	170	220	1846	339	182	Took on operating contract in 2003
Rock Lake PRA	1104	1297	1438	1618	1715	1700	1990	1846	1585	1153	Took on operating contract in 2003
Grand Totals	7461	6584	8646	8670	8772	8697	9303	8381	8358	8038	

*Provincial Recreation Area – These are government campsites that Hinton Wood Products maintains and operates under contract with the Alberta Tourism, Parks, and Recreation.

**An oil & gas work crew stayed in this campsite all summer during 2005, which significantly increased the number of overnight visits that year.

Target and Strategy

The Target for this VOIT is:

Target #1*: Annually target to have a minimum of 7500 well distributed paid overnight visits at Hinton Wood Products managed campgrounds.*

Basis for Target	7500 visits has been chosen as a base line target for acceptable use of HWP campgrounds based on statistics gathered since 2000. If this number varies negatively by more than 15% (this is a buffer to account for things like poor weather, forest fires, etc.), then HWP will need to decide if our activities are causing this decline and take necessary actions to reverse it. The target may be moved upwards depending on ongoing overnight visitor data.
Primary Strategy	The strategy that has been used to accomplish this Target is to maintain and continually improve our Recreation Program, through the implementation of our annually produced Recreation Action Plan. Each year the Company continues to improve and/or add to our recreation infrastructure – these projects are planned for and documented annually in this Action Plan. Also part of our strategy is to contract the services of Fox Creek Development Association (an Aboriginal owned and operated company) to manage the maintenance of the campgrounds (including a reservation system), and two Conservation Officers from the Alberta government that provide security and enforcement. The Company charges a small fee (lower than market value) for the use of all of its campgrounds. Marketing and advertising of our recreation sites has been minimal to date, with the main avenue being the production and distribution of a recreation map for the FMA and trail maps for a number of trails (these documents are distributed through the Company's website and at local Visitor Information Centres). We have advertised sporadically that we have a Recreation Program, mostly in local newspapers.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

In 2009, HWP recorded 9,303 overnight visits (by a camping party), which represented the highest level of overnight visits recorded since 2000 (the start of our records). In 2013, FRMA recorded 8,799 overnight visits; this is the second highest level since 2007 (the earliest year that our records can be compared "apples-to-apples").

Campground use does vary from year to year and is often dependent on weather. If there is nice weather, particularly on the four long weekends between May and the end of September, campground revenue is higher. Poorer weather, or campfire bans (implemented when the weather is too hot), results in lower use and thus lower revenue. In 2013, the weather was fairly reasonable over the long weekends resulting in a better than average year for campground use. As like last year, there was also issues with the Rock Lake road, resulting in campground closures, but the duration of these closures was not nearly as long as they were in 2012.

Table 2.2230b on the following page, shows the number of overnight visits at each campground in 2013. Most campgrounds either had relatively the same use as in previous years or had increase use. There were three campgrounds with significantly lower use than last year – McLeod North, Obed Lake, and Little Sundance.

Table 2.2230b – *Overnight Visits 2013*

Campground	Cost/visit for party	Overnight Visits 2013	Comments
Whitehorse Creek PRA*	$11/night	1156	No significant change from 2012.
Watson Creek PRA	$11/night	665	Significant increase from 2012.
Gregg Cabin	$11/night or $105/group	527	Slightly lower than 2012
McLeod Group PRA	$105/group	417	Significant increase from 2012.

Campground	Cost/visit for party	Overnight Visits 2013	Comments
McLeod Rec. N PRA	$11/night	645	Significant decrease from 2012
McLeod Rec. S PRA	$11/night	668	No significant change from 2012.
Lovett PRA	$11/night	162	Significant increase from 2012.
Fairfax Lake PRA	$11/night	770	No significant change from 2012.
Pembina Forks PRA	$11/night	213	Slightly higher than 2012
Obed Lake PRA	$11/night	473	Significant decrease from 2012
Little Sundance PRA	$16/night	26	Significant decrease from 2012
Emerson Lakes PRA	$105/group	560	Significant increase from 2012.
Petite Lake	$11/night or $105/group	470	Significant decrease from 2012
Wildhay Group PRA	$105/group	255	Significant increase from 2012.
Rock Lake PRA	$16/night	1792	Significant increase from 2012.
Totals		**8799**	9.5% increase over 2012

*Provincial Recreation Area – These are government campsites that Hinton Wood Products maintains and operates under contract with the Alberta Tourism, Parks, and Recreation.

Monitoring and Reporting

Campground receipts will be summarized annually in December of each year to determine the number of overnight visits and reported in the SFM Stewardship Report.

Future Development

This Target will continue to be monitored to ensure that it is appropriate.

References\Associated Documentation

- Hinton Wood Products – 2006 Recreation User Survey, Hinton Wood Products of Canada, Hinton, Alberta, Canada
- Hinton Wood Products – 2001/2002 Recreation User Survey, Hinton Wood Products of Canada, Hinton, Alberta, Canada
- McFarlane, B. L., M. Fisher, and P. C. Boxall, 1999. Camper characteristics and preferences at managed and unmanaged sites in the Foothills Model Forest. Canadian Forest Service, Edmonton, Alberta, Canada.
- Hinton Wood Products 2012-2014 Recreation Action Plan, Hinton Wood Products of Canada, Hinton, Alberta.

ToC

2.2231 Visual Impact Assessments

DFMP VOIT	No
SFI Objective#	Objective #5
ISO Objective and Target?	No
Criterion:	**Criterion #5** – Multiple Benefits to Society
SFM Element:	**5.1 Timber and Non-Timber Benefits** – Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits
Value:	Management reflects social values
Objective:	Minimize the short-term visual impacts of timber management in identified priority areas of high visual sensitivity.
Indicator:	Visual Impact Assessments
Target:	Conduct visual impact assessments for areas with high visual sensitivity prior to Final Harvest Plan submission. *(This target was changed in 2010 to reflect the new Operating Ground Rules)*
Acceptable variance:	0% - All proposed operations in identified high visually sensitive areas will be assessed.
Monitoring:	Review and revision of visual impact assessments will be reported annually based on a timber operating year (May – April).

Overview

Some areas of HWP's FMA, based on their location, are more visually sensitive than others. The intent of this VOIT is to recognize and identify the areas that are more sensitive and then conduct a visual impact assessment on these areas prior to block layout. Harvesting practices may have to be altered in order to reduce the visual impact of the Company's activities.

Definitions

A. ***High visual sensitivity*** – Areas of high visual sensitivity are visible from key locations by large numbers of people, and they are sensitive to disturbances that alter views.

B. ***Visual impact assessment*** – A visual impact assessment is an assessment of the impact of proposed operations on visual resource values (aesthetics). Assessments based on the viewscape (what can be seen) from specific viewpoints are completed using computer modelling to predict what the modified visual landscape would look like. The assessments are then subjectively evaluated and either accepted or revised based on a new operations scenario. The final Final Harvest Plan describes the assessment and the operations plan proposed to minimize aesthetic impact.

Inventory and Analysis

Industrial Forestry Service completed a Visual Landscape and Recreation Feature Inventory of the FMA in 1997. This inventory was conducted using the British Columbia Ministry of Forests standards and provided a description of the main visual landscape, recreation features, recreation sites and significant viewing locations on the FMA. The inventory covered areas visible from provincial highways and major river corridors. The inventory was further stratified into five visual quality classes, which defined the broad management intent with respect to aesthetics.
Since 1997, visual assessments have been initiated or completed on all compartments identified as having high visual sensitivity in the visual landscape inventory.

Target and Strategy

The Target for this VOIT is:

1. *Conduct visual impact assessments for areas with high visual sensitivity prior to Final Harvest Plan submission.*

Basis for Target	Based on the visual inventory, certain areas were identified as having high visual sensitivity, meaning they are visible from key locations by large numbers of people, and they are sensitive to disturbances that alter views. This target was developed to ensure that aesthetics are considered for all areas of high visual sensitivity.

Primary Strategy	Through the compartment planning process all areas identified as having high visual sensitivity will have visual impact assessments completed in order to address visual quality.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

Planning activities were completed in all working circles during 2012/13. None of the plans included any of the High Value Sensitivity areas. Following is a summary of the efforts undertaken to mitigate the visual impacts this year:

Final Harvest Plan	VQO 1-3	Action Taken
Atha28 2012-08	VQO 2	No blocks planned within the VQO 2 area.
Atha29 2013-02	None	N/A
Atha27 2012-06	VQO 2	No blocks planned within the VQO area.
Marl10 2012-10	None	N/A
Marl17 2012-09	None	N/A
Emb12 2013-02	VQO 2,3	Large harvest areas have been designed so that they are at least partially obscured and screened from view by topography and stand retention. Coal Valley Mine limits effectiveness of these efforts.
Emb20 2012-09	VQO 3	Area excluded from FHP.
Mcl08 2012-08	VQO 2,3	Irregular boundaries, topography and retention areas designed to provide screening.
Mcl13 2012-12	VQO 2,3	Structure retention and timber type changes used to minimize sight lines.
Mcl20 2012-06	VQO 3	Structure retention and topography used to reduce visual impacts.
Mcl28 2012-06	VQO 3	FireSmart block. No attempt to reduce visual impact.
Berl23 2013-03	VQO 2	Topography used to maintain visual quality.
Berl26 2012-06	VQO 2	Riparian buffers and topography will minimize views.

No visual assessments were initiated in 2013.

Monitoring and Reporting

A review and revision of visual impact assessments will be reported annually based on a timber operating year (May – April) in the SFM Stewardship Report.

Future Development

There are no plans for further changes to this indicator at this time. Although managing for visual quality isn't a requirement under the Alberta Planning Standard (i.e. at the DFMP level), it is a requirement under the SFI standard.

References\Associated Documentation

- Alberta Forest Service. 1986. Forest Landscape Management Guidelines for Alberta. Alberta Forest Service, Edmonton, Alberta, Canada.
- Industrial Forestry Service. 1997. Visual landscape and recreation inventory of the Hinton FMA, volumes 1-4. Industrial Forestry Service, Prince George, British Columbia, Canada.

ToC

2.2232 Public Complaints Regarding HWP Activities

DFMP VOIT	No
SFI Objective#	Objective #17
ISO Objective and Target?	No
Criterion:	**Criterion #5** – Multiple Benefits to Society
SFM Element:	**5.1 Timber and Non-Timber Benefits –** Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits
Value:	Management reflects social values
Objective:	HWP activities do not significantly impact the enjoyment of the forest resource by the general public.
Indicator:	Public complaints regarding HWP activities
Target:	Zero public complaints as a result of new HWP activities.
Acceptable variance:	2 negative complaints
Monitoring:	Public complaints resulting from HWP activities will be recorded and reported on annually in the SFM Stewardship Report. Positive feedback will also be recorded.

This VOIT was deleted in 2013, as it was deemed to have limited value and issues raised by third parties don't necessarily reflect the views of the majority of people.

ToC

2.2233 Sawmill Piece Size

DFMP VOIT	No
SFI Objective#	Objective #7
ISO Objective and Target?	No
Criterion:	**Criterion #5** – Multiple Benefits to Society
SFM Element:	**5.3 Fair Distribution of Benefits and Costs** – Promote the fair distribution of timber and non-timber benefits and costs
Value:	Competitive resource businesses
Objective:	Maintain a sustainable and economical supply of timber for wood products.
Indicator:	Piece size into the sawmill
Target:	Annually maintain an average piece size into the sawmill of 0.128 m3/piece. *(This new VOIT was developed on February 25, 2008)*
Acceptable variance:	+/- 10%
Monitoring:	The average piece size in the sawmill is monitored daily. As equipment changes are made the target may change.

Overview

The size of logs processed by the HWP sawmill has a large influence on mill efficiency including recovery (% of log volume turned into products), productivity (production/shift), and product value (% of lumber that is in larger sizes and higher grades).

Definitions

A. ***Piece Size*** – Piece size is defined as the m^3 of each 16'6'' log processed in the HWP sawmill. All pieces entering the mill are scanned and the volume/piece is recorded. The average is tracked daily, monthly, and annually with the objective of being as consistent as possible from shift to shift in size. In September 2011, the sawmill began to consume 100% cut-to-length logs which are manufactured as such in the forest. The sawmill no longer consumes tree-length logs or runs the merchandising deck.

Inventory and Analysis Information about the average size of merchantable trees (trees/m^3) is available through the HWP Alberta Vegetation Inventory and Permanent Growth Sample plot system, plus data from cruise plots. Tree height, tree diameter, and information about quality defects are the primary measures used to calculate trees/m3. Stand, stratum volume and tree size can be queried in the GIS system using this information linked to the AVI. For example, tree size was used as a selection factor to choose which MPB-susceptible pine stands to harvest starting in 2006. Recently, as technology continues to improve and find new ways of interpreting data, HWP has been working with LiDAR data as a new tool to further assist in determining volume/hectare accurately.

Target and Strategy

The Target for this VOIT is:

1. *Annually maintain an average piece size into the sawmill of 0.128 m^3/piece*

Basis for Target	Shifting harvest from larger spruce to smaller pine to address mountain pine beetle reduced the average piece size for harvested timber. To compensate for this reduction only larger diameter pine stands (≤ 5 trees/m3) are currently targeted for harvest. These produce an average sawmill piece size of 0.128 m^3.
Primary Strategy	Harvest susceptible "pure" pine stands ≤ 5 trees/m^3 to produce an average sawmill piece size of 0.128 m^3.

2013 Annual Report **Target Met** ☐ **Target Not Met** ☒

The average 2013 log size at the HWP sawmill was 0.145 m^3/piece. This log size is outside the acceptable variance of +/- 10%.

During 2013, the Company continued to focus on specific MPB infested stands or those highly susceptible MPB pine stands identified in the spatial harvest sequence. As Table 2.2233a illustrates, the last six months of 2013 saw an overall reduction in sawmill piece size. In fact, during the last six months of the year the piece size average would have fallen within the objective range set forth in this VOIT. This is largely due to the fact that we increased our operational presence in those highly susceptible MPB stands within our spatial harvest sequence in the southern reaches of the FMA, Forest stand characteristics in these geographical areas are typically shorter with smaller diameter and a high degree of taper.

The sawmill piece size of 0.145 m^3/piece was calculated using the monthly sawmill averages rolled up for the 12 month reporting period (see Table 2.2233a below).

Table 2.2233a – *2013 Monthly Sawmill Piece Size Summary*

Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
0.157	0.159	0.150	0.151	0.148	0.153	0.135	0.128	0.141	0.144	0.144	0.135

Monitoring and Reporting

All reporting on this indicator will take place annually with this Stewardship Report.

Future Development

This indicator may be revised depending on changes in the Mountain Pine Beetle strategy and economic conditions.

ToC

2.2234 Average Haul Distance

DFMP VOIT	No
SFI Objective#	Objective #1
ISO Objective and Target?	No
Criterion:	**Criterion #5** – Multiple Benefits to Society
SFM Element:	**5.3 Fair Distribution of Benefits and Costs** – Promote the fair distribution of timber and non-timber benefits and costs
Value:	Competitive resource businesses
Objective:	Maintain long-term economic viability of the HWP enterprise.
Indicator:	Average Haul Distance
Target:	Maintain an average haul distance of 67.3 km for wood harvested from the FMA over a five year cut control period (Jun 15/03 – Jun 14/08).
Acceptable variance:	± 5% of average (63.9 – 70.7 km)
Monitoring:	The indicator will be monitored and reported annually on an operating year basis (May 1 – April 30).

Overview

The average haul distance is considered key to ensuring the long-term economic viability of the Hinton Wood Products enterprise. Haul costs represent a significant "controllable" portion of the delivered wood cost to a mill facility. The average haul distance objective is designed to "flat line" the variable haul cost component of delivered wood costs. The only variable component of haul is therefore trucking cost per/km.

Definitions

A. ***Average haul distance*** – This is the distance in kilometres by road from a harvest area to the HWP mill. The volume-weighted annual average haul distance for a timber year is calculated by applying compartment average haul distances (using existing road infrastructure distances) to the Hinton mills against the volumes harvested by compartment.
B. **General Development Plan (GDP)** - The General Development Plan translates the strategies identified in the Forest Management Plan (DFMP), combines them with the Operating Ground Rules and develops operational strategies. The GDP is updated annually and contains relatively detailed information for all operations scheduled for the next 5 years. The intent of the GDP is to provide an annual plan that provides a long-term projection of the compartments to be operated, required main road access, and cut control (reports on previous harvesting) by large geographic areas (called working circles) to achieve the strategies specified in the Forest Management Plan, such as average haul distance).

Inventory and Analysis

Calculation of a rotation average haul distance is difficult to make in such a way as to be comparable to the annual volume-weighted average haul distance. To do this for a rotation would require knowing the rotational volumes for each stand, which depends on the time of harvest. The best "proxy" for this rotational average is the volume-weighted average haul distance. The average haul distances from 2000–2012 are shown in Table 2.2234a. The volume-weighted average haul distance is 67.3 km (as calculated for the 1999 Development Plan).

Table 2.2234a – *Average haul distance in km*

Year	2009	2010	2011	2012	2013
Average haul distance (km)	48.4	54.5	55.2	65.6	71.6

Note: Column headings refer to the timber year from May 1-April 30 of the current year.

Target and Strategy

Target for this VOIT is:

1. *Maintain an average haul distance of 67.3 km for wood harvested from the FMA over a five year cut control period* (May 1/08 – April 30/13).

Basis for Target	The primary reason for maintaining an average haul distance over the FMA is to avoid issue of always harvesting the cheapest wood first (i.e. the wood closest to the mill) – by maintaining an average haul distance over the FMA, this common pitfall is avoided. The philosophy of maintaining an average haul distance has been in place since the beginning of the FMA in the 50s.
Primary Strategy	The strategy to meet the Target is to implement the General Development Plan. Annual average haul distances are projected in the General Development Plan, based on the volume schedule and compartment average haul distances. The purpose of the General Development Plan is to ensure meeting the haul distance objective simultaneously with other resource objectives (e.g. cut control – VOIT #20).

2013 Annual Report **Target Met** ☐ **Target Not Met** ☒

The average haul distance for the 2012/13 timber year was 71.6 km. The average haul distance for the period of May 1, 2008 to April 30, 2013 was 59.1 km, which is less than 5 km outside of the acceptable variance for this target (63.9 to 70.7 km).

This target was not met because timber harvesting was concentrated in areas closer to the mill to minimize haul costs due to the very poor lumber market experienced in 2008-10. As markets improve, HWP operations will continue to transition towards the FMA average, while focusing on stands which have been attacked by the mountain pine beetle. This is evident in the 23 km increase shown between 2009 and 2013.

Monitoring and Reporting

The indicator will be monitored and reported annually on an operating year basis (May 1 – April 30).

Future Development

The target, and/or acceptable variance for this VOIT may need to be changed to address the looming issue of mountain pine beetle (MPB). If an MPB outbreak does occur on the FMA, then this VOIT will have to be re-evaluated, as the Company will be harvesting wherever the beetle is, disregarding average haul distance objectives. A new target will be compiled for this VOIT which is more consistent with the MPB strategy. New haul distance targets may be calculated as part of the 2014 DFMP, to better reflect the current utilization standard and the location of the mature timber on the FMA

ToC

2.2235 Hinton Wood Products Contributions

DFMP VOIT	No
SFI Objective#	Objective #12
ISO Objective and Target?	No
Criterion:	**Criterion #5** – Multiple Benefits to Society
SFM Element:	**5.3 Fair Distribution of Benefits and Costs** – Promote the fair distribution of timber and non-timber benefits and costs
Value:	Mix of forest goods and services
Objective:	Contribute to the economic and social health of the region.
Indicator:	Hinton Wood Products Contributions
Target:	Report annually on the contributions to economic and social health of the region.
Acceptable variance:	Report annually.
Monitoring:	Total contributions will be summarized on an annual calendar year basis and included in the SFM Stewardship Report.

Overview

Hinton Wood Products' contributions include any monetary and non-monetary assistance provided, to support the local, regional, provincial, or Canadian economic or social infrastructure or programs. This VOIT will focus primarily on the area encompassed by or in the vicinity of the Hinton Wood Products' Forest Management Area (FMA) landbase. Economic contributions include categories such as taxes, payroll, goods and service purchases, and employment. Social contributions include categories such as recreation infrastructure and public access to the forest.

Inventory and Analysis

Charitable and community contribution information is contained in the financial records. Contributions to initiatives such as the Employee and Family Assistance Program are also available. The value of services (sewer and water) provided to the town has to be calculated. Other contributions have been identified and calculated or summarized. Table 2.2235a contains a summary of HWP contributions from 2004 to 2012 – the year 2005 is missing as in that year the Company reported economic contributions only from Hinton Wood Products (i.e. not Hinton Pulp as well).

Table 2.2235a – *Hinton Wood Products Hinton Division contributions for 2004 to 2013*

Contribution[1]	2004	2005	2007	2008	2009	2010	2011	2012	2013
Direct employment	859	728	647	597	561	568	548	558	590
Contract employment[2]	410	291	263	207	128	135	131	215	185
Salaries, wages, and benefits	$81,283,200	$75,454,000	$67,225,000	$58,659,000	$56,393,937	$60,630,909	$61,270,769	$63,470,560	$66,946,876
Goods and service purchases	$196,609,000	$223,603,000	$201,390,000	$199,218,000	$175,275,963	$195,929,924	$19,867,712	$197,951,136	$216,907,376
Municipal taxes	$3,008,000	$3,022,000	$2,815,000	$2,922,000	$2,152,446	$2,725,090	$2,723,703	$2,814,393	$3,190,744
Taxes, Fees and royalties[3]	$34,112,000	$3,575,000	$1,662,000	$1,778,000	$1,428,454	$1,564,595	$1,654,287	$2,249,053	$2,559,057
Capital investment	$19,104,000	$30,511,000	$24,718,000	$5,193,000	$168,000	$3,939,554	$39,237,078	$20,017,867	$11,468,173
Research and development	$2,250,000	$2,010,000	$2,593,000	$2,209,000	$1,101,359	$212,441	$766,531	$695,471	$969,445
Hinton water and sewer[4]	$98,000	$100,000	$100,000	$600,000 (est.)	$600,000	$600,000	$600,000	$600,000	$600,000
FMA Recreation infrastructure[5]	24 sites	24 sites	24 sites	23 sites	23 sites			24 sites	24 sites
FMA Public access infrastructure	3075.2 km rds	3,152 km rds	3,143 km rds	3,087 km rds	3,024 km rds			3,000 km rds	3,000 km rds
Donations	not reported	not reported	$28,500	$30,350	$8,768	$17,933	$21,133	$20,452	$18,241

[1] Unless otherwise noted, contributions are for Hinton Division (Hinton Pulp and Hinton Wood Products) and account for all spending, irrespective of geographic area.
[2] Full-time employment (FTE) equivalent. 1 FTE = 12 person-months of employment.
[3] Includes Corporate taxes, stumpage, holding and protection charges, and gravel royalties.
[4] Hinton Pulp treats water and sewage for the Town of Hinton. The amount reported is the value of the service over and above payments received for potable water treatment.
[5] Recreation infrastructures include trails, day use areas, and campsites. This includes sites developed and managed by Hinton Wood Products and additional provincial sites managed by the company.

Target and Strategy

The Target for this VOIT is:

1. *Report annually on the contributions to economic and social health of the region.*

The strategy is the same as the Target – report annually on economic contributions.

Basis for Target	The basis of the Target is the Objective for this VOIT, which is to contribute to the economic and social health of the region. Sustainable Forest Management means a healthy economy as well as a healthy environment.
Primary Strategy	The strategy is the same as the Target – report annually on economic contributions.

2013 Annual Report

Target Met ☒ **Target Not Met** ☐

In 2005, we reported economic contributions only from Hinton Wood Products (i.e. not Hinton Pulp as well); however since 2006, we have gone back to reporting on the site as a whole. The table below outlines economic and social contributions of Hinton Wood Products (HWP) and Hinton Pulp (HP) for 2013:

Table 2.2235b – *West Fraser Hinton Division contributions for 2013*

Contribution[1]	HWP	HIP	Total
Direct employment	289	301	590
Contract employment[2]	175	10	185
Salaries, wages, and benefits	$28,154,599	$38,792,277	$66,946,876
Goods and service purchases	$48,416,320	$168,491,057	$216,907,376
Municipal taxes	$682,258	2508486.38	$3,190,744
Taxes, Fees and royalties[3]	$2,559,057	$0	$2,559,057
Capital investment	$7,532,580	$3,935,593	$11,468,173
Capital Investment - Green Transformation	$0	$0	$0
Hinton water and sewer[4]	$0	$600,000	$600,000
FMA Recreation infrastructure[5]	24 Sites	0	24 Sites
FMA Public access infrastructure	3,000 km of roads	0	3,000 km of roads
Donations[6]	$9,281	$8,960	$18,241
Research and development [7]	$281,735	$687,710	$969,445

[1] Unless otherwise noted, contributions are for Hinton Wood Products and account for all spending, irrespective of geographic area and are rounded to the nearest thousand.

[2] Full-time employment (FTE) equivalent. 1 FTE = 12 person-months of employment.

[3] Includes Corporate taxes, stumpage, holding and protection charges, and gravel royalties.

[4] Hinton Pulp treats water and sewage for the Town of Hinton. The amount reported is the value of the service over and above payments received for potable water treatment.

[5] Recreation infrastructures include trails, day use areas, and campsites. This includes sites developed and managed by Hinton Wood Products and additional provincial sites managed by the company.

[6] Includes donations from the sawmill and pulpmill donations committee, as well as donations made through HWP's Aboriginal Program and Recreation Program

Monitoring and Reporting

Total contributions will be summarized on an annual calendar year basis and reported in the SFM Stewardship Report.

Future Development

There are no plans for further changes to this VOIT at this time.

ToC

2.2236 Training and Education

DFMP VOIT	No
SFI Objective#	Objective #10
ISO Objective and Target?	Yes
Criterion:	**Criterion #5** – Multiple Benefits to Society
SFM Element:	**5.3 Fair Distribution of Benefits and Costs** – Promote the fair distribution of timber and non-timber benefits and costs
Value:	Increased knowledge
Objective:	Increase levels of education, knowledge, and awareness of sustainable forest management
Indicator:	Training and Education
Target:	All forest workers (Company staff & contractors) will meet minimum training requirements within timelines as identified by Hinton Wood Products.
Acceptable variance:	10% - A 90% overall compliance rate was chosen to account for operational realities (i.e. courses are not always available, people away when courses are available, etc.)
Monitoring:	Continual monitoring and maintenance by the Training Coordinator. Reports provided to HWP staff. Summary provided in SFM Stewardship Report.

Overview

Forest workers (both HWP employees and contractors) play a large role in helping Woodlands achieve and demonstrate sustainable forest management. Understanding the connections between forest practices and their effect on the environment is critical. Well-trained forest workers can help ensure sustainable forests for future generations.

Both the CSA Z809 standard, the SFI Standard and the ISO 14001 standard have significant training requirements. The Company is responsible for ensuring those people that conduct work on its behalf (e.g. Company employees and contractors) are competent on the basis of appropriate education, training, or experience and must retain records proving this. HWP has established minimum training requirements for employees and contractors.

Definitions

A. ***Minimum training requirements*** – This is the training required as a minimum to carry out a particular job function and are set by HWP (although also sometimes set through legislation; for example, first aid). The minimum training requirements also set out the expiry date of that training – for example; first aid needs to be renewed from time to time (depending of the first aid course).
B. ***Environmental aspects*** – An element of the Company's activities or products or services that can interact with the environment (e.g. bridge construction, road building, skidding, etc.).
C. ***Significant environmental impacts*** – Any change to the environment, wholly or partially resulting from the Company's environmental aspects, that has a significant impact (e.g. soil erosion into a stream resulting from poor road construction).
D. ***Sustainable Forest Management Policy*** – HWP SFM Policy sets out the overall intentions and direction of the Company related to its environmental performance, as formally expressed by our top management. A copy of HWP's SFM Policy can be found on our webpage at www.westfraser.com/hintonforestry (hit the forest management link).
E. ***Environmental Management System*** – This refers to HWP's management system used to develop and implement our SFM Policy and manage our environmental aspects.

Inventory and Analysis

Minimum training requirements were determined through a local Woodlands committee made up of representatives from the hourly workforce and staff. When determining minimum training requirements the following was considered:

- The Company's environmental aspects.
- The Company's significant environmental impacts.

- The Company's Sustainable Forest Management Policy
- Each workers individual roles and responsibilities in achieving conformity with the requirements of the Company's Environmental Management System (EMS).
- The potential consequences of deviations from the EMS.

All employee's training requirements and individual records are set out and stored on a training database called "TRACCESS". Principle contractors' training requirements and individual records are stored on another database which is kept in an Excel file and available on the EMS.

Target and Strategy

The Target for this VOIT is:

1. *All forest workers (Company staff & contractors) will meet minimum training requirements within timelines as identified by Hinton Wood Products.*

Basis for Target	Forest workers play a large role in helping Hinton Wood Products achieve and demonstrate Sustainable Forest Management. Understanding their connections between forest practices and their effect on the environment through proper training is critical. There is no legal requirement for implementing a training program, but training is a key requirement of the CSA Z809, the SFI Standard and the ISO 14001 Standard. Alberta's Occupation Health & Safety Regulations also mandates certain types of training for certain jobs.
Primary Strategy	Hinton Wood Products' primary strategy for meeting this VOIT is as follows: ➢ Employees – Employee training needs are identified according to job function and are stored on the TRACCESS System. (TRACCESS is an internal system for describing training requirements, delivering on-line training, and tracking completed training). ➢ Contract Workers – A separate database and training matrix has been created to track training records for all principal contractors and their employees. Quarterly reports will ensure contractors meet the identified training requirements. ➢ To ensure that TRACCESS and the Contractor Training Database is maintained, Woodlands staff have been tasked with various aspects of the training program (i.e. TRACCESS, Contractor records, etc.). These staff members will help coordinate training delivery, and other needs associated with training. ➢ HWP managers and coordinators are responsible for ensuring that all persons reporting to them complete the training in the required timeframe.

2013 Annual Report **Target Met** ☐ **Target Not Met** ☒

This target was not met in 2013 within the acceptable variance of 10%. The Company's training initiatives can be broken down into four main components – spring training (for harvesting contractors), contractor training, summer student training, and staff training. The following sections report on each of these main components of Hinton Wood Products' training program:

1. ***Spring Training***

This training occurs each year during break-up (the time of the year that the Company is not actively logging due to wet soil conditions). Approximately 2-3 months before spring training, staff managers and coordinators meet to discuss what training should be delivered. Environmental incidents, safety incidents, environmental aspects and training records are all reviewed to determine training needs for the spring training week. Normally, spring training involves one full day of training in a number of different areas (e.g. map reading, collision avoidance, spill response etc.).

In 2013, as in previous years, all prime contractors (of which there are nine) were required to take spring training (truck driver attendance is now mandatory). If for some legitimate reason an employee could not attend spring training (e.g. sick, not working for the contractor at the time, etc.), then that employee had to

review an information package from the spring training (provided by HWP) and write a multiple choice test, which was then returned to HWP. If the employee passed the test (>80%), then that employee was deemed to have taken spring training and the spill/fire tanker review.

In the 2013 operating season (June 2013 to April 2014), the following was accomplished with respect to spring training:

- Spring training was delivered to HWP's logging, road maintenance, and trucking contractors. Information designated as priority in the spring of 2013 included the following information updates and training courses:

  - Business update
  - SFI certification criteria – principles and objectives
  - Existing and new species at risk for FMA
  - Environmental incident review for the 2010-2011 logging year
  - Radio frequency updates
  - Fire trailer requirements
  - Operating Ground Rules refresher
  - Brown Book refresher
  - Brush piling
  - Ditch reclamation
  - Fuel management
  - Roading – block disturbance (maximum amount of block disturbance permitted is 5%)
  - Log quality & bucking specifications
  - Map reading
  - Log yard Indoctrination
  - Mountain Pine Beetle update

2. *Contractor Training*

Hinton Wood Products requires a minimum level of training for all of the contractors working for the Company to ensure safety and environmental stewardship. The contractor is responsible for ensuring their employees meet the required training, attend Spring Training (or take the make-up test), and for the maintenance and submission of training records to Hinton Wood Products.

The objectives for contractor training from Hinton Wood Products' perspective are:

a. To develop an effective system for recording and maintaining contractor training records
b. Ensuring prime contractors submit training records two times per year (was three times per year in 2010, but was reduced to twice a year in 2011). All other contractors (e.g. forestry consultants, planters, herbicide applicators, etc.) need to submit training records once per year.
c. Ensuring all logging contractors (truck drivers exempt) attend Spring Training or take the make-up test

Table 2.2236a on the following page summarizes the number of contractors that met the requirements (based on the time period of June 2013 to April 2014) for completing all of the required.

Table 2.2236a – *2013 Percent Required Training for Contractors Completed By Category*

Category	Company Name	Total Number of Employees	All Required Courses Completed	
			# of Employees	% Complete
Prime Contractors	Cher-Noble	13	13	100%
	Echo	22	20	91%
	Eliuk	31	20	65%
	Leniam	29	24	83%
	Moore's Logging	36	12	33%
	MR Radley	10	8	80%
	Promise	50	18	36%
	Talisman	7	5	71%
	Westbound Logging	54	37	69%
	Zell	21	18	86%
Consultants	670563 BC Ltd.	1	1	100%
	Airborne	10	10	100%
	Apical	17	17	100%
	AMEC	2	2	100%
	Bushmen	2	2	100%
	Fox Creek Development Association	9	9	100%
	FTR Forestree	1	1	100%
	Kowalchuk	2	2	100%
	Next Generation	65	65	100%
	Spectrum	5	5	100%
	Summit	60	60	100%
	West Central	3	3	100%
	Wolverine	1	0	0%
	Totals	**451**	**352**	**83%**

3. *Summer Students*

Summer student are particularly vulnerable to being involved in environmental and/or safety incidents as they are typically young and inexperienced workers. For this reason, Hinton Wood Products has particular focus on the training of summer students. The 2013 summer students required coursed the following training: (note: not all external courses were available for students to take.)

- WHMIS
- Operating Ground Rules
- Forest Stewardship Training
- H2S Awareness
- Forest Resources Handbook Review
- Radio Communications
- Wildlife Safety
- Quad Training

Table 2.2236b on the following page summarizes the number of summer students that have completed the required training.

Table 2.2236b – *2013 Percent Required Training for Summer Students Completed*

Category	Company Name	2013	Required Courses	
		No. of Students	No. of Courses	Percent Complete (%)
Summer Students	Hinton Wood Products	3	2	75%

4. *Staff Training*

Staff Training requirements have been continuously monitored and updated throughout 2013**.** Each Hinton Wood Products' employee has a record of their training requirements on an Excel spreadsheet. This spreadsheet outlines to each employee their training requirements, the status of those requirements, and where the training can be taken. The spreadsheet also links to copies of each employee's training records.

The 2013 required courses for staff are outlined below (note: not all staff has to take each of these courses)

- Hazard Recognition
- WHMIS
- Forest Resources Handbook Review
- Operating Ground Rules
- Forest Stewardship Training
- Incident Command System
- Principles in Fire Behaviour
- First Aid
- H2S Awareness
- Violence in the Workplace
- EMS Review
- Employee & Family Assistance Program
- Radio Communications
- Incident Investigation
- Wildland Fire - Safety on the Line
- Spill Response
- Wildlife Safety
- OH&S Legislation Training - Basic

Table 2.2236c below summarizes the number of staff that have completed the required training

Table 2.2236c – *2013 Percent Required Training for Staff Completed*

		2013	Required Courses		
Category	**Company Name**	**No. of Staff**	**Total # of Courses**	**Completed**	**Percent Complete (%)**
FR Staff	Hinton Wood Products	28	439	362	84%

Summary of Target

Table 2.2236d summarizes HWP's 2013 compliance with the Target for this VOIT – "All forest workers (Company staff & contractors) will meet minimum training requirements within timelines as identified by Hinton Wood Products (acceptable variance 10%)".

Table 2.2236d – *HWP Overall Compliance with Training Target*

Category	**Number of Employees**	**Percent Compliance with Target**
Contractor Training	451	85%
Summer Students Training	3	75%
Staff Training	28	84%
	Weighted average	**81%**

Monitoring and Reporting

The Contractor Training Database and the Staff Training Database (excel spreadsheet) will be monitored on a continual basis by Hinton Wood Products' Training Coordinator. Individual staff members and their supervisors can also track compliance with training requirements. A Summary will be provided in SFM Stewardship Report.

Future Development

There are no plans for further changes to this VOIT at this time.

References\Associated Documentation

- 2012 Staff Training Records
- 2012/2013 Records from the Contractor Training Database (updated to July 5, 2013)

2.2237 Non-compliance Incidents

DFMP VOIT	Yes
SFI Objective#	Objective #11
ISO Objective and Target?	Yes
Criterion:	**Criterion #6** – Accepting Society's Responsibility for Sustainable Development
SFM Element:	This VOIT is not related to any particular SFM Element, but directly to Criterion #6.
Value:	Comply with government regulations and policies
Objective:	Comply with all relevant legislation and regulations, as enforced by government.
Indicator:	Non-compliance incidents
Target:	Zero non-compliance incidents on an annual basis.
Acceptable variance:	+/- 4 incidents *(This acceptable variance was revised September 24, 2007)*
Monitoring:	Monitoring will occur through on-site inspections, internal and external auditing, and incident reporting. Environmental incidents and follow up action items are tracked on a database. All incidents that are reportable to the government will be reported on in the SFM Stewardship Report.

Overview

With forest management activities, there is a potential for environmental damage to occur if practices are not followed correctly. Depending on the type and severity of environmental damage, sustainable forest management objectives could be at risk. This indicator monitors the type and number of non-compliance incidents, which helps to identify re-occurring problems, and in general indicates how well preventive measures are working to prevent environmental events. Incident identification and reporting is needed to develop recommendations for the prevention of future events as part of the continual improvement process.

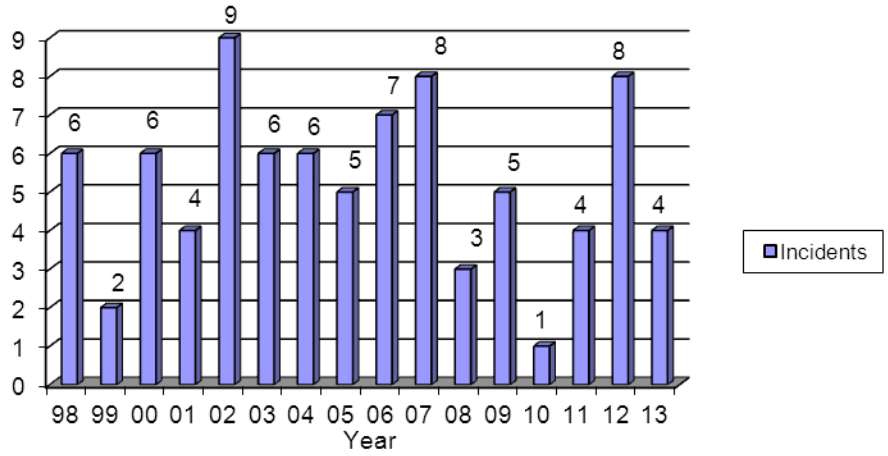
Definitions

A. ***Non-compliance incidents*** – These are incidents, caused by Hinton Wood Products activities, where there has been a contravention of government legislation, or HWP's Operating Ground Rules. All incidents that are reportable to government are considered a non-compliance incident. These non-compliance incidents are reported on annually in the Company's SFM Stewardship Report.

Inventory and Analysis

Hinton Wood Products maintains records on the number and types of environmental events. A review is completed annually to analyse trends and to determine needed steps for prevention. Figure 2.2237a provides an overview on non-compliance incidents from 1998 to 2012.

Figure 2.2237a - *Non Compliance Incidents – 1998-2013*



Target and Strategy

The Target for this VOIT is:

1. *Zero non-compliance incidents on an annual basis.*

Basis for Target	Due to the amount of Company activity (e.g. logging, hauling, site preparation, road maintenance, etc.) each year within the FMA, the target of zero non-compliance incidents will be difficult to achieve, but is still the Target that we must set and work toward.
Primary Strategy	All of Hinton Wood Products' activities will be assessed on an annual basis through the Company's Risk Assessment Database. Where risks are deemed to be an "A" risk (the highest level), action plans or standard operating procedures will be implemented, wherever feasible, to reduce the risk of a non-compliance incident. In addition to the above, the Company will also undertake the following in order to meet this VOIT: ➢ The Company will maintain and implement its own cutblock inspection system (100% of blocks and roads are inspected). ➢ Implement a compliance auditing program (see section 11) – these are internal audits that are completed at regular intervals. ➢ Implement a continual training program for HWP workers and supervisors (see VOIT #36). ➢ Investigate any non-conformance and develop and implement action plans to address each non-conformance.

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Target Met ☒ **Target Not Met** ☐

The graph (Figure 2.2237b) below and table (Table 2.2237c) on the following page outline the non-compliance incidents for Hinton Wood Products in 2013. There target was met in 2013, as there were four environmental incident in 2013 that were reportable to Alberta Environment Sustainable Resource Development, which is within the acceptable variance.

Figure 2.2237b - *Non Compliance Incidents – 1998-2013*

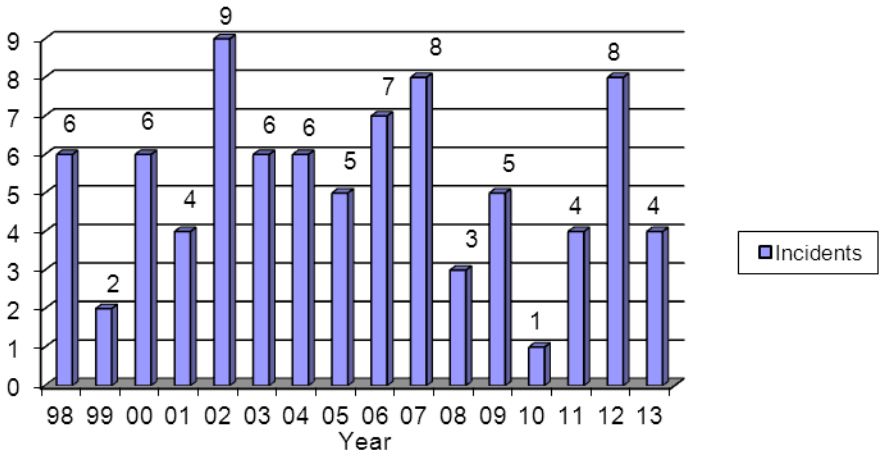

Table 2.2237c – *Non Compliance Incidents, January 1, 2013– December 31, 2013*

Event #	Date Reported	Type	Description	Effect[1]
1112-0140	Jan 29, 2013	HWP-Watercourse crossing variance	See incident 1112-0137. Block was self-reported due to inadequate buffer. ESRD identified concern with bridge when they went to inspect buffer. ESRD took pictures on 28 Nov 2012. ESRD concern was that logs were placed in the watercourse. Bridge was pulled on 13 Dec 2012. ESRD staff was on site when work commenced however were not present when the crossing was removed. Installation of crossing during non-frozen period likely contributed to this issue. Subsurface flow may have been impeded, resulting in the upstream pooling of water observed be ESRD. ESRD reported that stream returned to normal flow levels and location. No environmental damage was noted.	High
0713-0141	July 12, 2013	HWP-Erosion	On July 12, 2013 an ESRD Forest officer (Greg Tough) conducting a routine LOC inspection on 861172 (Polecat Road) came across an incident of erosion on a road bank causing sediment to spread off the disposition into the surrounding forest (See attached photos). This erosion incident occurred as a result of large volumes of rain water moving down the 8% ditch grade after severe storms were experienced earlier in the week. On Thursday, July 18th ESRD notified us of this inspection and incident. On Friday, July 19th a formal reclamation notice was issued by ESRD along with a formal notice of investigation citing contravention of section 56(1) of the Public Lands Act "A person who as the holder of a disposition contravenes a provision of the disposition, is guilty of an offence". (See attached documents) Clean up efforts of the erosion incident commenced on Friday, July 19th.	Medium
0813-0142	Aug 17, 2013	HWP-Spill	A mechanical failure in the spray equipment caused a load of herbicide not to be sprayed in an approved opening. The pilot was unaware of this and came back to mixsite to get another load. Mixer started to add water for next load, which caused the tank to overfill and spill herbicide solution. NO additional herbicide concentrate was added. Most of the spill occurred at mixsite, on road, but possibility of some spill in the adjacent harvest block.	Medium
1013-0140	Oct 27, 2013	EFP-Trespass	Feller buncher operator missed the block boundary ribbon while cutting boundary during daylight hours on October 27, 2013.	Low

[1] Environmental effect of event - subjective rank.

Any incident that occurs is thoroughly investigated by HWP staff and a corrective action plan is developed for each incident. This action plan is then referred to EFP-HWP's Stewardship Committee, who further reviews the plan and add on any additional action items that they think may be necessary to prevent a reoccurrence. This action plan is then reviewed by the Woodlands Manager, who might further amend the plan. Once the Woodlands Manager has signed off on the incident and its corrective plan, those action items begin to be implemented by staff.

The following is a summary of the correction actions taken to address the four incidents noted in Table 2.2237c.

Corrective Actions

As part of HWP's commitment to continual improvement, and in order to try to prevent similar incidents from occurring in the future, the following action items for this incident were developed, and have been, or are in the process of being, implemented:

Incident #1112-0140

- Remove bridge
- Complete a joint inspection with ESRD

Incident #0713-0141

- Conduct emergency preliminary sedimentation control work (i.e. diversion ditches, sediment traps)
- Conduct secondary sedimentation control measures (i.e. armouring of the ditch line, potentially putting in a diversion cross drain upslope)
- Respond to ESRD with our action plan on their Reclamation Notice

Incident #0813-0142

- HWP Mixsite Supervisor tried to minimize the event by directing the pilot over the road as the soil would bind the glyphosate and prevent its uptake by vegetation.
- Pilot was allowed to spray out the load in approved treatment block, once overflow stopped.
- Window was closed and both machines were shutdown.
- Airborne was notified.
- Engineer was sent out to inspect wiring, pumps, tanks, etc.
- Incident investigation started with pictures taken to document by HWP.
- Incidents reviewed internally and then with Airborne and outcomes discuss.
- Airborne to fill out their own incident report and provide copy to HWP
- Review Off Target Application (OTA) event with other Airborne pilots and mixers on our FMA for rest of 2013 program.
- Advise AESRD of OTA using the Excursion Reporting Form.
- Currently job pre-works talk about our expectations of the pilots. Should add a section about our expectation of the mixers.
- OTA/Monitoring flight list to include 3-006-0146 and 3-006-3099.
- Add this OTA incident to the pre-work material for next year's contract.

Incident #1013-0140

- Conduct a joint field assessment of the site with the Contractor.
- Conduct a joint field assessment of the site with the ESRD.
- Investigate training status of the operator
- Assess in-field map reading skills of the feller-buncher operator involved in this incident.
- Assess in-field map reading skills of all remaining feller-buncher operators employed by this contractor.
- Assess cutblock field maps for clarity and make improvements where necessary.
- Assess contractor compliance with West Fraser training requirements for harvest operations staff
- Ensure all appropriate forest planning information is loaded from the previous format into West Fraser's woodlands information system prior to harvest operations for all cutblocks.
- Require the contractor to have GPS units installed in any equipment that will be used for harvesting cutblock boundary.
- Report completion of action items to ESRD

Monitoring and Reporting

Monitoring will occur through on-site inspections by HWP staff and through AESRD's Forest Operations Monitoring Program (FOMP). In addition, the Company will also undergo regular audits that check HWP's compliance with the ISO 14001 Environmental Management System Standard and the Sustainable Forestry Initiative (SFI) Standard (see section 10) Action plans will also be developed to address any shortcomings found in these audits.

Any non-compliance incidents that are discovered are reported to the appropriate agencies or people and entered into a Company database. The Company's Stewardship Committee and the Woodlands Manager review each incident and make recommendations and/or create action items to reduce the likelihood of a reoccurrence of the incident. All incidents that are reportable to the government will be reported annually in the SFM Stewardship Report.

Future Development

There are no plans for further changes to this VOIT at this time.

References

ToC

2.2238 Waste Management

DFMP VOIT	No
SFI Objective#	Objective #12
ISO Objective and Target?	Yes
Criterion:	**Criterion #6** – Accepting Society's Responsibility for Sustainable Development
SFM Element:	This VOIT is not related to any particular SFM Element, but directly to Criterion #6.
Value:	Management reflects social values
Objective:	Reduce, Reuse, and Recycle.
Indicator:	Waste Management
Target:	Annually review and improve the Waste Management Program to include new initiatives to reduce, reuse, and recycle – report on the results of these initiatives.
Acceptable variance:	Report annually.
Monitoring:	HWP representatives will provide updates to the program as necessary. Progress will be reported in the SFM Stewardship Report.

Overview

Waste management and waste minimization is of growing importance. Concerns regarding crowded landfills, global warming and observed pollution in the environment have raised the profile of waste management within communities and at the national and international scale. The public does not want to see something as unnatural as litter in their forest environment.

As stewards in the forest environment, it is important that Hinton Wood Products seek continual improvement in waste management. HWP's Waste Management Program intends to provide guidance and information that will aid in this endeavour.

Definitions

A. ***Waste Management Program*** – HWP Waste Management Program is outlined in the Company's Waste Management Plan. This Plan is available on HWP's Environmental Management System and all staff must be aware of its existence. The Plan addresses waste management in the following areas:

- The office of the Woodlands Department
- Hinton Wood Products Pick-up fleet (Forest Resources)
- Fire Shed

This plan is intended to create actions that reduce waste generated by the Woodlands Department.

Inventory and Analysis

A Waste Management Plan was first completed in 2001, covering recycling opportunities in all areas of the Woodlands Department. A Home Recycling Guide was also created and provided to Woodlands employees. This provides direction on how to recycle household products in the Hinton area.

Ideally, a system of monitoring and measurement of product use and recycling amounts would provide information on waste management activities and show trends over time. For this to be effective, however, the system must be relatively simple to implement and it must provide useful results that can be acted upon. Unfortunately, this does not fit the current situation in the Woodlands Department. There are a number of variables beyond our control that affect our inputs and measuring of outputs over time. Recycling efforts have been tracked in the past, however this data did not provide a worthwhile benefit, relative to the amount of work required to track. In the future, if it proves feasible, measurement of waste management initiatives will be made where possible and reported in updates to the Waste Management Plan.

ToC

Target and Strategy

The Target for this VOIT is:

1. *Annually review and improve the Waste Management Program to include new initiatives to reduce, reuse, and recycle – report on the results of these initiatives.*

Basis for Target	There is no legal requirement to have a Waste Management Program or Plan, however, the ISO 14001 standard requires a commitment to the "prevention of pollution". Any commitment to the prevention of pollution should involve a Waste Management Plan.
Primary Strategy	The Target and Strategy are the same for this VOIT. The Waste Management Plan will be implemented annually. Also, each year the Plan will be reviewed by the Stewardship Committee and new initiatives will be contemplated and implemented, wherever feasible.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

Waste Management initiatives were implemented as described in HWP's 2013 Waste Management Plan, this plan is reviewed and revised annually. The recycling of planting boxes was the only initiative in 2011. The Willow (and associated roads) clean-up initiative (undertaken annually from 2007 to 2013) although it was put on hold in 2011 due to lack of participation from other companies and the fact that most of our haul roads were fairly clean due to four years of annual clean-ups, it was a success in 2012 and 2013. The Woodlands staff and employees from various Oil & Gas Companies attended. This initiative will be implemented again in 2014.

Table 2.2238a provides a summary of the one waste management related initiative in 2013:

Table 2.2238a – *Results from HWP's Waste Management Initiatives in 2013*

Waste Initiative	Results
Recycling of Planting Boxes	HWP recycled 20 metric tons of planting boxes, which is about 10,000 boxes. There were no boxes sent back to nurseries for re-use. The total number of planting boxes in HWP's planting program in 2013 was about 16,957 therefore, 6,957 boxes were land-filled or otherwise disposed of (including Edson FMA boxes).
FMA Roads Clean-Up Project	Road clean up took place on May 30th. Unfortunately with the lack of time and resources, the amount of garbage and bottles collected was not reported in.

In addition to the above noted waste management initiatives, HWP also provides bottle/can recycling receptacles at many of our campgrounds – these are brought to the Hinton recycling depot by Fox Creek Development Association as part of their maintenance contract. Also, all cutblocks undergo a final harvest inspection (when harvesting activities have completed) – one of the items that HWP's Operations Supervisor is checking is the cleanliness of the logging operations (i.e. is their any garbage visible, etc.). As noted in VOIT #39, there were no garbage incidents identified in 2013.

Monitoring and Reporting

HWP representatives will provide updates to the program as necessary. Progress will be reported in the SFM Stewardship Report.

Future Development

The Waste Management Plan outlines future Waste Management Initiatives. There are no plans for further changes to this VOIT at this time.

References\Associated Documentation

- Hinton Wood Product's 2010 Waste Management Plan

ToC

2.2239 Garbage Incidents

DFMP VOIT	No
SFI Objective#	Objective #12
ISO Objective and Target?	Yes
Criterion:	**Criterion #6** – Accepting Society's Responsibility for Sustainable Development
SFM Element:	This VOIT is not related to any particular SFM Element, but directly to Criterion #6.
Value:	Management reflects social values
Objective:	Reduce, Reuse, and Recycle.
Indicator:	Garbage Incidents
Target:	No garbage or hazardous materials left on the FMA landbase originating from Edson Forest Products and Hinton Wood Products activities, based on compliance audits conducted from time to time. *(This target was revised January 8, 2008)*
Acceptable variance:	5 incidents per year
Monitoring:	Monitoring of garbage on the FMA landbase will occur through internal compliance audits, road and stream inspection programs, and other periodic audits and inspections. Summarized annually in SFM Stewardship Report.

This VOIT was deleted for 2013, as it added very little value.

ToC

2.2240 Safety Plans and Partners in Injury Reduction (PIR) Audit

DFMP VOIT	No
SFI Objective#	Objective16
ISO Objective and Target?	Yes
Criterion:	**Criterion #6** – Accepting Society's Responsibility for Sustainable Development
SFM Element:	This VOIT is not related to any particular SFM Element, but directly to Criterion #6.
Value:	Management reflects social values
Objective:	Avoid endangering human life and property as a result of forest management activities.
Indicator:	Woodlands Safety Plans and Prime Contractor's Safety Audits
Target:	1. Annually develop and implement safety plans for the Woodlands Department *(This Target was amended at the March 31, 2008)* 2. Edson & Hinton Prime Contractors will successfully pass a PIR or SECoR audit.
Acceptable variance:	1. The Target will be met, if more than 80% of the action items have been completed or are ongoing 2. 0%
Monitoring:	The PIR program provides a definable process by which the Edson & Hinton Woodlands can measure the successful development and maintenance of safety programs. Scores will be reported annually in Stewardship Report.

Overview

This VOIT directly relates to the SFM Objective of avoiding endangering human life and property as a result of forest management activities. Sustainability relies on a secure and confident work force. Recognition and promotion of a safe work environment will ensure a viable long-term work force. The Woodlands Department, the Sawmill, and the Company's Prime Contractors (i.e. harvesting and road maintenance) undergo a third party audit to the "Partners in Injury Reduction" (PIR) standard. In addition, each year the Edson & Hinton Woodlands Department's main departments (i.e. Operations, Planning, Silviculture and Landuse) develop and implement safety plans.

Definitions

A. ***Partners in Injury Reduction (PIR)*** – The Partners in Injury Reduction (PIR) Program is designed to encourage injury prevention and the development of effective workplace health, safety and disability management systems. PIR is a voluntary program that operates through the combined efforts of the Workers' Compensation Board (WCB) – Alberta, Alberta Human Resources and Employment, industry partners (such as the Alberta Forest Products Association), safety associations, employers and labour groups. The PIR program provides a definable process by which the Company can measure the successful development and maintenance of safety programs. This provides a forward-looking measure, rather than the lagging indicator of incidents sustained over the course of the year. PIR certified companies are eligible for WCB rebates. More information on the PIR program can be found on the following website: http://www.wcb.ab.ca/pdfs/pir_broch.pdf

B. ***Small Employee Certificate of Recognition (SECoR)*** – A Small Employee Certificate of Recognition (SECoR) is awarded to an employer (in this case, a HWP Prime Contractor) who has successfully implemented a basic workplace health and safety management system. The process is as follows:

- The Contractor selects the Alberta Forest Products Association (AFPA) as their Certifying Partner. The contractor may also register with the WCB for the Partners in Injury Reduction (PIR) Program – while this is optional, it makes the contractor eligible for WCB rebates.
- The Contractor then takes Leadership in Health and Safety training through the AFPA (their Certifying Partner). These training sessions are designed to help the contractor implement a health and safety program, or determine that their existing program is on the right track.
- When the Contractor is ready to conduct the health & safety audit, they contact the AFPA and an audit is arranged. Once the audit is completed, the auditor writes up the report and submits it to the AFPA for quality control.
- If the Contractor has passed the audit, the AFPA will submit a SECoR request to Alberta Human Resources & Employment on the contractor's behalf. Once the SECoR is received by the AFPA, it is signed by the AFPA's president and sent to the employer. The SECoR is good for 3 years, providing the employer performs the annual maintenance audit for the next 2 years.

C. ***Woodlands Department*** – The Woodlands Department consists of approximately 30 staff positions that

include foresters, forest technicians, biologists, accountants, and administrative support.

D. ***Prime Contractors*** – These are the Contractors that are employed full-time by the Edson & Hinton Woodlands to conduct operational harvesting or road maintenance activities on the FMA. The Prime Contractors often sub-contract out certain components of their operations to other contractors (e.g. skidding, loading, etc.). From time to time, the Woodlands department may bring on additional Contractors to conduct operations (these are not considered to be Prime Contractors).

Inventory and Analysis

Prior to 2007, the Woodlands department underwent its own PIR audit; however, in 2007 a decision was made internally to combine the Woodlands PIR audit with the Sawmill's PIR Audit. For this reason the previous target of the Woodland's Department obtaining a PIR score greater than 90% was dropped, as the Woodlands was no longer able to control the outcome of the audit (as the Sawmill was now part of the audit). In 2008, the target was changed to developing and implementing individual Woodland's department safety plans. There is no inventory or previous analysis of these safety plans.

The Company's Prime Logging Contractors are still committed to be third-party audited to the PIR or SECoR standard on an annual basis. Audit results will be held on safety record files. The forecast for this indicator is for the Prime Logging Contractors to successfully pass their PIR or SECoR audits as required.

The Woodlands Operations Superintendent will maintain the inventory of Prime Logging Contractors and will hold on file evidence that PIR or SECoR has been achieved and maintained.

Target and Strategy

The Targets for this VOIT are:

1. *Annually develop and implement safety plans for the Woodlands Department.*

Basis for Target	Woodlands Department staff operate daily in potentially hazardous conditions, such as driving on logging roads, working alone in the forest, and supervising heavy equipment. In addition, staff also interact directly with HWP's contractors, who are also carrying out hazardous work (e.g. logging, site preparation, herbicide applications, trucking, etc.). In both cases, the development and implementation of annual Woodlands department safety plans ensures that safety initiatives are routinely discussed, planned for, and implemented.
Primary Strategy	In order to meet the Targets set out in this VOIT, HWP will continue to implement its safety program which is spearheaded by the Company's Forest Resources Employee Safety & Health (FRESH) group. FRESH is made up of representatives from employees and is a cooperative committee supporting the Health & Safety Policy of the Woodlands Department. The Company appoints one staff person to coordinate the Safety Program and the FRESH Committee as part of their job responsibilities. The mandate of the FRESH Committee is to help coordinate and promote the awareness, understanding, and continual improvement of the Company's health and safety program. The FRESH Committee spearheads the Woodlands Department's safety plan initiative, ensuring that each department in Woodlands (e.g. Operations, Planning, Silviculture, etc.) annually develops, implements, monitors, and reports on safety plans.

2. *Hinton Wood Products' Prime Contractors will successfully pass a PIR or SECoR audit.*

Basis for Target	The SFI Standard requires the Company to provide conditions and safeguards for the health and safety of workers on the FMA. The Partners in Injury Reduction (PIR) Program is designed to encourage injury prevention and the development of effective workplace health, safety and disability management systems.
Primary	The primary strategy to achieve this Target is to make the requirement of passing a PIR or

Strategy SECoR audit a condition of employment for the Company's Prime Contractors. Edson & Hinton Woodlands staff also provides support by organizing, attending, and presenting at monthly contractor safety meetings.

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Target #1 **Target Met** ☒ **Target Not Met** ☐

HWP's Woodlands Department safety plans are apart of the HWP overall health and safety program. The objective of the Health and Safety Program is to ensure that a safe, healthy work environment is maintained and improved on an ongoing basis. The department Safety Plans are a tool in achieving this objective. They are reviewed and updated annually. These Safety Plans outline:

- safety issues for each department
- targets (i.e. action plans) developed to address the issue
- the primary employee responsible for the target, and
- the status of the target

These Safety Plans aid in identifying safety issues and concerns as well as work towards resolving issues and promoting continuous improvement.

The Target has been met as more than 80% of the action items are completed or are ongoing (60 of 65 = 92%).

The following tables outline the safety plans and their status for each department in Woodlands.

Table 2.2240a – ***2013 Administration and Landuse Department Safety Plans and Status***

ISSUE	ACTION PLAN	PRIMARY RESPONSIBILITY	COMPLETION DATE
Safety Meetings	Attend weekly Planning meetings with the planning group. Safety is the first agenda item at each of these meetings.	Danielle	Every week - Jan 1 to Dec 31
	Attend weekly Management meetings. Safety is first agenda item discussed.	Tammy	Every week - Jan 1 to Dec 31
	LU meetings on an as needed basis will include review of any safety items.	All	As required throughout Jan 1 to Dec 31
	Attend FRESH Meetings • Danielle FRESH Member • Joey FRESH Member	 Danielle Joey	Jan 17, Mar 19, May 23, July 25, Sept 26, Nov 21
Training and Competency	Complete all required staff training	All	On-going throughout 2013
Hazard Assessments	Staff to complete HWP Pre-Work Hazard Assessments when required. - Provide Bruce updates quarterly	All Tammy	 N/A for 2013
Safety Observations	Conduct and record safety observations in the field on staff supervisors when applicable.	Tammy	N/A for 2013
Contractor Safety Coordination	Ensure all contractors provide training records every 6 months.	Joey	Jan and June
Road Safety	HWP and Oil & Gas Road Safety Meeting (annually pending Energy response)	Tammy	EFP Partnership – May 24, 2013
	Implement accountability in RUA holders	Tammy	As required throughout 2013
	Continually improve /re-evaluate the Enhanced Policing Program (FMA road safety) based on level of activity and safety issues. Continually improve /re-evaluate the Rules of the Road and Road Monitoring Program (FMA road safety) based on level of activity and safety issues.	 Tammy Tammy	Monthly throughout 2013 Monthly throughout 2013
Emergency Response Testing/Inspections	Annual Woodlands building inspections Fire Extinguisher Inspections (Monthly)	Joey Wade/Joey	Not completed Not completed
Health & Wellness	Contribute to Family Health and Safety Night	Wade / Joey	June 5

ISSUE	ACTION PLAN	PRIMARY RESPONSIBILITY	COMPLETION DATE
	Coordinate HWP/Energy FMA road clean-up (Energy involvement based on Energy response)	Tammy	May 30, 2013

Table 2.2240b – *2013 Operations Department Safety Plans and Status*

ISSUE	ACTION PLAN	PRIMARY RESPONSIBILITY	COMPLETION DATE(STATUS)
CONTRACTOR SAFETY DRILLS	Complete one emergency response drill per contractor (603, 604, 606, 612, 624, 626, 665, Cher-Noble, Radley & Talisman) during the Timber Year. The drill to be based on fire, H2S and/or spill requirements.	Operations Department	Incomplete
CONTRACTOR INTERNAL AUDITS	Complete one internal safety/environmental audit per contractor during the Operating Timber Year.	Operations Department	Ongoing
CONTRACTOR SAFETY MEETINGS	Organize and chair bi-monthly contractor safety meetings. Include attendance records, formal agendas and meeting minutes.	Larry Stordock	Ongoing
HAZARD ASSESSMENT	Conduct field level hazard assessments for job function. Submit copies of 7 assessments (1 each per OPS staff) to Woodlands Manager each quarter. ('Green Book')	Operations Department	Incomplete
ROAD HAZARD MAPPING	Construct a map of the Hinton FMA showing areas on FMA roads which have some hazardous conditions, ie, narrow roads, sharp curve, etc. Ensure appropriate road signage is put in place.	Lynn Bergeron	Modified for 2014
ROBB ROAD OVER-HEIGHT LIGHTS	Determine repair requirements to repair Robb Road over-height lights.	Larry Stordock/Janine Schroder	Complete Dec '13
RADIO FREQUENCY EVALUATION	Evaluate radio frequency-road assignment during break-up.	Clark Shipka	Break-up 2014
SUNDANCE HAUL ROAD LINE OF SIGHT	Sundance Road vegetation mulching program.	Janine Schroeder	Under Construction
EFP ROAD SIGNAGE ASSESSMENT	Evaluate Edson FMA road identification & kilometer markers, road signage and mapping. Coordinate signage installation program and mapping updates.	Tyler Steneker	Assessment Complete
CERTIFIED/RATED CHAINS & SLINGS	Acquire the appropriate certified slings/chains for lifting bridge structures.	Dave Wallace	Complete Oct 2013
WRAPPER CHECK POINT A88	Complete construction of the log check point at A88km.	Dave Wallace	Complete Jan 2013
SAFETY OBSERVATIONS	Conduct and record safety observations in the field on staff supervisors and in the log yard on trucks.	Richard Briand	Incomplete

Table 2.2240c – *2013 Silviculture Department Safe Plans and Status*

ISSUES	ACTION PLAN	PRIMARY RESPONSIBILITY	COMPLETION DATE
Safety Meeting	All Members of the Silviculture Team will attend weekly meetings, where safety is discussed and recorded.	All	On going
	We will be safety mentors for the silviculture summer students and temporary staff. We will stress safety as the first priority and talk about it often throughout the summer. Complete periodic assessments as part of FRESH	Tim Trahan/ Tanya Norman Mentors	Completed 6/9/13
ATV Safety	Work with Operations to develop and continue to improve on quad trail reclamation guidelines to make safe access for staff and contractors.	Tanya Norman/ Tom Mulvihill	Completed 14/6/13
	Ensure all necessary safety equipment and tools are on the Silviculture quads. (Axe, Rope, Basic tool kit, etc.)	Tim Trahan	Completed 15/5/13

Emergency Response Testing	One Emergency drill will be planned and implemented for the orchard.	Diane Renaud	Completed 5/9/13
	Do one table top drill for the Silv Group.	Tim Trahan	Completed 19/6/13
Road Safety	Develop a driving competency check list.	Tim Trahan	Completed 1/2/2013
Working Alone	Work in pairs where hazard or workload warrants.	All	On-going
Hazard Assessment	At least 5 hazard assessments to be completed by each Employee per quarter and given to Forest Resource Manager.	All	On-going
Contractor Safety	Have contractor safety plan on file for non-CoR contractors. Sign & date when they are received and file on contractor safety file. Electronic files go on the S drive under contractor safety files. Paper copies are to be filed in the Silviculture Library if they are too fat for the contractor safety file.	Silv Group	Pending
	Use check list to assess competence of H&S program for contractors without CoR. Form located at S:\Woods-Silviculture\private\Silviculture General\Forms	Silv Group	Pending
	For Contractors with CoR, file proof of certification on contactor safety file. Work Safe B.C. will be recognized as equivalent to the Alberta PIR System.	Silv Group	Pending
Student Safety Meetings	Silviculture Summer Students to attend weekly Silviculture Meeting.	All/Mentors	Completed 6/9/13
Student Training and Competency	Summer students to complete the necessary training on the S drive. Mentors to check within two weeks of hire and as necessary to address any defiencies.	Mentors	Completed 15/6/13
Summer Student ATV Safety	Focus on ATV safety training and driving with summer students.	Tim Trahan	Complete 31/5/13
	Complete an ATV evaluation as part of mid season safety evaluation by mentors.	Mentors	???
	Review ATV maintenance/checklist prior to uses. Review ATV trouble shooting as part of training. Go over proper ATV use and etiquette as part of training.	Tim Trahan	Complete 31/5/13
Student Road Safety	Driving assessment to be done on summer students and new hires before they start work. Driver Competency Checklist to be used to assess their skill.	Mentors	Complete 21/5/13
	Summer students to do vehicle check list monthly to ensure all safety/fire equipment is present and in working order.	Mentors	Complete 6/9/13
Student Road Safety	Summer students to clean weekly or as conditions warrant and ensure their vehicles are going in for regular maintenance (5000km). Get WO from mentors	Mentors	Completed 6/9/13
Student Working Alone	Have summer students work in pairs for at least the first 2 weeks of employment and as much as practical throughout the summer.	Silv Group	Completed 6/9/13
	Verify summer students are using the check-in procedure. Mentors to do weekly checks for the first month and then periodic checks throughout rest of term.	Mentors	Completed 6/9/13
	Student target of zero for days not using the working alone system. Overall student target of 1 for failing to check in at planned time	Mentors	Completed 6/9/13

Table 2.2240d – *2013 Planning Department Safety Plans and Status*

ISSUE	ACTION PLAN	PRIMARY RESPONSIBILITY	COMPLETION DATE
EMERGENCY RESPONSE DRILL	Conduct one emergency drill of the working alone system.	Forestry Manager	12 June 13
SAFETY MEETINGS	Discuss safety at all weekly planning meetings.	All	Weekly
	Have a participant on the FRESH Committee.	Wade Gullason	Quarterly
NEW HIRE SAFETY MENTOR	Mentor and ensure that new hires are trained on all safety related Forest Resource Handbook policies and have a safe functional vehicle for field activities.	Forestry Manager	Ongoing

ISSUE	ACTION PLAN	PRIMARY RESPONSIBILITY	COMPLETION DATE
WORKING ALONE	Continue to use daily check-in procedures	All	Daily
EMERGENCY RESPONSE	Review and update company contact list	All	ongoing
TRAINING AND COMPETENCY	Complete all required staff training.	All	In progress
	Complete staff training regarding snowmobile use, loading, unloading and maintenance.	All	Cancelled due to instructor availability and weather.
CONDUCT PPE SPOT INSPECTIONS	Conduct spot inspections quarterly to ensure that field planning staff have the necessary PPE to complete their work safely.	All	Discussed at weekly meeting
EQUIPMENT	Keep assigned vehicles (truck, ATV and snowmobiles) in good working condition by adhering to a regular maintenance program.	All	ongoing
HAZARD ASSESSMENT	Conduct field level hazard assessments for job function.	All	ongoing

Target #2 **Target Met** ☒ **Target Not Met** ☐

For the 2013 timber year, the Prime Contractors under contract with the Edson & Hinton Woodlands group that were expected to have either valid PIR or SECoR certifications were; Echo Logging, Eliuk Transport, Promise Contracting, Leniam Industries, Moore's Logging, Cher-Noble Enterprises, M. Radley Enterprises and Talisman Logging. With the acquisition and amalgamation of the 2 new Edson Prime Contractors (Westbound Logging and Zell Industries) in April 2013, the expectation is to have them working towards certification achievement for 2014-2015.

This Target has been met for this reporting period as all necessary Prime Contractors have active and acceptable AFPA recognized safety programs. The new Edson Contractors will be formally included in the count in the next reporting year.. Table 2.2240e outlines the status for each Contractor:

Table 2.2240e – *PIR and/or SECoR Status of Edson & Hinton Woodlands Prime Contractors 2013*

Contractor	Certification Status	Response / Corrective Action
Echo Logging	Certified to SECoR	Certified to SECoR standard until November 29, 2015
Eliuk Transport	Certified to PIR	Certified to PIR standard until December 17, 2015
Leniam Industries	Certified to PIR	Certified to PIR standard until October 14, 2014
Promise Contracting	Certified to PIR	Certified to PIR standard until April 9, 2016
Moore's Logging	Certified to PIR	Certified to PIR standard until December 9, 2014
Cher-Noble Enterprises	Certified to PIR	Certified to PIR standard until October 26, 2014
M. Radley Enterprises	Certified to PIR	Certified to PIR standard until November 7, 2016
Talisman Logging	Certified to SECoR	Actively working with AFPA auditor on updating safety program for external audit and certification renewal.
Westbound Logging	Not Applicable	In progress
Zell Industries	Not Applicable	In progress

This indicator was modified slightly in 2010 to reflect the mutual recognition of the Small Employer Certificate of Recognition (SECoR) safety program (which is for smaller operators) and the Partners in Injury Reduction (PIR) safety program.

Monitoring and Reporting

The PIR and SECoR programs provide a definable process by which the Edson & Hinton Woodlands group can measure the successful development and maintenance of safety programs. The status of the Prime Contractors (i.e. whether they continue to maintain their PIR or SECoR certification) will also be reported on annually in the SFM Stewardship Report.

Future Development

No future development at this time.

References\Associated Documentation

- Hinton Wood Products, Hinton Forest Resources Health and Safety Plans, Hinton, Alberta, Canada.
- Hinton Wood Products, Forest Resources Handbooks
- Partners in Injury Reduction Program - http://www.wcb.ab.ca/pdfs/pir_broch.pdf
- Certificate of Recognition Program - http://www.albertaforestproducts.ca/Downloads/documentloader.ashx?id=11005

ToC

2.2241 Participation in SFM Events

DFMP VOIT	No
SFI Objective#	Objective #17
ISO Objective and Target?	No
Criterion:	**Criterion #6** – Accepting Society's Responsibility for Sustainable Development
SFM Element:	**6.3 Public Participation** – Demonstrate that the SFM public participation process is designed and functioning to the satisfaction of the participants
Value:	Increased knowledge
Objective:	Foster mutual understanding on the concepts and benefits of sustainable forest management among policy makers, practitioners, researchers and the public
Indicator:	Participation in SFM events
Target:	Hold one field trip at a minimum bi-annually (every two years) that targets policy makers, practitioners, researchers, media, and/or the public and fosters mutual understanding of SFM.
Acceptable variance:	Report annually.
Monitoring:	Report annually in the SFM Stewardship Report.

Overview

It is no longer simply good enough to be practicing sustainable forest management (SFM); as responsible forest managers, we must also help others understand the concepts and benefits of SFM. The intent of this VOIT is to foster the mutual understanding of SFM (targeting some key groups such as policy makers, practitioners, researchers, the media and the general public) by hosting a field trip on our FMA at least once every two years.

Inventory and Analysis

Hinton Wood Products has a well-known reputation for providing field tours to a wide range of groups. Table 2.2241a gives a partial inventory of the field trips held from 2008 to 2011.

Table 2.2241a – *Examples of Field Trips from 2008 to 2011*

Target Group	Tour Description
Public (2008)	HWP hosted a French Production/Film Company "Bonne Pioche Productions" for a day – this is the same company that produced the academy awarding winning documentary "March of the Penguins". The documentary they were making dealt with the protection of the forests and initiatives in this direction in Canada. The objective of the film, titled "The Call of the Forest", was to meet people involved in sustainable initiatives in Canada's rainforests and boreal forests. The film focuses on the everyday life of men and women who work in the forests and who encourage and/or implement initiatives aimed at a better management of these forests. During the tour hosted by HWP, filming and interviewing regarding commercial thinning, the Foothills Research Institute, and silviculture took place. The film was to be distributed across Europe and North America.
Global Forum Field Tour (2008)	In June, the Foothills Research Institute held a Global Forum in Hinton; over 150 researchers from around the world (e.g. Russian, Chile, Mexico, etc.) participated. One day of the five day forum was a forestry field day. HWP presenters talked about natural disturbance, recreation, riparian trials, and the forest related history of the area.
Practitioners (2009)	A provincial government representative asked Foothills Research Institute to conduct a tour with a researcher from the Japanese Forest Policy Research Institute (Dr. Sawanobori Yoshihide). As part of that tour, HWP staff took them on a half day tour of the FMA – field tour stops during the afternoon included discussion on the following topics: riparian management, enhance forest management, recreation management, and oil & gas integration.
Canadian Institute of Forestry Tour (2010)	The Canadian Institute of Forestry (CIF) convened its 102nd annual general meeting and conference in Jasper, Alberta, from September, 26 to 30, 2010. The conference featured presentations, field trips and special events and was held in Jasper, Alberta. The theme for the general meeting and conference was regional land use planning in a global economy. HWP Woodlands staff were asked to be involved in two field trips (on September 28 and 30) associated with this conference. Approximately 90 attendees from this conference participated on these two field trips – HWP staff discussed natural disturbance, HWP's

Target Group	Tour Description
	recreation program, integrated land management, and management planning.
Inside Education – teachers from across Alberta (2011)	A day long tour of 30 teachers from across Alberta hosted by Inside Education. HWP staff provided the group with a 1.5 hour "forestry 101" presentation and then the remainder of the day was in the field looking at: natural disturbance, riparian disturbance, silviculture interpretive trail, and electro-fishing.
Kimberly Clark customer tour (2011)	Kimberly Clark is Hinton Pulp's largest customer. This visit and tour to HWP's woodlands was to examine the Hinton operation's forestry practises to ensure they are in line with KC's procurement policy There was a two hour question and answer session on August 15th, followed by a five hour field tour on August 16th. The field trip focused on looking at harvesting and reforestation north of Hinton.

Target and Strategy

The Target for this VOIT is:

1. *Hold one field trip at a minimum bi-annually that targets policy makers, practitioners, researchers, media, and/or the public and fosters mutual understanding of SFM.*

The strategy and Target are the same.

Basis for Target	To help others understand the concepts and benefits of sustainable forest management.
Primary Strategy	The strategy and Target are the same.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

The target of holding at least one field trip every two years that targets policy makers, practitioners, researchers, media, and/or the public and fosters mutual understanding of SFM has been achieved. Table 2.2241b below summarizes the field trips and presentations related to this VOIT over the last two years (2012-2013):

Table 2.2241b – *Summary of Field Trips involving the target audience in 2012-2013*

Date	Target Group	Tour Description
January 23, 2012	Grade 4 class - Mountain View school (Hinton)	A PowerPoint presentation to a Grade 4 class. Focused on: - Forests are renewable - Forestry jobs - Managing for other values in the forest
July 6, 2012	ESRD	A tour to Athabasca 35 to look at riparian management issues primarily in upland pine areas. Part of HWP's development of a new Riparian Management Strategy.
September 11, 2012	ESRD	A tour to the Gregg River/White Creek areas to view riparian management issues in spruce dominated areas. Part of HWP's development of a new Riparian Management Strategy.

Monitoring and Reporting

This VOIT will be reported annually in the SFM Stewardship Report.

Future Development

There are no plans for further changes to this VOIT at this time.

References\Associated Documentation

- HWP Tour and Presentation Database

There are no plans for further changes to this VOIT at this time.

References\Associated Documentation

- HWP Tour and Presentation Database

ToC

2.2242 Participation in the Decision Making Process

DFMP VOIT	No
SFI Objective#	Objective #17
ISO Objective and Target?	No
Criterion:	**Criterion #6** – Accepting Society's Responsibility for Sustainable Development
SFM Element:	**6.4 Information for Decision-Making** – Provide relevant information to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.
Value:	Decision-making input
Objective:	Ensure land use management and planning processes include timely, fair, open and equitable public involvement
Indicator:	Activities that allow interested parties to participate in the decision making process
Target:	5. Conduct three open houses annually to provide opportunities for the public to review plans, provide feedback, and ask questions about Hinton Wood Products' sustainable forest management practises. 6. Annually, report publicly on FRAG's activities. 7. Annually publicly solicit new membership groups/organizations not already represented on FRAG.
Acceptable variance:	1. +/- one open house (Grande Cache is optional) 2. no variance 3. no variance
Monitoring:	Report annually in the SFM Stewardship Report – adjust or revise Target as required.

This VOIT was dropped in 2013 and the targets for this VOIT were combined with the "Consultation Opportunity and Participation" indicator.

ToC

2.2243 Public Communication

DFMP VOIT	No
SFI Objective#	Objective #17
ISO Objective and Target?	No
Criterion:	**Criterion #6** – Accepting Society's Responsibility for Sustainable Development
SFM Element:	**6.4 Information for Decision-Making** – Provide relevant information to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.
Value:	Effective consultation & communication
Objective:	Communicate the concepts and benefits of sustainable forest management
Indicator:	Public Communication
Target:	1. Develop and distribute two Hinton Wood Products newsletters annually (called the TreeBune) to employees, stakeholders, retirees, and both local and provincial politicians. *(This Target was revised on January 8, 2008 and in December of 2010))* 2. Annually develop and distribute an annual GDP Summary Document that summarizes the Company's general operating plans for the upcoming 1-3 years. *(This Target was revised in Jan 2010)*
Acceptable variance:	1. +/- 1 TreeBune 2. 0%
Monitoring:	Public communication initiatives will be reported on an annual calendar in the SFM Stewardship Report.

Overview
This VOIT was deleted in 2013. The intent of it is covered in other VOITs.

ToC

2.2244 Resource Information

DFMP VOIT	No
SFI Objective#	Objective #17
ISO Objective and Target?	No
Criterion:	**Criterion #6** – Accepting Society's Responsibility for Sustainable Development
SFM Element:	**6.4 Information for Decision-Making** – Provide relevant information to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.
Value:	Increased knowledge
Objective:	Increase levels of education, knowledge, and awareness of sustainable forest management
Indicator:	Resource Information
Target:	Complete Historical Resource Inventory Assessment on all high probability areas – complete 2014. (This includes cultural sites). *(Two targets from the 2005 SFM Plan were deleted Feb 25, 2008 as they have been completed)* *(In December 2010, this Target was changed to 2014 in order to reflect economic realities)*
Acceptable variance:	1. 0%
Monitoring:	Information about the status of each resource information category will be reported annually on a calendar year basis in the SFM Stewardship Report.

This VOIT was deleted for 2013, as it added very little value.

ToC

2.2245 Standard Operating Procedure Review

DFMP VOIT	No
SFI Objective#	Objective #12
ISO Objective and Target?	Yes
Criterion:	**Criterion #6** – Accepting Society's Responsibility for Sustainable Development
SFM Element:	**6.4 Information for Decision-Making** – Provide relevant information to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.
Value:	Increased knowledge
Objective:	Continual improvement of sustainable forest management planning and practices
Indicator:	Standard Operating Procedure (SOP) Review
Target:	Annually review 100% of HWP's Standard Operating Procedures
Acceptable variance:	0%
Monitoring:	Report annually in the SFM Stewardship Report.

Overview

An important element of sustainable forest management is continual improvement based on knowledge gained through various avenues such as operational experience, research, and resource inventory information. Standard Operating Procedures describe in detail how all elements of the Company's operations (e.g. logging, planning, silviculture, etc.), which have a significant risk to the environment, should be carried out so that risk is eliminated or minimized. In order to continually improve, the Company will review 100% of these SOP annually.

Definitions

A. ***Standard Operating Procedure*** – Standard Operating Procedures (SOPs) are those documents found and described on the Company's Environmental Management System. SOPs have been put into place to ensure that risks associated with Hinton Wood Products' activities are properly managed. SOPs describe procedures that must be followed and forms that must be filled out, for each of the main phases of work carried out by Hinton Wood Products staff (e.g. planning, operations, silviculture, administration, etc.). SOPs also ensure that employees understand how all aspects of their jobs should be carried out.

Inventory and Analysis

The Company developed the majority of its SOPs and then placed them within a computer database (called the EMS) in 1998, as a method to ensure compliance with the ISO 14001 standard for environmental management. In 2004, this EMS database was restructured onto an intranet platform, so that users now have added flexibility and easier use, afforded by internet technology.

Hinton Wood Products currently has approximately 60 SOPs on its EMS. Some of these SOPs also contain additional forms that must be filled out and filed.

Targets and Strategies

The Targets for this VOIT are:

1. *Annually review 100% of HWP's Standard Operating Procedures.*

Standard Operating Procedures are part of the overall Environmental Management System (EMS) – this EMS is currently based on an intranet platform and available to all Hinton Wood Products employees through their computers. All SOPs have an expiry date, are assigned to an individual based on their job function, and must be reviewed at least annually by that individual. Employees receive automatic reminders from the EMS one month before a SOP expires, and must review and revise their SOPs where approximate. All SOPs expire on June 1st of each year, with the exception of silviculture SOPs, which expire on March 1st – this allows employees to annually schedule time to review SOPs.

From time to time new SOPs are added into the EMS and existing SOPs are removed. All decisions regarding adding new SOPs and removing old SOPs are coordinated through the Stewardship/Public Affairs Coordinator, and are also normally vetted through the Company's Stewardship Committee.

Basis for Target	Continual improvement is an important aspect of sustainable forest management. Reviewing, and revising when necessary, HWP's Standard Operating Procedures on an annual basis, ensures we are continually improving our SFM system.
Primary Strategy	All SOPs expire on June 1st of each year, with the exception of silviculture SOPs, which expire on March 1st. By the expiry date of all Company SOPs, staff will review, and where necessary, revise SOPs.

2013 Annual Report **Target Met** ☒ **Target Not Met** ☐

In 2013, all of Hinton Wood Products Standard Operating Procedures were reviewed. Some remained the same, and a few were revised or deleted. We did meet our target.

Monitoring and Reporting

This status of VOIT will be reported annually in the SFM Stewardship Report.

Future Development

There are no plans for further changes to this VOIT at this time.

ToC

2.2246 SFM Satisfaction

DFMP VOIT	No
SFI Objective#	Objective #12
ISO Objective and Target?	No
Criterion:	**Criterion #6** – Accepting Society's Responsibility for Sustainable Development
SFM Element:	**6.4 Information for Decision-Making** – Provide relevant information to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.
Value:	Increased knowledge
Objective:	Achieve and maintain a local, provincial, national and international reputation for excellent forest stewardship
Indicator:	SFM Satisfaction
Target:	Survey local public satisfaction with Hinton Wood Products SFM program at least once every 5 years
Acceptable variance:	0%
Monitoring:	Results from this survey will be used to develop communication programs. Results will be reported on the HWP website.

This VOIT was deleted for 2013, as it added very little value.

ToC

2.2247 Certification Status

DFMP VOIT	No
SFI Objective#	Objective #12
ISO Objective and Target?	Yes
Criterion:	**Criterion #6** – Accepting Society's Responsibility for Sustainable Development
SFM Element:	**6.4 Information for Decision-Making** – Provide relevant information to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.
Value:	Increased knowledge
Objective:	Achieve and maintain a local, provincial, national and international reputation for excellent forest stewardship
Indicator:	Certification Status
Target:	Maintain and improve the SFM System and continue to meet the requirements of ISO 14001:02, the Sustainable Forestry Initiative (SFI), and any other certification standards that are subscribed to by HWP *(This Target was revised on January 8, 2008. CSA certification and* FORESTCARE *was dropped by HWP in 2010 and the Target revised accordingly)*
Acceptable variance:	0%
Monitoring:	The status of HWP's certification will be reported annually in the SFM Stewardship Report. Audit results will be shared with HWP's public advisory group (FRAG).

Overview

Forest certification is a systematic verification process conducted by an independent body (an accredited registrar) that examines a forest area or forest product to determine if it is being managed according to a recognized standard. For example, if a company applies for certification under a particular standard and meets the requirements, it is awarded a certificate by the registrar (the auditing agency).

Certification is an important tool in communicating to the public, our customers, and other interested parties, that the wood products purchased from our Company comes from a well managed forest.

Hinton Wood Products is currently (2010) registered to one sustainable forest management standard - the Sustainable Forest Initiative (SFI) Standard. From 2000 to 2009, HWP was also registered to the Canadian Standard Association's standard for sustainable forest management (CAN/CSA Z809-96); however, this certification was not renewed in 2010.

The SFI standard is a voluntary sustainable forest management standard – it originated in the United States but now is also commonly applied throughout Canada. This Standard is set around 20 Objectives, each of which has various indicators and performance measures associated with them. SFI Inc. is an independent, registered charitable organization under section 501(c)(3) of the United States Internal Revenue Code. It promotes sustainable forest management across North America and responsible fibre procurement globally.

SFI Inc.'s 18-member multi-stakeholder Board of Directors comprises three chambers, representing environmental, economic and social interests equally, so it can meet the many needs of forests and communities. Board members include representatives of environmental, conservation, professional and academic groups, independent professional loggers, family forest owners, public officials, labour and the forest products industry. This diversity reflects the variety of interests in the forestry community.

Hinton Wood Products also maintains certification of their Environmental Management Systems (EMS) to the ISO 14001 standard – a widely recognized EMS certification system. The ISO 14001 certification provides third party independent verification that the Company's Woodlands Environmental Management Systems properly address the short-term and long-term impact that the Company's products, services, and operations can have on the environment, while at the same time ensuring the Company is striving for, and committing to, continual improvement.

In addition to the ISO and SFI certifications, Hinton Wood Products is also eligible to be certified to FOREST*CARE*. The FOREST*CARE* certification is an Alberta based program that evaluates a forest company's commitment to protect the environment and sustain the many values of Alberta's forests. The

FOREST*CARE* program was developed by the Alberta Forest Products Association (AFPS) in the 1990s and was designed to improve the forest industry's performance in the six target areas specified in the Program's "Guiding Principles". These broad focus areas are; forest sustainability, multiple-use of the forest, environmental protection, safety, communications, and community support. The FOREST*CARE* Standard is not widely recognized by HWP's customers and adds little extra value to the two major North American certification schemes that HWP is registered to, and therefore was dropped by HWP in 2010.

Many customers in Asia and Europe are also increasingly seeking verification that products they purchase are derived from fibre that has been legally harvested from a certified sustainably-managed forest. To meet this demand, West Fraser is utilizing a system known as "Chain of Custody", which is designed to track the legality and the certification of our timber sources. This system is based on the Programme for the Endorsement of Forest Certification (PEFC) volume-credit method, which is internationally-recognized and widely-accepted.

As well as the PEFC Chain of Custody certification, West Fraser's Hinton Pulp operation was registered to the Forest Stewardship Council's (FSC) Standard for Chain of Custody Certification (FSC-STD-40-004 v2-0) and the Standard for Company Evaluation of FSC Controlled Wood (FSC-STD-40-005 v2-0) in June 2008. This Controlled Wood Standard means that Hinton Pulp does not source fibre from any of the following sources:

- Illegally harvested wood;
- Wood harvested in violation of traditional and civil rights;
- Wood harvested in forests where high conservation values are threatened by management activities;
- Wood harvested in forests being converted to plantations or non-forest use; and
- Wood from forests in which genetically modified trees are planted.

Fibre sources that can not be confirmed to be controlled wood will be excluded from the fibre supply chain.

Definitions

A. ***Certification Status*** – For the purpose of this indicator, certification status refers to attaining and maintaining in good standing certification in the following third party programs – International Organization for Standardization ISO 14001 and the Sustainable Forestry Initiative (SFI). This indicator is consistent with the Woodlands Department and Corporate commitments to achieve sustainable forest management and verify performance through third-party certification programs.

B. ***Full Scope or Partial Scope Audits*** – A full scope or partial scope audit is conducted by the registrar (the accredited auditing agency – in HWP's case, it is KPMG) against the ISO 14001 and SFI standards. It is a systematic and documented verification process used to obtain and evaluate evidence objectively in order to determine whether to Company meets the requirements of a standard. The first audit against any of the previously noted standards is called the registration audit. At regular intervals after the initial registration audit, a partial scope audit (where only certain elements of the standard are audited) or a full scope audit (where all of the elements of the Standard are audited) is conducted by the registrar (i.e. KPMG).

C. ***Internal Audit*** – This is an audit undertaken annually by someone other than the registrar. These audits are used to encourage continual improvement. These audits can be carried out by Company personnel and/or by external parties selected by the Company. In either case, the persons conducting the audits are properly trained, objective and impartial. Internal audits are submitted to the Company's senior management for review and action plans are developed to address any areas for improvement or shortcomings.

Inventory and Analysis

Audits are conducted as required by the individual certification program standards. Table 2.2247a outlines the history of audits with respect to the HWP and Hinton Pulp for the following Standards: CAN/CSA Z809, SFI, ISO 14001, PEFC Chain of Custody (CoC), FSC Standard for Chain of Custody Certification (FSC-STD-40-004 v2-0) and the FSC Standard for Company Evaluation of FSC Controlled Wood (FSC-STD-40-005 v2-0).

As previously noted, HWP dropped CAN/CSA Z809 certification in 2010 – this brought the Hinton division in line with all of West Fraser's other wholly-owned Canadian divisions, which are certified only to SFI sustainable forest management standard.

Table 2.2247a – *Registration Status for Hinton Wood Products' Certification Systems*

Type of Audit	Third Party Audits					Internal Audit			
	CSA Z809	ISO 14001	SFI	PEFC CoC	FSC CoC & Controlled Wood	CSA Z809	ISO 14001	SFI	PEFC CoC
Year of Initial Registration Audit	**2000**	**2000**	**2007**	**2010**	**2008**	n/a	n/a	n/a	n/a
Full Scope or Partial Scope Audits	2001 2002 2003 2004 2005 2006 2007 2007 2008 2009 n/a* n/a* n/a*	2001 2002 2003 2004 2005 2006 2007 2007 2008 n/a 2010 n/a 2013	n/a n/a n/a n/a n/a n/a n/a n/a 2008 n/a 2010 n/a 2013	n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a 2010 n/a 2013	n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a 2010 n/a 2013	2001 2002 2003 n/a 2005 2006 n/a n/a 2008 n/a n/a* n/a* n/a*	2001 2002 2003 2004 2005 2006 n/a n/a 2008 n/a n/a 2011 n/a	n/a n/a n/a n/a n/a n/a n/a n/a 2008 n/a n/a 2011 n/a	n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a 2011 n/a
Next Scheduled Audit		2014	2014						

*HWP dropped its CSA certification in 2010

Target and Strategy

The Target for this VOIT is:

1. *Maintain and improve the SFM System and continue to meet the requirements of ISO 14001:02, the Sustainable Forestry Initiative (SFI), and any other certification standards that are subscribed to by HWP*

Basis for Target	Certification systems such as ISO, SFI, PEFC, and FSC all provide a series of standards that must be met in order to make a claim of managing a forest in a sustainable manner. In addition to providing generally acceptable criteria for SFM, certification standards also require that a Company is audited by a third party to ensure those standards are being met.
Primary Strategy	The programs initiated within ISO 14001, FSC, PEFC, and SFI will be continued. Internal audits and surveillance/registration audits will be conducted as required. Results from these audits will be used to continually improve the SFM system.

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Target Met ☒ **Target Not Met** ☐

Hinton Wood Products underwent an external surveillance audit in July 2013 to the ISO 14001, SFI, and PEFC chain of custody standards by a two person KPMG audit team, made up of James Lucas and Bodo Von Schilling. There were two good practices, one minor non-conformance and five other "opportunities for improvement" (OFI). There was also an open non-conformity carried over from Sundance Forest Industries external audit in 2012 (weeks prior to West Fraser purchasing their assets). It was the opinion of the audit team that HWP's environmental management system was in conformance with the requirements of the ISO 14001, SFI, and PEFC chain of custody standards with the exception of the one non-conformance and five OFIs noted above. An action plan for the minor non-conformity of the finding from the audit was developed and being implemented.

Monitoring and Reporting

This status of VOIT will be reported annually in the SFM Stewardship Report.

Future Development

There are no plans for further changes to this VOIT at this time.

References\Associated Documentation

- International Organization for Standardization. 1996. CAN/CSA-ISO 14001-96: Environmental management systems – specification with guidance for use. International Organization for Standardization, Geneva, Switzerland.
- Canadian Standards Association. 1996. CAN/CSA-Z808-96 and CAN/CSA-Z809-96. A sustainable forest management system, guidance document and specifications document. Canadian Standards Association, Etobicoke, Ontario, Canada.
- Sustainable Forestry Initiative Standard – (http://www.sfiprogram.org/)
- The FSC's Standard for Company Evaluation of FSC Controlled Wood (FSC-STD-40-005 v2-0); http://www.fsccanada.org/docs/E31E1C094092776C.pdf
- FSC's Standard for Chain of Custody Certification (FSC-STD-40-004 v2-0); http://www.fsc.org/fileadmin/web-data/public/document_center/international_FSC_policies/standards/FSC_STD_40_004_V2_0_EN_Standard_for_CoC_Certification_2008_01.pdf
- Hinton Wood Products, Sustainable Forest Management Plan – available on Hinton Wood Products webpage – (www.westfraser.com/hintonforestry)

ToC

2.23 Voluntary VOIT Performance Review

Table 2.231 summarizes the progress in 2013 in meeting the voluntary Targets, as described in the VOIT reports in section 2.2225 to section 2.2247. In 2013, 16 out of 20 voluntary Targets were successfully met. There were 6 Targets deleted (VOIT# 28, 32, 39, 42, 43 and 44.

Section 2.14 describes the targets that were not met and describes why the Targets were not met, and where feasible, what measures HWP will take to ensure they are met in the future.

Table 2.231 – *Voluntary Indicator & Target Performance Review Summary*

VOIT #	Indicator	Target	Target Met in 2013
25	Species Conservation Strategies	1. Complete species conservation strategies for all species at risk (SARA and Alberta designations) within 6 months of designation and update strategies at least every 2 years. 2. Report on results of strategies annually.	No Yes
26	Non-forestry disposition area by disposition type	1. Measure and track the non-forestry industrial footprint by disposition type. 2. Implement Long Term Access Plan (LTAP) process, including stream crossings.	Yes Yes
27	Protected cultural & historical areas	Identify and document cultural and historical sites through HWP's Standard Operating Procedures (Cultural & Historical Site SOP & Form – EM-0056), HWP's Special Places in the Forest Program and through the Company's archaeological assessment procedure - develop a management strategy for each identified site within 12 months	Yes
28	Timber Salvage (ha)	1. Salvage all accessible timber damaged by fire, insects, diseases, or blowdown, as defined in the Development Plan and the Annual Operating Plan, greater than 1 ha (that meets quality criteria and hasn't been reserved for ecological value) within 2 years of damage being identified. 2. TARGET DELETED	Yes
29	Recreation Infrastructure	Implement the action plan for year one of the annually produced Recreation Action Plan.	Yes
30	Overnight visits	Annually target to have a minimum of 7500 well distributed paid overnight visits at Hinton Wood Products managed campgrounds.	Yes
31	Visual Impact Assessments	Conduct visual impact assessments for areas with high visual sensitivity prior to Final Harvest Plan submission.	Yes
32	Public complaints regarding HWP activities	VOIT DELETED	
33	Piece size into the sawmill	Annually maintain an average piece size into the sawmill of 0.128 m3/piece	No
34	Average Haul Distance	Maintain an average haul distance of 67.3 km for wood harvested from the FMA over a five year cut control period (Jun 15/03 – Jun 14/08).	No
35	Hinton Wood Products Contributions	Report annually on the contributions to economic and social health of the region.	Yes
36	Training and Education	All forest workers (Company staff & contractors) will meet minimum training requirements within timelines as identified by Hinton Wood Products.	No
37	Non-compliance incidents	Zero non-compliance incidents on an annual basis.	Yes
38	Waste Management	Annually review and improve the Waste Management Program to include new initiatives to reduce, reuse, and recycle – report on the results of these initiatives.	Yes
39	Garbage Incidents	VOIT DELETED	
40	Woodlands Safety Plans and Prime Contractor's Safety Audits	1. Annually develop and implement safety plans for the Woodlands Department 2. Hinton Wood Products' prime contractors will successfully pass a PIR or COR audit.	Yes Yes
41	Participation in SFM events	Hold one field trip at a minimum bi-annually that targets policy makers, practitioners, researchers, media, and/or the public and fosters mutual understanding of SFM.	Yes
42	Activities that allow interested parties to participate in the decision making process	VOIT DELETED	
43	Public Communication	VOIT DELETED	
44	Resource Information	VOIT DELETED	
45	Standard Operating Procedure (SOP) Review	Annually review 100% of HWP's Standard Operating Procedures	Yes
47	Certification Status	Maintain and improve the SFM System and continue to meet the requirements of ISO 14001:02, CSA Z809:02, Sustainable Forestry Initiative (SFII), FORESTCARE, and any other certification standards that are subscribed to by HWP.	Yes

ToC

2.24 Action Plan for Voluntary VOITs Not Met

Table 2.241 on the following page describes the voluntary VOITs that were not met and outlines why the Targets were not met, and where feasible, what measures HWP will take to ensure they are met in the future.

ToC

Table 2.241 – Voluntary VOITs that were not met in 2013 and their Corrective Actions

Voluntary VOITs not met in 2013					
25	Conserve genetic diversity within species	Species Conservation Strategies Current list is: woodland caribou, grizzly bear, trumpeter swan, olive-sided flycatcher, common nighthawk.	1. Complete species conservation strategies for all species at risk (SARA and Alberta designations) within 6 months of designation and update strategies at least every 2 years.	All species conservation strategies were not revised within the past two years (Table 2.2225a. Updating of all strategies was postponed to align government recovery processes and with the new FMP to be submitted in fall 2014. West Fraser is participating in all government recovery processes that concern HWP FMA species. There were three new FMA "species at risk" designations in 2010: grizzly bear (Alberta Wildlife Act), common nighthawk (SARA) and olive-sided flycatcher (SARA). In 2009 and 2010, respectively, the Endangered Species Conservation Committee recommended that the Athabasca rainbow trout and bull trout should be designated as Threatened in Alberta, but the designations were not finalized as of December 31, 2012. If the Alberta government designates these species, species conservation strategies will be developed. September 2013 the Alberta government launched a new caribou range plan process that will replace the WCACLP. The HCS Revision will be deferred until the range plan is approved or replaced. HWP has already started to implement some of the recommendations in the WCACLP and is participating in the range plan process.	Draft species conservation strategies for olive-sided flycatcher and common nighthawk were completed in early 2014. The Alberta government is preparing Range Plans for the two caribou herds that overlap the HWP FMA: Little Smoky and A la Peche. HWP is participating in the process, which has a target completion date of Dec 2013 but has been extended into 2014. The caribou species conservation strategy update will be completed within 6 months of approval of the LSM and ALP Range Plans, in time for inclusion in the 2014 FMP. The grizzly bear species conservation strategy update will be completed in time for inclusion in the 2014 FMP. Species conservation strategies for voluntary species listed in the HWP Species at Risk Guide are not part of this VOIT. HWP will prepare or update strategies for the following species in time for inclusion in the 2014 FMP: rusty blackbird, bank swallow, Athabasca rainbow trout, bull trout, Arctic grayling, Pinto Creek mountain goat, wolverine, Columbia spotted frog, and long-toed salamander. The trumpeter swan species conservation strategy was reviewed in 2013. Update of the strategy was commenced in 2013 and will be completed in 2014.
33	Maintain a sustainable and economical supply of timber for wood products.	Piece size into the sawmill	Annually maintain an average piece size into the sawmill of 0.128 m^3/piece	The average 2013 log size at the HWP sawmill was 0.145 m^3/piece. During 2013, the Company continued to focus on specific MPB infested stands or those highly susceptible MPB pine stands identified in the spatial harvest sequence.	The last six months of 2013 saw an overall reduction in sawmill piece size. In fact, during the last six months of the year the piece size average would have fallen within the objective range set forth in this VOIT. This is largely due to the fact that we increased our operational presence in those highly susceptible MPB stands within our spatial harvest sequence in the southern reaches of the FMA.
34	Maintain long-term economic viability of the HWP enterprise.	Average Haul Distance	Maintain an average haul distance of 67.3 km for wood harvested from the FMA over a five year cut	The average haul distance for the 2012/13 timber year was 71.6 km. The average haul distance for the period of May 1, 2008 to April 30, 2013 was	As markets improve, HWP operations will transition towards the FMA average, while focusing on stands which have been attacked by the mountain pine beetle. This is evident in the 23 km increase shown between 2011 and 2013.

			control period (Jun 15/03 – Jun 14/08).	59.1 km, which is less than 5 km outside of the acceptable variance for this target (63.9 to 70.7 km). This target was not met because timber harvesting was concentrated in areas closer to the mill to minimize haul costs due to the very poor lumber market experienced in 2008-10.	
36	Increase levels of education, knowledge, and awareness of sustainable forest management	Training and Education	All forest workers (Company staff & contractors) will meet minimum training requirements within timelines as identified by Hinton Wood Products.	The Target variance is =/<10% - a 90% overall compliance rate. The summer student and staff training rate is in compliance, however the Contractor training rate is 62%, leaving the total compliance at 85%.	The 2014 Spring Training schedule is being reviewed, ways of delivering information and communicating will be improved and the expectation of what is required of the Contractors will be laid out and the importance of the training program will be reinforced.

ToC

3. STEWARDSHIP COMMITTEE INITIATIVES FOR 2013

Hinton Wood Products maintains a Stewardship Committee, which is made up of the Company's Stewardship Coordinator, as well as one representative each from the Operations, Planning, and Silviculture Departments. The mandate of the Stewardship Committee is to provide support to the Stewardship Coordinator to ensure that systems and processes are in place and functioning to achieve and promote sustainable forest management. Each year, the Stewardship Committee develops a number of stewardship related initiatives that the Committee tries to implement by the end of the year.

The following sections outline each of the initiatives for 2013, their status, and what actions will be taken, if any, if the initiative was not met:

1.1 Recycling and Composting Planting Boxes

HWP recycled 20 metric tons of planting boxes, which is about 10,000 boxes. There were no boxes sent back to nurseries for re-use. The total number of planting boxes in HWP's planting program in 2013 was about 16,957 therefore, 6,957 boxes were land-filled or otherwise disposed of (including Edson FMA boxes).

1.2 FMA road side clean-up

ToC

Road clean up took place on May 30th. Unfortunately with the lack of time and resources, the amount of garbage and bottles collected was not reported in.

4. COMMUNICATION INITIATIVES FOR 2013

Every year, Hinton Wood Products develops a communications plan that consists of a number of objectives. Each objective has a number of action items that are developed in order to meet the objective. The following table outlines our success in meeting each objective:

Table 4.0 – *Status of 2013 Communication Objectives and Action Items*

Objective #1 – Develop and encourage understanding, partnership and pride in employees, their families, contractors and retirees		
Action	**Status**	**Comments/Corrective Actions.**
Quarterly Newsletter – The TreeBune This will be discontinued in 2013 due to insufficient internal capacity to produce the newsletter	Incomplete	There TreeBune was discontinued in 2013.
Bulletin Boards – Maintain a bulletin board at the Woodlands office to educate people about company practices and current events.	Complete	Bulletin boards are maintained in a number of locations in the Woodlands Office.
Information Sharing – Inform employees and contractors about special activities (e.g. exhibit at local mall, community projects) to ensure awareness and understanding as to why events are occurring.	Complete	Two open houses were held in 2013 - ads were placed in local newspapers. One open house was held in Hinton and Edson on March 27th and March 28th respectively.
Communication meetings update – Participate in the scheduled department meetings with staff, with communication updates and discussion of communication issues of key concern to the Woodlands Department	Complete	There were 3 communication meetings were held in 2013; February 11, May 7 and July 11.
Objective #2 – Develop external understanding and support for the Company's practices and operations.		
Action	**Status**	**Comments**
Audience Identification/ Interface – Each year, identify at least one key opinion leader	Not Complete	There were no field trips organized in 2013.

Action	Status	Comments/Corrective Actions.
and/or organization that are influential in the community and elsewhere. Encourage a site visit and tours of operations.		
Regular meeting with Town Staff and Council – Each year arrange at least one meeting with Town staff and council to bring council up to date on the Company's operations and issues.	Complete	HWP and HP did not meet with Town in 2013, although a meeting was organized in 2013 and was held in early 2014 (January 20).
Speaking Engagements/ Speakers Bureau – Respond quickly to requests and seek out opportunities for speakers or information about the company and its practices	n/a	HWP had no requests for speaking engagement in 2013
Response to Enquiries/Complaints – All enquiries/complaints will be responded to or forwarded to the appropriate respondent. Substantive enquires/complaints and their responses will be tracked and recorded.	Complete	
West Fraser Alberta Stewardship Report Each year, assist in the development and production of an Alberta Stewardship Report that reports on the forestry/stewardship activities of the five West Fraser Alberta woodlands divisions.	n/a	A Stewardship Report for Alberta operations has not yet been completed for the 2013 year. Last year's report is available on West Fraser's main webpage (www.westfraser.ca).
Forest Certification Initiatives – Maintain support and encourage understanding of the certification systems the Company is currently registered for: ISO 14001 and SFI.	Complete	HWP maintained its ISO 14001 and SFI certifications in 2013. Also please refer to VOIT 47 (Certification Status).
Annual GDP Summary Document Annually produce an easy to read and understand brochure outlining Hinton Wood Products' General Development Plan. This document is used during open houses and as a referral document sent to various stakeholders and Aboriginal communities.	Complete	On March 4, 2013, HWP mailed out the "2013/2014 GDP & Stand Tending Summary Document" to trappers, local and regional politicians, contractors, media, energy companies, and FRAG members - a limited number were also produced for our open houses.
Open Houses – Host annual "open houses" to provide information on forest management and stewardship.	Complete	In 2013, open houses were held in the communities of Edson and Hinton on March 27th and 28th respectively. Copies of Hinton Wood Products' 2012 Stewardship Report, the "2013/2014 GDP & Stand Tending Summary Document", planned or approved Compartment Operating Plans, HWP's herbicide plans, and general information about the Woodlands Department were available for the public to view and comment on.
Natural Resources Interpretative Park – HWP ended this relationship in early 2011, allowing the Town of Hinton to take over the management and maintenance of the NRIP.	n/a	HWP no longer is involved in the NRIP. The Society was dissolved and the remaining funds were transferred to the Town of Hinton, which will now maintain this green space.
Website – Maintain and continue to evolve HWP's webpage providing information to the public regarding forest management. Include on this webpage access to various public documents such as our AOP, GDP, DFMP, and Stewardship Report.	Complete	This was phased out in 2013, and HWP's web based information is now contained within the larger West Fraser website.
Public Tours – West Fraser / Foothills Research Institute – Adopt a positive response to requests for tours by external groups or individuals. Participate and assist, if requested, with the Foothills Research Institute Public Tours program.	Complete	No tour requests were made in 2013.
Recreation Program From 2000 to 2010, Hinton Wood Products managed 23-24 recreation sites under our	Complete	See VOIT #29 for a complete overview of the recreation projects completed during 2013.

Action	Status	Comments/Corrective Actions.
recreation program. A Recreation Action Plan that outlines all maintenance as well as proposed new projects was produced annually. In 2011, a new organization was formed to jointly manage recreation on the landbase – the Foothills Recreation Management Association (FRMA). FRMA is a group of companies and organizations committed to providing safe and affordable outdoor recreation opportunities. This new partnership manages 15 campgrounds and eight trail systems in the foothills area near the communities of Hinton, Edson, Robb, and Cadomin. FRMA is a not-for-profit organization currently made up of the following companies and organizations – West Fraser, Sherritt, Teck, Coalspur, Yellowhead County, and the Town of Hinton. Additional partners are also being sought Thorough FRMA, HWP will use opportunities within the recreation program, such as kiosks, interpretive trails, and trail maps, to inform and educate the public about our forest stewardship and sustainable forest management practices.		
Foothills Research Institute (FRI) Communications Steering Committee – Continue to participate in the Foothills Research Institute Communications Steering Committee. Look for opportunities to work with the Foothills Research Institute to increase the understanding in the region regarding forestry and the science behind it.	Complete	A HWP representative continued with active participation on the FRI's Communications Steering Committee.
Continue and improve the role of the Forest Resource Advisory Group (FRAG) in providing informed and timely advice to the programs and activities of the Forest Resource Department. Actions include:	Complete	In 2013, there were eight FRAG meetings – see VOIT #9 (Target #1) for a summary of FRAG activities in 2013.
Effective Meetings If required, bring in a professional facilitator to ensure smooth and effective conduct of the meetings. Maintain an accurate record of recommendations, responses and action items.	Complete	A facilitator was not required in 2013; FRAG's chairperson ran the meetings. Minutes were kept for each meeting and are available to FRAG members on HWP's website and are filed at HWP.
Issue & Recommendation Tracking Establish and maintain a record of FRAG recommendations to the Company and the Company responses.	Complete	A record of FRAG's issues and recommendations was developed, approved by FRAG, and is filed on site and on HWP's webpage. The timeframe of this report is Sept 2012 to July 2013.
Report to the Community Each year, complete a "Report to the Community" and publish it in the local newspaper. This report summarizes FRAG's work for the last year.	Complete	In 2013, HWP placed a quarter-page notice in the July 25, 2013 edition of the Hinton Voice. This notice explained who FRAG was, outlined what FRAG has been discussing over the last 12 months, and invited anyone interested in sitting on FRAG to contact FRAG's chairperson.

Action	Status	Comments/Corrective Actions.
Timely and Appropriate Response Ensure that action items and recommendations from FRAG receive early attention at the appropriate level in the Forest Resource Department organization and that a considered and timely response or action follows.	Complete	Each fall FRAG's issues are prioritized and then addressed throughout the next 10 months. Additional issues can be brought up at any time and will be addressed by HWP at the direction from FRAG.
Management Support At least one senior manager, preferably more, will attend every FRAG meeting. If no senior manager is available, Hinton Wood Products will re-schedule the meeting.	Complete	HWP's Woodlands Manager, HWP's General Manager, or West Fraser's Chief Forester for Alberta attended each FRAG meeting in 2013.
Objective #3 – Establish and maintain trust and credibility with educators, students and boards of education		
Action	**Status**	**Comments**
Program Support: Other Agencies – Provide financial and technical support to the educational programs of the Foothills Research Institute (FRI) and Inside Education.	Complete	HWP did not provide any direct financial support to Inside Education in 2013. Technical support was provided to the Foothills Research Institute through participation by HWP representatives in various committees.
Education Programs: Other Agencies – Align company with credible third-party organizations to position company messages including Inside Education, the Alberta Forest Products Association (AFPA), schools; utilize their personnel and program materials. Attract these organizations to host local events.	n/a	There were no field trips opportunities in 2013.
Other Support – Where the opportunity arises, support local science fairs, partnering opportunities with schools, student exchange programs, and tree planting.	n/a	There were no opportunities in 2013.
Objective #4 – Build credible relationships with the local media, based on mutual trust, that result in fair and accurate presentation of the Company's position on events or issues involving Hinton Wood Products		
Action	**Status**	**Comments**
Information Release – Pro-actively release information that would otherwise be covered by the media to control the message and display openness (crisis). Provide routine press releases that have media appeal and build credibility (community support, environmental milestones).	n/a	There was no media with respect to HWP woodlands operations in 2013.
Media Monitoring/Response – Vigilant monitoring of media and discretionary correction of large errors/deliberate misrepresentation. Possible actions include calls to reporters through to editorial board meetings.	Complete	HWP now uses one service to monitor print media – the Tree Frog Daily News. In addition, local papers were monitored by the Management Forester. Responses and follow ups regarding local issues are normally handled locally.
Distribute Literature – Include regular update on Company through local, corporate literature and AFPA and Forest Products of Canada (FPAC) information.	Complete	Local newspapers are on the distribution list of HWP's GDP Summary Document. Local media is also sent copies of other company literature, such as the Alberta West Fraser Stewardship Report.

ToC

5. OGR ANNUAL REPORTING REQUIREMENTS

Within the Operating Ground Rules (OGRs), there are certain reporting requirements either as part of a plan submission (e.g. AOP and GDP) or as a separate specific reporting requirement set out in section 12.0 of the OGR. The following sections address all reporting requirements set out in the OGRs

5.1 General Development Plan

The primary purposed of the General Development Plan (GDP) is to provide a projection of activities for the next five years in order to guide the integration of activities, predict cut control status as per the Forest Management Agreement, and to schedule the development and reclamation of roads.

The primary components of the GDP include a forecast of the areas scheduled for harvest for a five year period and a summary of variance for existing Final Harvest Plans or long-term road plans outlined in the Forest Management Plan. The GDP must also include the status and forecast of the coniferous and deciduous annual allowable cut (AAC) by the current cut control period.

The GDP shall also include details regarding road requirements and fish and wildlife issues within the planning area where these are not already described in the DFMP or a FHP. First Nations consultation of the GDP is a requirement of the Alberta First Nations Consultation Guidelines on Land Management and Resource Development.

The GDP submission date is April 1st of each year unless otherwise approved by AESRD. AESRD shall respond within 30 days. The GDP shall be approved subject to an appraisal by AESRD.

5.11 Documentation

The following documents pertain to the 2013/2014 GDP (access to HWP staff only):

- The 2013 General Development Plan (plus cover letters and Aboriginal Consultation)
- The 2013 General Development Plan AESRD approval letter
- The 2013 GDP Map

5.2 Annual Operating Plan

The purpose of the Annual Operating Plan (AOP) is to annually authorize all HWP road, harvest and forest management activities.

The AOP describes the activities proposed for the current AOP year (May 1 to April 30) and must be approved by AESRD before timber operations commence. The AOP components include:

- Operating schedule and timber production – (not yet approved by AESRD)
- Applicable Final Harvest Plans – (appraised by AESRD)
- Compartment Assessment (if applicable) – (appraised by AESRD)
- Reforestation program – (accepted by AESRD)
- Fire control plan – (accepted by AESRD)
- Road Development Plan – (accepted by AESRD)
- General Development Plan – (not yet approved by AESRD)

The AOP submission date is April 1st of each year unless otherwise approved by AESRD. AESRD shall respond within 30 days. The AOP shall be appraised by AESRD in accordance to the AOP checklist (found in Appendix 5 of the OGRs with approval subject to the outcome of the appraisal.

5.21 Documentation

The following documents pertain to the 2013/2014 AOP (access to HWP staff only):

- 2013 AOP with approval letter, carry over letter and submission letter.

ToC

5.3 Silviculture and Harvest Activity Reporting

Section 12.0 of the OGRs requires certain additional reporting in order to ensure that timber operation activities are reported to AESRD so that the provincial government can maintain an accurate and current database across the Province.

5.31 ARIS Silviculture Work

HWP reports the details of all silviculture work completed in the previous year annually into ARIS no later than May 15. The required information is outlined in the ARIS Industry Operations Manual. Information and has been submitted in accordance with all requirements of the manual and associated policy directives.

5.32 Additional Forest Management Activities

Alberta may require additional reporting for forest management activities such as thinning, herbicide, pesticide spraying, or fertilization as per Alberta requirements.

5.33 Periodic Timber Operations Inspections

HWP's Operating Ground Rules state that "HWP shall have a self-inspection agreement and shall carry out periodic inspections of active timber operations and report the information to Alberta in a format acceptable to Alberta. Reports based on the 2006-04 directive shall be submitted to Alberta once per month or at agreed to intervals". Hinton Operation Supervisors carry out documented harvesting inspections, which can be found on the following link (available to HWP only) – logging inspections 2013 timber year to date.

HWP provides an electronic submission of a Block Status Report to the ESRD (Area Forester) at the end of each month during the timber year. This reports provides dates on activity status for block commencement, skid clear, hauling, in-block road construction/reclamation, temporary crossing construction/reclamation, debris piling/burning and scanning, applicable Operations Supervisor, AOP road status and MPB block status. Any particular block will remain on the status report until a final date is entered; when this final date is entered this, means that all operational obligations have been completed satisfactorily. HWP's Operations Superintendent reviews and submits the report to ESRD monthly and it is the responsibility of HWP's Operation Supervisors to enter the applicable dates and information for their blocks into HWP's data management system (called "The Forestry Manager" or TFM for short).

A digital copy of each month's submission is filed on HWP's "S Drive" in the following location: "S:\Woods-Planning\private\final_docs\Operating_Status_Reports\2013 Timber Year Ops Status". The links to Block status report submissions for 2013 are provided below (available to HWP only):

- June 2013 Block Status Submission - Hinton Wood Products
- September 2013 Block Status Submission - Hinton Wood Products
- October 2013 Block Status Submission - Hinton Wood Products
- December 2013 Block Status Submission - Hinton Wood Products
- January 2014 Block Status Submission - Hinton Wood Products
- February 2014 Block Status Submission - Hinton Wood Products
- March 2014 Block Status Submission - Hinton Wood Products
- May 2014 Block Status Submission - Hinton Wood Products

5.34 As Built Plans

HWP shall submit by December 31 an "as-built" plan (includes harvest boundaries, retention patches, road location, watercourse crossings, road percentages, etc.) from the previous AOP year's harvest. For example, as-built plan for blocks harvested in the 2009-2010 AOP year (May 1, 2010 – April 30, 2010) must be submitted by December 31, 2010.

As-built plans consist of a digital (PDF) as-built map for each block with harvest completed during the AOP year showing the final harvest boundaries, retention patches, block road locations and watercourse crossings.

Variance tracking using the final as-built boundaries remains to be completed.

As-built plans were completed and submitted to ESRD for the following compartments:

- Athabasca 26, 28, 30, 35
- Berland 22, 25, 29, 30
- Embarras 7, 10, 20
- Marlboro 2, 4, 5, 10, 13, 16, 22
- McLeod 12, 25, 27, 28

The as-built plans were submitted on March 23, 2014.

5.35 Open Compartments

Table 6.35a outlines the open compartments on HWP's FMA as of April 1, 2014

Table 5.35a – *Open compartments as of April 1, 2014*

Working Circle	Compartments
Athabasca	28,30,35
Marlboro	2,4,5,6,10,13,16,18,19,22
Embarras	7,9,10, 20
McLeod	12,13,18,20,25,27,28
Berland	12,22,23,25,29,30

5.36 Annual status of channelled watercourse crossings

The annual status of channelled watercourse crossings are described in VOIT#6 and VOIT#7.

5.37 Seedlot Deployment Activities

Section 21.2.1 of the Alberta Forest Genetic Resource Management and Conservation Standards (second revision of STIA), May 1, 2009 requires a company, under certain conditions, to report their seedlot deployment activities in the five-year Stewardship Report for the FMP. HWP stewardship is at year five of five as of April 30, 2013. No restricted seedlot (stream 1 or 2) were planted on the Hinton FMA in that time period. The performance measures are FMP specific. Because the 2010 FMP amendment (the MPB Plan) did not set performance measures, HWP will report the cumulative deployment of improved material. The cumulative Ne (effective population size) for the stream-two deployment population is for each CPP (Controlled Parentage Program) region and will be calculated at the end of the Quadrant ending April 30, 2013.

The table below meets the intent of the reporting requirements in the above noted Alberta Forest Genetic Resource Management and Conservation Standards.

Table 5.37a – *Stream-two Deployment: 2008 - 2012*

Breeding Region	Seedlot	Planting year	Total Seedlings	Total Area	5 year Cumulative Ne (effective population size)
High Elevation Pine (Region B2)	HASOCIG303SO2006PL	2009	100,036	78.1	
High Elevation Pine (Region B2)	HASOCIG303SO2007PL	2010	42,210	20.3	
High Elevation Pine (Region B2)	HASOCIG303SO2006PL	2011	66,540	165.4	
High Elevation Pine (Region B2)	HASOCIG303SO2007PL	2011	174,015	140.1	
High Elevation Pine (Region B2)	HASOCIG303SO2009PL	2011	105,570	94.4	
High Elevation Pine (Region B2)	HASOCiG303So2008.2010Ol	2012	376,695	278	
High Elevation Pine (Region B2)	HASOCIG303SO2009PL	2012	131,670	86	
			996,736	**862**	being calculated by geneticist

Breeding Region	Seedlot	Planting year	Total Seedlings	Total Area	5 year Cumulative Ne (effective population size)
Low Elevation White Spruce (Region I)	HASOCIG333SO2005SW	2008	49,410	25.6	
Low Elevation White Spruce (Region I)	HASOCIG333SO2005SW	2009	107,800	61	
Low Elevation White Spruce (Region I)	HASOCIG333SO2006/07SW	2010	104,040	92.71	
Low Elevation White Spruce (Region I)	HASOCIG333SO2006/07SW	2011	30,240	27	
Low Elevation White Spruce (Region I)	HASOCIG333SO2009SW	2012	281,610	173	
			573,100	**379**	being calculated by geneticist
Low Elevation Pine (Region A)	WW I G801 2008/2009 PL	2011	49,785	23.2	
Low Elevation Pine (Region A)	WW I G801 2010 PL	2011	45,960	23.3	
			95,745	**46.5**	being calculated by geneticist
Low Elevation Black Spruce (Region L1)	WW G802 SO 2007/2009 SB	2012	9,000	4.5	
Low Elevation Black Spruce (Region L1)			**9,000**	**4.5**	being calculated by geneticist

ToC

6. FOMP REPORTS AND ACTION PLANS

Each year, Alberta Environment Sustainable Resource Development (AESRD) conducts compliance audits on HWP's harvesting and silviculture operations under AESRD's Forest Operations Monitoring Program (FOMP).

6.1 Harvesting Operations

AESRD FOMP audits have two main categories – "variances" and "exceptions". Variance findings are basically minor variances from HWP's Operating Ground Rules. More specifically, a variance is a practice or procedure conducted by HWP that is either:

- not directly contrary to legislation, but could increase risk to long term site productivity and/or is generally an unacceptable practice, or
- contrary to legislation, but may or may not become an exception depending on the frequency, severity, cause and/or consequence of the finding, which are considered with respect to long term site productivity, environmental/public impact, acceptable practices, etc.

Variance findings from AESRD FOMP audits result in action plans being developed by the Company to deal with these variances

If any variance finding is particularly flagrant, an investigation may be opened by AESRD's compliance department and the finding then moves into the "exceptions" category. An "exception" is a practice or procedure conducted by the disposition holder that is contrary to legislation; it is supported by evidence revealed through the inspection process, and may be subject to enforcement action (penalty or warning).

Any exceptions found by FOMP would normally be treated as an environmental incident by HWP and dealt with under VOITs 4, 16, and/or 37.

FOMP reports deal with various time periods, but generally fall during the logging season (May to March). The summarized FOMP results and action plans contained in this report are for 2013/2014 timber year (May 2013 to March 2014).

The link below (access to HWP staff only) outlines the status of the FOMP findings, exceptions, and action plans as of December 31, 2013:

Summarized FOMP Variance Findings and Action Plan – Nov 1 2012 to April 30 2013

Summarized FOMP Exception/Variance Findings and Action Plan – Dec 18 2013 to Mar 12 2014

6.2 Silviculture Operations (SAM)

AESRD Forest Operations Monitoring Program (FOMP) also audits HWP's silvicultural activities on a regular basis – this audit is called a SAM (Silviculture ARIS Monitoring) audit. ARIS is an acronym for the Alberta Reforestation information System; a provincial database that monitors reforestation obligations of the Alberta forest industry.

As noted above in section 6.1, the SAM audits have two main finding categories – variances and exceptions (see definitions in section 6.1). Unlike the FOMP harvesting audits (which are fairly concurrent with harvesting activities), the SAM audits are normally conducted on HWP blocks that have been harvested at least a year previously (and depending on the activity being audited, can be on blocks harvested over a decade ago) – this is because the silvicultural activities being audited occur at varying times after harvest (e.g. site preparation, then planting, then surveying, etc.).

SAM audits deal with various time periods, but generally fall during the logging season (April to March). The summarized FOMP results and action plans contained in this report are for 2013/2014 timber year (May 2013 to March 2014) – the audit took place during the summer/fall of 2013.

The link below (access to HWP staff only) outlines the status of the SAM documentation, findings, exceptions, and action plans as of December 31, 2013:

Summarized SAM Variances & Action Plan – May 1 2013 to Dec 31, 2013

ToC

7. WEST FRASER ALBERTA STEWARDSHIP REPORT

Each year since 2004 West Fraser's Alberta woodlands divisions have been producing a Stewardship Report that highlights and reports on different aspects of each of the four Alberta FMAs (in 2007 a fifth FMA was added, when Slave Lake Pulp partnered with two other forest companies in the management of the Martin Hills FMA).

The most recent copy of West Fraser's Alberta Stewardship Report can be found on West Fraser's main webpage (www.westfraser.com) under the environment link. 2012 report is scheduled for completion by the end of June 2013. The 2013 report has not been requested or provided.

ToC

8. FMA ACCOMPLISHMENT REPORT

As part of the requirements of HWP's Forest Management Agreement, the Company must produce a FMA Accomplishment Report at regular 10 year intervals.

The FMA Accomplishment Report includes information and/or descriptions regarding the following items:

1. West Fraser's Alberta operations, including more detailed information on Hinton Wood Products' and Hinton Pulp's operations
2. Forest Management activities, including:
   - ❑ Environmental certification (e.g. CSA, ISO, ForestCare),
   - ❑ Forest monitoring and inventory information such as:
     - ➢ Ecosite inventory
     - ➢ Protected areas
     - ➢ Cultural/historical values
     - ➢ Rare and endangered plants
     - ➢ Endangered wildlife
     - ➢ Water
     - ➢ Riparian areas
     - ➢ Stream crossings
     - ➢ Soil
   - ❑ Public involvement
   - ❑ Aboriginal engagement
   - ❑ Landbase allocations, such as withdrawal information and compensatory revenue
3. FMA Performance information, such as:
   - ❑ Assignments or mergers
   - ❑ Forest management planning activities,
   - ❑ Timber management activities such as:
     - ➢ The growth & yield program,
     - ➢ Timber supply analysis
   - ❑ Ground rules compliance and audit results
   - ❑ Reforestation & silviculture activities such as:
     - ➢ Strategies for adherence to legislation and policy – silviculture
     - ➢ Strategies for successful and continual improvement in reforestation
     - ➢ ARIS reporting
     - ➢ Alberta Regeneration Information System (ARIS)
     - ➢ Tree improvement
     - ➢ Pre-commercial thinning
     - ➢ Commercial thinning
     - ➢ Fertilizing
     - ➢ Research - silviculture
     - ➢ Summary of infractions (silviculture)
   - ❑ Research dollars spent on both internal projects and through the Foothills Model Forest (now the Foothills Research Institute)
   - ❑ Integration with other resource users including information about:
     - ➢ Oil & gas
     - ➢ Trappers
     - ➢ Grazing
     - ➢ Commercial tourism recreation
     - ➢ HWP Recreation Enhancement Program
   - ❑ Fire, insect & disease, including more detailed information about:
     - ➢ Fires on the FMA
     - ➢ Forest protection personnel
     - ➢ Firefighting equipment
     - ➢ Insects and disease
     - ➢ Mountain pine beetle (MPG)
     - ➢ General approach to addressing MPB
     - ➢ Salvage

- FireSmart
- ❑ Chips and other fibre exchanges
- ❑ Mill operations continuity

4. Manufacturing Performance
   - ❑ Capital investment
   - ❑ Basic statistics regarding HWP's contributions include monetary and non-monetary assistance provided to support the local, regional, provincial, or Canadian economic or social infrastructure or programs
   - ❑ Environmental performance including information regarding:
     - Energy/Cogeneration
     - Air monitoring
     - Emission reduction
     - Water monitoring
     - Water treatment
     - Sawmill wetland
     - Other pollution control initiatives (e.g. ad hoc litter committee)
     - Recycling
   - ❑ Value added performance, including information on:
     - Medium Density Fibreboard (MDF)
     - Secondary lumber manufacturers
     - Fibre exchange agreements
     - Fibre exchange and transportation

ToC

9. WEST FRASER CORPORATE SFM PLAN AND REPORT

West Fraser has a corporate Sustainable Forest Management Plan, which was prepared by West Fraser's corporate stewardship forester as a requirement of West Fraser's SFI certification. Within this SFM Plan there are a number of objectives and targets that West Fraser has committed to implementing. While a significant portion of these indicators and targets are the responsibility of West Fraser's corporate stewardship forester to track, implement, and document, some are the responsibility of the individual divisions. Table 9a below outlines the indicators and targets found in the corporate SFM Plan that are the responsibility of the individual West Fraser division to implement – the table also describes the status of each these indicators and target as of December 31, 2013.

Table 9a – *Status of Divisional Indicators and Targets from West Fraser SFM Plan*

SFM Objective Number	Indicator	Target	Measurement Frequency	Target Met (Y or N)	Comments	Corrective Action (if target wasn't met)
3	Riparian management and waterbody classification for staff and layout contractors	Training program maintained by 100% of divisions	Annually	Y	A riparian classification course was provided to staff in 2013..	Staff training occurred on May 7, 2013.
3	Riparian area and water quality awareness training for contractors	Training conducted annually by 100% of divisions	Annually	Y	There was no riparian area or water quality awareness training for contractors in 2013.	
4	Species at risk awareness training for Company staff and contractors	Training conducted annually by 100% of divisions	Annually	Y	Contractors are provided species at risk training annually. Company staff received training in July 2010 and scheduled again in 2013.	Staff training occurred on May 9, 2013.
6	Prescriptions for identified special sites	Prescriptions prepared for 100% of identified special sites.	Annually	Y	There were no identified special sites in 2013; however, HWP does have an SOP to address special sites.	
7	Results of divisional log quality programs and harvest inspections.	n/a	Annually	Y	Log quality and harvest inspection programs were maintained in 2013.	
7	AB: Annual drain of Annual Allowable Cut (AAC) at a level approved by government.	n/a	Annually	Y	Yes – see 2.1220 (VOIT #12)	
15	Divisional research plan	Research plan maintained by 100% of divisions.	Annually	N	There was no divisional research plan in 2013.	A divisional research plan is being drafted in 2013/2014 once the Research template is distributed from the Corporate Stewardship Coordinator.
16	Percentage of logging contractors under direct contract to the Company have that received training required for a qualified logging professional	100%	Annually	Y	All contractors met required training for a qualified logging professional. It was determined the frequency of training with respect to water quality BMPs would be every 2 years.	Practices with respect to water quality had been completed in 2012 spring training.
17	Divisional public outreach log	Public outreach log maintained by 100% of divisions.	Annually	Y		
17	Written 'inconsistent practices' complaints regarding the Company SFI certification that received a response from the Company	100%	Annually	Y	No complaints were received.	
18	Review of divisional communications records	Communications log maintained by 100% of divisions.	Annually	Y		

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10. WEST FRASER CORPORATE ANNUAL STEWARDSHIP REPORT

Each year, West Fraser's corporate stewardship forester compiles an annual summary of some key information from each of West Fraser's wholly-owned Alberta and British Columbian woodlands divisions. Data collected in the report includes such information as:

- Total area harvested (ha) by silvicultural system (e.g. clear-cut, partial retentions, etc.)
- Wood procurement sources (e.g. SFM certified or not)
- Company logger training program (how many contractors have been trained)
- Purchase wood logged by trained loggers.
- Other SFI wood procurement
- Information about silviculture activities (e.g. Number of trees planted, Area Stand Tended (ha), etc.)
- Silviculture obligations (e.g. surveys required, areas which are not satisfactorily restocked, etc.)
- Research funding dollars (e.g. research into biodiversity, growth & yield, water quality, etc.)
- Environmental management system information (e.g. the number of non-conformances and the number of non-compliances)

The final compiled West Fraser Corporate Stewardship Report can be found on the following file (access to HWP staff only):

- West Fraser Corporate Stewardship Report - 2013

ToC

11. SFI/ISO AUDIT REPORTS

11.1 HWP SFM Certification (SFI)

HWP's FMA is certified to the Sustainable Forestry Initiative's (SFI) sustainable forest management standard. SFI is one of the three major sustainable forest management (SFM) certification schemes commonly used in North America – the other two are the Canadian Standard Association (CSA) Z809 Standard and the Forest Stewardship Council (FSC) Standard. West Fraser recognizes the particular strengths and weaknesses of all valid certification programs. As a company operating in various jurisdictions, we believe that choice between recognized certification systems is important.

The SFI organization is a fully independent, non-profit organization whose goal is to promote sustainable forest management practises. The 18 member multi-stakeholder Board of Directors comprises three chambers, representing environmental, economic and social interests equally. Board members include representatives of environmental, conservation, professional and academic groups, as well as independent loggers, small family forest owners, public officials, labour and the forest products industry.

In 2013, the SFI Standard was based on 14 principles that promote sustainable forest management, including measures to protect water quality, biodiversity, wildlife habitat, species at risk, and forests with exceptional conservation value. In addition, the Standard also contains 20 objectives, 38 performance measures and 115 indicators, all that have been developed jointly by professional foresters, conservationists, scientists and others.

Companies seeking SFI registration must develop procedures, policies, plans, and reporting practises to address each objective, performance measure and indicator set out in the Standard. Companies are then audited by an independent third-party to determine if they have met the requirements of the SFI Standard. Once SFI certification is achieved, companies must undergo regular third-party audits to ensure continued compliance and continued improvement.

In addition to being registered to the SFI Standard, West Fraser's Hinton Wood Products division was also registered to the Canadian Standards Association Z809 SFM Standard from 2000 to 2009. 2009 was the last year that HWP maintained its CSA certification – it was allowed to expire in 2010. Now all West Fraser wholly-owned Canadian divisions are SFI certified.

The SFI (and CSA) Standards are endorsed by the "Programme for the Endorsement of Forest Certification" (PEFC), a global organization that provides a mutual recognition framework for national SFM certification systems.

PEFC's endorsement of SFI and CSA, along with many other national certification systems, assures West Fraser's customers that differing national systems are mutually recognized as guaranteeing a level of sustainable forest management according to stringent PEFC criteria.

11.2 Environmental Management Certification (ISO)

HWP is also registered to the ISO 14001 environmental management standard. This Standard exists to help organizations minimize the impact of their operations on the environment, and to comply with applicable laws, regulations, and other environmentally oriented requirements. The ISO Standard requires the Company to examine each aspect of its interaction with the environment and determine the associated risk. Where the risk is deemed to be significant, the Company must develop procedures to minimize this risk. In addition, the Standard requires proper training of employees and contractors, adequate resources to implement procedures, and a written environmental policy. A third-party audit is conducted annually to determine West Fraser's conformance with the Standard.

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11.3 Chain of Custody

Many customers are increasingly seeking verification that products they purchase are derived from fibre that has been "legally harvested" from a certified sustainably-managed forest.

To meet this anticipated demand, West Fraser utilizes a certification system known as "Chain of Custody," which is designed to track the legality and the certification of our timber sources. This system is based on the PEFC volume-credit method, which is internationally-recognized and widely-accepted. West Fraser's PEFC Chain of Custody system was recently introduced at all of the Company's Canadian manufacturing facilities.

As well as the PEFC Chain of Custody certification, West Fraser's Hinton Pulp operation was registered to the Forest Stewardship Council's (FSC) Standard for Chain of Custody Certification (FSC-STD-40-004 v2-0) and the Standard for Company Evaluation of FSC Controlled Wood (FSC-STD-40-005 v2-0) in June 2008.

11.4 Audit Reports

As part of all of the certification schemes that HWP is registered to there is the requirement for both internal and external audits. Internal audits are conducted by the Company (or a contractor hired by the Company), while external audits are conducts by HWP's registrar, which in 2013 was KPMG. Each certification scheme has different requirements for the frequencies of audits. Also, because West Fraser holds the certification, not all the divisions have to be audited each year – only a subset of all of West Fraser's Alberta and BC divisions are audited each year (based on previous performance). Currently, this results in HWP being audited approximately once every two to three years. Tables 10.41 provide links to all internal and external audits conducted since 2002 (access available to HWP staff only):

Table 10.41 – *SFI/CSA/ISO External and Internal Audit Reports*

Third Party Audits					Internal Audit			
CSA Z809	**ISO 14001**	**SFI**	**PEFC CoC**	**FSC CoC & Controlled Wood**	**CSA Z809**	**ISO 14001**	**SFI**	**PEFC CoC**
2001	2001	n/a	n/a	n/a	2001	2001	n/a	n/a
2002	2002	n/a	n/a	n/a	2002	2002	n/a	n/a
2003	2003	n/a	n/a	n/a	2003	2003	n/a	n/a
2004	2004	n/a	n/a	n/a		2004	n/a	n/a
2005	2005	n/a	n/a	n/a	2005	2005	n/a	n/a
2006	2006	n/a	n/a	n/a	2006	2006	n/a	n/a
2007	2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2007	2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	2008	2008	n/a	n/a	2008	2008	2008	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a*	2010	2010	2010	2010	n/a*	n/a	n/a	n/a
n/a*	n/a	n/a	n/a	n/a	n/a*	2011	2011	2011
n/a*	2013	2013	2013	2013	n/a*	n/a	n/a	n/a

*HWP dropped its CSA certification in 2010

11.5 Action Plans

When there are Audit Report findings resulting from either an internal or external audit, an action plan is developed and implemented. Tables 10.51 provide links to all internal and external action plans conducted since 2002 (access available to HWP staff only):

Table 10.51 – *SFI/CSA/ISO External and Internal Audit Action Plans*

External Action Plans					Internal Action Plan			
CSA Z809	**ISO 14001**	**SFI**	**PEFC CoC**	**FSC CoC & Controlled Wood**	**CSA Z809**	**ISO 14001**	**SFI**	**PEFC CoC**
2000	2000	n/a	n/a	n/a		2000	n/a	n/a
2001	2001	n/a	n/a	n/a	2001	2001	n/a	n/a
2002	2002	n/a	n/a	n/a	2002	2002	n/a	n/a
2003	2003	n/a	n/a	n/a	2003	2003	n/a	n/a
2004	2004	n/a	n/a	n/a		2004	n/a	n/a

External Action Plans					Internal Action Plan			
CSA Z809	ISO 14001	SFI	PEFC CoC	FSC CoC & Controlled Wood	CSA Z809	ISO 14001	SFI	PEFC CoC
2005	2005	n/a	n/a	n/a	2005	2005	n/a	n/a
2006	2006	n/a	n/a	n/a	2006	2006	n/a	n/a
2007	2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	2008	2008	n/a	n/a	2008	2008	2008	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a*	2010	2010	2010	2010	n/a*	n/a	n/a	n/a
					n/a*	2011	2011	2011
n/a*	2013	2013	2013	2013	n/a*	n/a	n/a	n/a

*HWP dropped its CSA certification in 2010

11.6 Summary of 2013 Audits

Hinton Wood Products did not undergo an internal surveillance audit in 2013.

KPMG conducted an external audit from July 15 to July 19, 2013. They audited against our ISO 140001, SFI and PEFC CoC Standards. In KPMG's final report, there were two good practices recognized, one open minor non-conformity carried over from Sundance Forest Industries, one new minor non-conformance and five new opportunities for improvement identified from this audit. The audit action plan did effectively address the new minor non-conformance and the opportunities for improvement have been adequately considered to help improve our business practices.

The divisional corrections required for the permanent camps were to:

1. Ensure water quality tests are completed on a quarterly basis beginning in Q3: 2013.
2. Ensure compliance with WHMIS requirements.

The divisional correction action plans for the permanent camps were to:

1. Investigate options and select a cost-effective septic management system for both permanent camps – on going
2. Implement selected septic systems – on going
3. Develop a Permanent Camp Inspection Form – complete

The divisional correction required for the temporary camps was to:
Review and revise the Silviculture Inspection Form to include more specifically detailed list of items to review (i.e. secondary fuel containment) – complete

At this time, the open non-conformance identified a non-functioning culvert on LOC688. This culvert was fully repaired in August 2013 and the five opportunities for improvement were reviewed and are being addressed appropriately.

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12. INTERNAL COMPLIANCE AUDITS

In order to ensure compliance with legislation, ground rules, and certification requirements, internal compliance audits are conducted from time to time during the year on various aspects of the Company's harvesting operations. The internal audit operations schedule will be planned to audit each harvesting contractor once per logging season (i.e. 2009-2010, 2010-2011, etc.). The original forms will be filed digitally on the S Drive (S:\Woods-Ops\private\Operations Department\OPERATIONS - CURRENT\Ops Audits - Internal\Internal Audits\Internal Archive).

12.1 Summary of 2013 Internal Compliance Audits

The document below summarizes all internal compliance audits that have taken place since 2005 (access available to HWP staff only).

- Internal Audits Summary Document (2005 to 2013)

During 2013 all of HWP's logging contractors were audited at least once.

ToC

13. EMERGENCY DRILLS

The Woodlands Department has developed procedures to identify potential for and respond to accidents and emergency situations (Environmental & Safety Incident Reporting SOP). We are prepared to deal with environmental events as they may occur to prevent and mitigate the environmental impacts that may be associated with them. These procedures include an ongoing commitment to training and preparedness.

The Woodlands Department will review and revise, where necessary, its procedures for emergency preparedness after any emergency occurrence. Emergency Response Procedures exist for fire response, spill response, emergency response for missing persons, and emergency evacuation.

Emergency procedures are tested, in whole or in part on a regular basis, unless an actual emergency response has occurred within the past year. Upon completion of an emergency response test, or in the event of a real emergency response, a review must be conducted to evaluate the effectiveness and efficiency of the response procedures (see HWP 0079). This review should be done with an eye to continual improvement. This will ensure that impacts on people and the environment are minimized and promptly mitigated and that emergency procedures are tested on a regular basis to help ensure effective and efficient response.

The table below outlines the requirements HWP has set out with respect to emergency drills:

Table 12.1 – *Emergency Drill Requirements*

HWP Department	Drill Requirements
Operations	• Ensure that an emergency fire drill, spill drill and H2S drill is performed for each logging/road construction/road maintenance contractor at least once every three years. • Ensure copies are available to all appropriate personnel, and measures for testing the plans are taken on a periodic basis as is appropriate. This responsibility includes providing adequate support to ensure all personnel are aware and understand the purpose and function of the plan.
Landuse:	• Ensure that company personnel and contractors are aware of the Emergency Response Plan for a critical sour well operation. This will be done on an "as required" basis dependent upon sour gas well activities.
Planning	• Ensure the missing persons search procedures are tested on an annual basis (unless an actual event has occurred in the previous 12 months). Upon completion of the drill(s), chair the review meeting to look for methods of improvement. • Ensure that these annual drills are held for their department and that all drill records are placed on file
Safety Lead	• Ensure that annual fire and emergency response drills are held for the Woodlands Office Building and these records are placed on file

13.1 Summary of 2013 Emergency Drills Results

The document below summarizes all emergency drills (or actual emergencies) that have taken place since 2006 (access available to HWP staff only).

- Incident Review Summary (EM-0144)

Each of HWP's logging/trucking/road maintenance contractors conducted an emergency drill review in 2013.

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14. ABORIGINAL ENGAGEMENT PROGRAM

14.1 Overview

Hinton Wood Products' Aboriginal Engagement Program has been developed in order to address three main requirements:

1. **The requirement to meet the expectations for Aboriginal engagement set out in the Alberta Forest Management Planning Standard.**

Alberta has adopted the CAN/CSA-Z809 Standard as the forest management planning system. These requirements of the Standard are outlined below:

- **5.2 (c)** – Demonstrate through documentation that efforts were made to contact Aboriginal forest users and communities affected by or interested in forest management in the DFA.
- **5.2 (d)** – Demonstrate through documentation that efforts were made to encourage Aboriginal forest users and communities to become involved in identifying and addressing SFM values.
- **5.2 (e)** – Recognize Aboriginal and treaty rights and agree that Aboriginal participation in the public participation process will not prejudice those rights.
- **Element 6.1** – Aboriginal and Treaty Rights; Recognize and respect Aboriginal and treaty rights.
- **Element 6.2** – Respect for Aboriginal Forest Values, Knowledge, and Uses; Respect traditional Aboriginal forest values and uses identified through the Aboriginal input process.
- **7.3.4 (b)** – Demonstrate that Aboriginal and treaty rights have been identified and respected.

All standards in CSA Z809-02 apply to forest management planning in Alberta (except where specifically excluded in the Alberta standard), and therefore all of the sections of the CSA Standard noted above, must also be addressed as part of the DFMP process. The Planning Standard requires companies to provide opportunities for meaningful consultation to Aboriginal forest users and communities concerning forest management on the FMA. Meaningful consultation requires consulting in good faith, with honest communication and an open exchange of relevant information before decisions are made. The mechanisms for Aboriginal consultation must also be outlined in the Terms of Reference for the forest management plan.

2. **The requirement to meet the expectations set out in the government's First Nation Consultation Guidelines on Land Management and Resource Development.**

The current Alberta First Nations consultation guidelines for the forest industry require that the FMA holder consult with First Nations with respect to the development and preparation of the DFMP and General Development Plan (GDP). Specifically, the guidelines require the Company to undertake the following:

- Notify First Nations at the outset of the forest management planning process;
- Provide plain language information describing the forest management process, the scope and location of upcoming forest operations (including maps and schedules);
- Initiate meetings to discuss the forest management planning process and to review ideas, comments and concerns of the potential short and long term adverse impacts to First Nations Rights and Traditional Uses as brought forward by First Nations;
- Provide reasonable time for First Nations to review, consider and respond;
- Develop strategies to avoid or mitigate the potential adverse impacts on First Nations Rights and Traditional Uses whenever possible;
- Where avoidance is not possible, consultation will be conducted with the goal of mitigating such adverse impacts; and
- Notify SRD of steps taken for avoidance and mitigation of potential adverse impacts on First Nations Rights and Traditional Uses;
- All forms of consultation and communications shall be documented. A summary of the consultations will be provided to the Area and to the First Nations prior to approval

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3. **The requirement to meet Hinton Wood Products' own policy for Aboriginal relations called "Principles for Relations with Aboriginal Peoples" (implemented March 18, 2003)**

The policy is as follows:

Hinton Wood Products understands and acknowledges that Aboriginal peoples (including Treaty, non-Treaty, & Métis) are part of the human society who have values, knowledge, and uses in respect of the Hinton FMA. In addition, Aboriginal peoples are accorded special rights and interests through treaty, constitutional law, common law and government policy. Many of these special rights and interests are not clearly defined and remain the subject of debate and judicial processes. *Hinton Wood Products is committed to the preferential involvement of Aboriginal peoples in sustainable management planning for the FMA and by recognizing and where possible addressing these special rights and interests through the following*:

- Timely dialogue with local aboriginal communities regarding FMA activities to understand the implications of our operations upon the special rights and interests of aboriginal peoples with the intent of respecting and addressing those rights and interests whenever it is reasonably possible to do so.
- Ensuring FMA activities continue to provide opportunities for ongoing use of land and resources by Aboriginal people
- Conservation of specific sites culturally or spiritually important to local aboriginal communities.
- Consideration of traditional knowledge into our sustainable forest management planning.
- Active support of socio-economic capacity building in local aboriginal communities.
- Support of social and cultural events and organizations within local aboriginal communities.

14.2 Aboriginal Engagement Requirements for 2013

The following sections describe HWP's Aboriginal Engagement Program for 2013:

14.21 DFMP Aboriginal Engagement

Aboriginal engagement will take place for the Forest Development Plan (DFMP) and any major amendments to this plan. The extent of the engagement will depend on the First Nation involved and the interest each organization shows. The following consultation will be undertaken:

- **For the Alexis Nakota Sioux Nation, the Aseniwuche Winewak Nation, and (beginning Sept 1/09) the O'Chiese First Nation, and the Ermineskin Tribe**

A Company representative will contact via letter each of the above noted First Nations (with later meetings possible depending on response) and the following consultation will be undertaken:

- During DFMP preparation (i.e. before final submission to Alberta) First Nations will be consulted three times. Because the DFMP is a complex document that is prepared over a number of years, Aboriginal consultation, by necessity, will be more involved and time consuming that the consultation required for other plans such as the GDP. DFMP First Nation consultation will be broken down into three main stages:

    1. Notification of the start of a DFMP planning process – this will take place 2-3 years before the planned submission date of the DFMP.
    2. Consultation opportunity for the development of VOITs (especially any VOITs that may relate to Aboriginal issues) – this will take place 1-2 years before the planned submission date of the DFMP
    3. Consultation opportunity regarding the 20 Year Spatial Harvest Sequence – this will take place 1 year to 6 months before the planned submission date of the DFMP

        - During each of the three stages noted above, at a minimum the Company will write a letter to each organization, in plain language outlining:

            - what a DFMP is,

- ★ what stage in the process the DFMP is at (i.e. as described above)
- ★ the location of the FMA,
- ★ how the DFMP may impact Aboriginal interests,
- ★ the Terms of Reference (with an attached copy),
- ★ what a VOIT is, how they are incorporated into the DFMP, and which ones are directly related to Aboriginal consultation (including the current copy of the VOIT table),
- ★ an explanation of how they can provide feedback, and an invitation for a further face-to-face meeting, if so desired,
- ★ a reasonable time to respond to the request for further information and/or a face-to-face meeting

- ➢ Within one month of the sending the letter, HWP will follow up with a reminder phone call (preferred) or letter.

If any of the above noted organization requests a meeting, then the following should be undertaken at those meetings:

- ➢ Review the DFMP renewal process.
- ➢ Explain the Alberta Planning Manual and provide a copy of the document.
- ➢ Review the DFMP Terms of Reference and specifically the Aboriginal consultation portion of the Terms of Reference point by point. Provide a copy of the Terms of Reference.
- ➢ Review the VOIT table (i.e. what it is, how it works, why it is used, etc.), provide a copy of the table, and explain in detail all VOITs dealing with Aboriginal consultation.
- ➢ Explain how feedback can be provided (and incorporated) into the DFMP and provide a reasonable timeframe for such feedback.
- ➢ Consider Aboriginal feedback and identify possible methods to avoid or mitigate potential adverse impacts.
- ➢ Invite each community to sit on the Company's Forest Resources Advisory Group (FRAG).
- ➢ Depending on the circumstances, additional meetings and correspondence may be required to address concerns and answer questions.

- ❑ After approval of the DFMP by Alberta:

  - ➢ An approved copy of the DFMP will be offered to the First Nation, and provided, if requested.
  - ➢ Documentation of Aboriginal Consultation must be submitted to AESRD with the submission of the DFMP.
  - ➢ A summary of the consultation that has taken place will also be sent to the above noted First Nations, with the final submission of the DFMP.

- **For Non Status Aboriginal Organizations – Foothills Ojibway, Mountain Cree, the Nakcowinewak Nation, the Bighorn Chiniki, and for Status First Nation – Sunchild**

HWP will notify each of the above noted communities via letter within one year to six months before the final submission date of the DFMP. The notification letter will outline the following:

- ❑ what a DFMP is,
- ❑ the location of the FMA,
- ❑ how the DFMP may impact Aboriginal interests,
- ❑ the Terms of Reference (with an attached copy),
- ❑ what a VOIT is, how they are incorporated into the DFMP, and which ones are directly related to Aboriginal consultation (including the current copy of the VOIT table),
- ❑ an explanation of how they can provide feedback, and an invitation for a further face-to-face meeting, if so desired,
- ❑ a reasonable time to respond to the request for further information and/or a face-to-face meeting.

Within one month of the sending the letter, HWP will follow up with a reminder phone call (preferred) or letter.

14.22 GDP Aboriginal Engagement

Aboriginal engagement will take place for the General Development Plan (GDP). Included as part of the GDP consultation (although not required), will be the review of herbicide program for the following year. The extent of the engagement will depend on the Aboriginal organization involved and the interest each organization shows. The following consultation will be undertaken:

- **For the Alexis Nakota Sioux Nation, the Aseniwuche Winewak Nation, and (beginning Sept 1/09) the O'Chiese First Nation, and the Ermineskin Tribe**

A Company representative will contact via letter each of the above noted organizations (with later meetings possible depending on response) and the following consultation will be undertaken:

- ❑ Write a letter to each organization, in plain language, that contains:
  - ➢ An explanation of the purpose of the GDP.
  - ➢ A copy of the annually produced AOP/GDP Summary Document, which outlines the proposed logging operations in the current logging season (spring to spring). This document also outlines permanent road construction for the upcoming year.
  - ➢ An explanation of the herbicide program for the upcoming year, including providing copies of the maps which highlight the proposed blocks for treatment.
- ❑ Within one month of the sending the letter, HWP will follow up with a reminder phone call (preferred) or letter.

If any of the above noted organization requests a meeting, then the following should be undertaken at those meetings:

- ➢ Explain and review the purpose of the GDP.
- ➢ Review those compartments with blocks identified (by the FMF referral process) as being potentially in conflict with an Aboriginal site. Provide copies of those compartment maps.
- ➢ Review the annually produced AOP/GDP Summary Document, which outlines the compartments with approved Final Harvest Plans, as well as those compartments where planning has started or where planning is likely to start in the current logging season (spring to spring). This document also outlines permanent road construction for the upcoming year.
- ➢ Review the herbicide program for the upcoming year, including providing copies of the maps which highlight the proposed blocks for treatment.
- ➢ Provide copies of any additional maps requested.

- ❑ Depending on the circumstances, additional meetings (including field trips) and correspondence may be required to address concerns and answer questions.
- ❑ Consider any Aboriginal feedback received (whether written or via meetings) and identify possible methods to avoid or mitigate potential adverse impacts.

- **For Non Status Aboriginal Organizations – Foothills Ojibway, Mountain Cree, the Nakcowinewak Nation, the Bighorn Chiniki, and for Status First Nation – Sunchild**

HWP will notify each of the above noted communities via letter that the GDP is available to comment on. The notification letter will outline the following:

- ❑ An explanation of the purpose of the GDP.
- ❑ A copy of the annually produced AOP/GDP Summary Document, which outlines the proposed logging operations in the current logging season (spring to spring). This document also outlines permanent road construction for the upcoming year.

ToC

- ❑ An explanation of the herbicide program for the upcoming year, including providing copies of the maps which highlight the proposed blocks for treatment.

Within one month of the sending the letter, HWP will follow up with a reminder phone call (preferred) or letter.

14.3 Record of Aboriginal Engagement in 2013

All correspondence dealing with Aboriginal engagement in 2013 (e.g. meetings, phone calls, letters, emails, etc.) have been kept on file at HWP's office in a digital form. This documentation on Aboriginal engagement can be found on the HWP's S Drive (S:\Woods-Planning\private\final_docs\FMA_planning\Aboriginal Consultation). Separate files are kept for each of the following types of Aboriginal engagement:

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- ❑ ESRD-HWP Aboriginal Documentation
- ❑ DFMP-SFMP Aboriginal Documentation
- ❑ GDP-AOP Aboriginal Documentation

15. ENGO ENGAGEMENT AND CORRESPONDENCE

All correspondence (e.g. emails, meetings, phone calls, letters, etc.) between known Environmental Non-Government Organizations (ENGOs) and HWP is tracked and documented. HWP had no significant or specific ENGO engagement or correspondence in 2013. Most dialogue between West Fraser and ENGOs is now taking place as part of the Canadian Boreal Forest Agreement (http://www.canadianborealforestagreement.com/).

Documentation of the above noted complaint process, as well as all other ENGO correspondence and engagement can be found on the following file (access to HWP staff only):

- ENGO Correspondence and Engagement – 2001 to present

ToC

APPENDIX 1 – GLOSSARY OF TERMS

Aboriginal consultative activities – Aboriginal consultative activities can be defined as having dialogue with communities of local aboriginal persons – aboriginal persons as identified in Section 35(2) of the Constitution Act, 1982. This includes status, non-status, Métis and Inuit persons who reside in or near the FMA landbase and have expressed interest in being involved. Consultative activities involves dialogue and exchange of views with intent to understand and influence each other but does not necessarily require or imply consent being given. Aboriginal consultation is ultimately the responsibility of the provincial government; however, some of the government's requirement to consult can be delegated to other stakeholders (e.g. HWP, oil & gas companies, etc.). The provincial government has prepared a document called "Alberta's First Nations Consultation Guidelines on Land Management and Resource Development", which outlines what consultative activities are required by industry – this document can be downloaded at (http://www.aboriginal.alberta.ca/571.cfm). The consultative activities HWP undertakes are significantly more than are required under the Alberta government's First Nation Consultation Guidelines..

Access planning – Access planning involves the planning of access into a compartment that is coordinated with other resource users. The Operating Ground Rules contain standards and operating practises to ensure access is planned and managed in a balance manner recognizing the loss or productive area is minimized.

Afforestation – This term refers to the process of returning land that is currently non-forested, but was previously forested, back to a forested state.

Annual Allowable Cut (AAC) – The AAC is the amount of timber harvest that can be obtained from a forest area on a perpetual sustained yield basis. The total area of the forested land available for harvest and the growth rates of the trees strongly influence the AAC. In order to calculate an accurate AAC, the Company must have good information about the location of different tree species in the forest and their associated growth rates. HWP has some of the best data in the world on the growth of lodgepole pine (the main species on the FMA) due to over 3000 growth & yield plots that have been continually established on the FMA starting in the mid-1950's. These plots calibrate growth models which allow us to project how fast trees on our managed land will grow back after they have been harvested or after they regenerate following a fire.

Annual Operating Plan – The Annual Operating Plan (AOP) describes where and when operations such as harvesting and road building will take place on the Forest Management Area for the operating year (May 1st to April 30th). Approval of the AOP provides the authority to undertake harvesting, reforestation and road construction activities according to the schedules listed in the document. The AOP can be downloaded from our website by going to the "Forest Operations" section and following the "planning" links.

Average haul distance – This is the distance in kilometres by road from a harvest area to a processing mill. The volume-weighted annual average haul distance for a timber year is calculated by applying compartment average haul distances (using existing road infrastructure distances) to the Hinton mills against the volumes harvested by compartment.

Bog, fen, and marsh – A bog is a peat accumulation usually dominated by moss. Receives only direct precipitation; characterized by acid water, low alkalinity, and low nutrients. A fen is also a peat accumulation; may be dominated by sedge, reed, shrub or forest. Receives some surface runoff and/or ground water, which has neutral pH and moderate to high nutrients. A marsh is a permanently or periodically inundated site characterized by nutrient-rich water. In Europe, must have a mineral substrate and lack peat accumulation. Peat is intrinsic to many wetlands around the world. Peat is partly decomposed plant remains that consist of more than 65% organic matter (dry weight).

Breeding Region – A geographic area, defined mainly by adaptation criteria for which materials are selected, bred, tested, multiplied and deployed.

ToC

Canopy gaps – An opening or gap in a forest canopy (the tops of overstory trees) caused by single or multiple overstory-tree mortality.

Certificate of Recognition (COR) – A Certificate of Recognition (COR) is awarded to a employer (in this case, a HWP prime contractor) who has successfully implemented a basic workplace health and safety management system. The process is as follows:

- The contractor selects the Alberta Forest Products Association (AFPA) as their Certifying Partner. The contractor may also register with the WCB for the Partners in Injury Reduction (PIR) Program – while this is optional, it makes the contractor eligible for WCB rebates.
- The contractor then takes Leadership in Health and Safety training through the AFPA (their Certifying Partner). These training sessions are designed to help the contractor implement a health and safety program, or determine that their existing program is on the right track.
- When the contractor is ready to conduct the health & safety audit, they contact the AFPA and an audit is arranged. Once the audit is completed, the auditor writes up the report and submits it to the AFPA for quality control.
- If the contractor has passed the audit, the AFPA will submit a COR request to Alberta Human Resources & Employment on the contractor's behalf. Once the COR is received by the AFPA, it is signed by the AFPA's president and sent to the employer. The COR is good for 3 years, providing the employer performs the annual maintenance audit for the next 2 years.

Certification Status – For the purpose of this indicator, certification status refers to attaining and maintaining in good standing certification in the following third party programs – Alberta Forest Products Association (AFPA) FORESTCARE, International Organization for Standardization ISO 14001, Canadian Standards Association CAN/CSA Z809. This indicator is consistent with the Woodlands Department and Corporate commitments to achieve sustainable forest management and verify performance through third-party certification programs.

Coarse filter biodiversity conservation strategy – The coarse filter biodiversity conservation strategy is a concept of conserving species diversity by providing adequate representation (distribution and abundance) of ecological landscape units considering the historical range of variability based upon an understanding of the natural disturbance regimes of those ecological landscape units. This coarse filter approach does not necessarily prescribe reserves, but rather recognizes ecological processes.

Cohort – Component of the population born during a particular period and identified by period of birth so that its characteristics (such as causes of death and numbers still living) can be ascertained as it enters successive time and age periods.

Collections – Genetic material gathered for the purposes of reforestation, breeding or research.

Common corridor – A common corridor is any corridor where more than one use is occurring – for example, a road and a pipeline.

Compliance Audits – In 2004, HWP started a process of independent compliance audits of all of our operational contractors and employees (i.e. those persons that work on the forested landbase carrying out harvesting, hauling, site preparation, etc.). A contractor was hired to carry out audits on our operational activities. In 2007, the procedures around these compliance audits were changed – they are now being done by staff rather than a contractor (as a cost saving measure). These compliance audits are documented and a follow-up action plan to address shortcomings is required. Each contractor is required to undergo a compliance audit once per logging season (June to April).

Consultation opportunity – A consultation opportunity is any opportunity provided to the public that allows them input into Hinton Wood Products' forest management activities.

ToC

Consultation participation - Consultation participation is defined as the participation by the public in forest management issues. Offering the opportunity for the public to provide input and feedback is a cornerstone of sustainable forest management and provides a measure of how seriously the Company values input from other sources.

Contingency Planning – Sometimes the Company encounters problems with operating on a cutblock due to wet soils – this problem is normally encountered in the spring (June/July). Operating on wet soils has the potential to cause detrimental soil disturbance. As part of the planning process, the Company identifies those blocks that can be operated on safely during wet weather (normally due to their soils having a high content of gravel) – these are called "contingency blocks". If wet weather and soil disturbance issues arise, the Company moves into the contingency blocks.

Contributing landbase – That portion of the FMA landbase which contributes to the calculation of the Annual Allowable Cut. In other words, the portions of the landbase that are available for harvest (i.e. no other constraint is placed on it such as riparian reserve, visual buffer, steep slope, etc.) and can productively grow trees for current or future harvesting.

Controlled Parentage Plan – A stock production program that includes in its population a finite number of deliberately chosen individuals.

Cultural Site – A Cultural Site is a Historic Site related to Aboriginal peoples, or a site that originated after 1945 that has special significance to Aboriginal peoples.

Cut Control – Cut control is the term used to compare actual cut (harvested volume) to the AAC and is therefore a measure of long-term sustainability of the timber resource. The Forest Management Agreement specifies cut control requirements as a minimum harvest to be achieved (to ensure use of the resource for the economic benefit to Albertans), and a maximum harvest, (to protect against over-harvest).

Damaged Timber – Damaged timber is defined as an area $\geq$ 1 ha in size where most of the trees have been killed or are dying. Damaged timber does not include areas < 1 ha or individual trees that die in forest stands as a result of natural processes. Damaged timber can encourage the growth of disease or insect populations, and increases fire hazard which could lead to further damage to healthy timber.

Deactivation & reclamation of roads and watercourse crossing – After roads and watercourse are finished being used they are often deactivated or reclaimed. The intent of the standards and operating practices found within the OGRs are to return the site to the original or near original landform, drainage and productivity, and to stabilize disturbed soil and minimize the risk of erosion.

Disturbances – Any agent that causes the death of trees in a forest. Disturbances can be stand-replacing, where most of the trees in a stand are killed, or stand-maintaining, where some trees survive. Disturbances include agents such as fire, wind, flood, insects, disease, and harvesting.

Disturbance regimes – A disturbance regime is the collective pattern, rate, and timing of disturbances. For example, the characteristic regime produced by forest fires.

Drainage & erosion control – The drainage and erosion control standards found in the OGRs prevent sediment from the road drainage from entering water bodies.

Ecosystems – An ecosystem consists of the biological community that occurs in some locale, and the physical and chemical factors that make up its non-living environment. There are many examples of ecosystems – a pond, a forest, or grassland. The boundaries are not fixed in any objective way, although sometimes they seem obvious, as with the shoreline of a small pond.

ToC

Ecological Land Classification – Classification of ecosites according to nutrient and moisture regime. The ELC for the FMA is described in a 1996 document titled: Field Guide to Ecosites of West-central Alberta.

Endangered timber – Timber that has been damaged but not salvaged is called endangered timber because it must be salvaged before decay makes it unsuitable for forest products.

Environmental aspects – An element of the Company's activities or products or services that can interact with the environment (e.g. bridge construction, road building, skidding, etc.).

Environmental Management System – This refers to HWP's management system used to develop and implement our SFM Policy and manage our environmental aspects.

Establishment survey – A legislated survey to be completed 4 to 8 years after harvesting in coniferous, coniferous/deciduous and deciduous/coniferous cutblocks or Strata; and 3 to 5 years after harvesting in deciduous cutblocks or strata. An establishment survey will show stocking amount (%), density (stems/ha) ad height of regenerated trees; this survey will also show the approximate location s of SR and NSR areas larger than 4 hectares.

***Ex situ* conservation** – Transfer of organisms (e.g. a tree) from one site (e.g. the wild) to another site (e.g. seed banks, test sites) for the purpose of maintenance or breeding as a means of conserving the organism

Final Harvest Plan Process – The Company's FMA is divided into 140 compartments that vary in size from just over 100 hectares to over 22,000 hectares. HWP develops a Final Harvest Plan (FHP) for each of these compartments (or portions thereof) approximately 1-3 years before harvesting is planned. The FHP defines compartment level management objectives for all identified resource values. This is done by first doing a detailed inventory of the compartment in order to answer some important questions, such as: "how well-suited is the site for growing trees?" or "How will the site be reforested?". Foresters use the information gathered in the field and input from the public to prepare compartment harvesting plan. Powerful computer tools, including the Geographic Information System (GIS), are used to map a variety of resources and make sure each is considered in the planning process. The FHP contains resource management strategies, developed with public and stakeholder input, describing, (for example): cutblock location, road access location and timing, cutblock scheduling (relative), harvest systems, silvicultural systems (including pre-harvest silvicultural assessments for current -pass blocks), and resource management objectives specific to the compartment.

FireSmart – FireSmart is a provincial government initiative whose goal is to make communities more fire aware and fire proof.

Fish passage – This refers to the ability of any fish that frequent a waterbody to pass through the crossing structure both upstream and downstream under all baseline flow conditions.

Foothills Research Institute – The Foothills Research Institute (formerly the Foothills Model Forest) is a unique partnership dedicated to providing practical solutions for stewardship and sustainability on Alberta forest lands. The mandate of the FRI to have their research reflected in on-the-ground practice throughout Alberta and elsewhere in Canada, where applicable incorporated in forest and environmental policy and changes and widely disseminated to and understood by a broad spectrum of society. The overall result will be a solid, credible, recognized program of science, technology, demonstration, and outreach. More information on the FRI including results of their research can be found on their website (http://foothillsresearchinstitute.ca).

Foothills Recreation Management Association (FRMA) – FRMA is a group of companies and organizations committed to providing safe and affordable outdoor recreation opportunities. The partnership, which includes Teck, Sherritt, Coalspur, Yellowhead County, and the Town of Hinton, and

manages 15 campgrounds and eight trail systems in the foothills area near the communities of Hinton, Edson, Robb, Cadomin, and Brule.

Foothills Research Institute Stream Crossing Group –The FRI Stream Crossing Group is a group of organizations with responsibilities for stream crossing on the FMA. The Group have a common purpose of repairing and remediating all stream crossing (for which they have responsibility for) to current standards. This organization is coordinated through the FRI.

ToC

Forest ecosystem productivity – The rate at which radiant energy is used by producers to form organic substances as food for consumers.

Forest Management Plan (DFMP) - The DFMP is a large landscape level plan that has to be submitted to the Alberta government for approval once every 10 years. The (DFMP) describes the actual resources and intended management strategies for the Forest Management Area (FMA) and how Hinton Wood Products (HWP) plans to achieve them. The DFMP contains critical information that guides all operating plans and activities of Hinton Wood Products. A road development plan, 20 year spatial harvest sequence and details regarding reforestation and multiple use management are outlined. A sustainable Annual Allowable Cut (AAC) is established. The plan forecasts over a 200 year period to ensure resources are sustainable over the long-term.

Forest Resources Advisory Group (FRAG) – The Forest Resources Advisory Group was established to provide organized and regular public input into the Company's Woodlands department planning and operations. FRAG is also established to select or respond to issues, consider and recommend actions and policies to Hinton Wood Products. FRAG is the main avenue for public participation as required and outlined in the CAN/CSA Z809-02 standard. The Group is made up of various stakeholders including those that represent landbases that are adjacent or within our FMA.

Forest Soil Conservation Guidelines – These guidelines were developed by a joint task force of the Alberta Forest Products Association and the AESRD. The Guidelines are applicable to temporary roads and decking areas, harvesting/skidding, and reforestation. They were adopted as standard in the 2002 Harvest Planning and Operating Ground Rules. The Alberta Soil Conservation Guidelines came into effect in 1994.

Full Scope or Partial Scope Audits – A full scope or partial scope audit is conducted by the registrar (the accredited auditing agency – in HWP's cased it is KPMG) against the ISO 14001, CSA Z809 and ISO standards. It is a systematic and documented verification process used to obtain and evaluate evidence objectively in order to determine whether to Company meets the requirements of a standard. The first audit against any of the previously noted standards is called the registration audit. At regular intervals after the initial registration audit, a partial scope audit (where only certain elements of the standard are audited) or a full scope audit (where all of the elements of the Standard are audited) is conducted by KPMG.

Gene archive – A place where material for a genotype is kept for use in *ex situ* conservation work.

General Development Plan (GDP) - The General Development Plan (also sometimes called the Development Plan) translates the strategies identified in the Forest Management Plan (DFMP), combines them with the Operating Ground Rules and develops operational strategies. The GDP is updated annually and contains relatively detailed information for all operations scheduled for the next 10 years. The intent of the GDP is to provide an annual plan that provides a long-term projection of the compartments to be operated, required main road access, and cut control (reports on previous harvesting) by large geographic areas (called working circles) to achieve the strategies specified in the Forest Management Plan, such as average haul distance).

General Development Plan (GDP) Summary Document – The GDP Summary Document provides an overview of the General Development Plan (GDP). Previous to 2010, this document also summarized HWP's AOP, but this portion of this Summary Document was dropped; meaning that moving forward this

document will primarily be providing an over of HWP's General Development Plan. This document is intended to provide a simple overview of the general areas the Company plans on developing during the upcoming operating year (May to April), as well as showing areas where approval has already occurred. The document is given out at the open houses held in the fall, distributed to Aboriginal communities as part of HWP's Aboriginal Consultation Program, and is available on HWP's website (www.westfraser.com/hintonforestry).

Genetic Diversity – The genetic variability with a population of species.

ToC

Genotype – the genetic identity or constitution of an individual. Physical material in the form of plant tissue, provides the medium for storage and transmission of a genotype.

Gravel pits – Gravel pits are built to gravel roads. The intent of the standards and operating practices found within the OGRs is to minimize the impact

Green Attacked mountain pine beetle tree – The term "green attack" refers to a tree that has been attacked by a mountain pine beetle (MPB) and the tree still has the larva or pupae of the MPB in it. Once the pupae mature into beetles, the mature beetles fly and attack another tree, into which it lays its eggs. When a green attacked pine tree dies it turns red – this tree is called a red attacked tree, and it no longer has any beetles in it.

Highway 40 Demonstration Project - The Highway 40 North Demonstration Project spans 70,000 hectares and includes portions of three forest management areas (including HWP's) and one protected area - the Willmore Wilderness Park. HWP is part of a multi-agency planning process that will take the years of research from the Foothills Research Institute's Natural Disturbance Program and apply that knowledge gained on a large landscape. The focus of this project is to manage the ecosystem as a whole. The Highway 40 North Demonstration Project is using natural disturbance science - including natural range of variation and natural patterns - as the foundation of a ten-year, cross-jurisdictional operational plan.

High visual sensitivity – An area of high visual sensitivity is defined in the Visual Landscape Inventory. Need more text here.

Historic Resource – The Historical Resources Act defines a Historical Resource as follows: **"**means any work of nature or of humans that is primarily of value for its palaeontological, archaeological, prehistoric, historic, cultural, natural, scientific or aesthetic interest including, but not limited to, a palaeontological, archaeological, prehistoric, historic or natural site, structure or object".

Historic Site – The Historical Resources Act defines a Historic Site as follows: "any site that includes or consists of an historical resource of an immovable nature or that cannot be disassociated from its context without destroying some or all of its value as an historical resource and includes a prehistoric, historic or natural site or structure." Historic Sites generally originated prior to about 1945

Hydrography – Hydrography refers to surface waters, so hydrography information about the FMA is the location, description, and categorization of surface waters (streams, lakes, ponds, etc.)

Impact thresholds - Impact thresholds are those thresholds (limits) associated with disturbance (either through management activities or natural disturbances) in a watershed basin that lead to undesirable effects on the watershed basin if they are exceeded. Impact thresholds were set as low, moderate, or high or each variable measured, and an acceptable threshold was set as low or medium effect for each variable. A basin is within acceptable impact thresholds if all variable and measurement effects for the basin are moderate or lower. The percent of watershed basins within acceptable impact thresholds will be reported on an annual calendar year basis.

Industrial lands – In the context of this Indicator, industrial lands are those lands that have some type of industrial disposition constructed on them (e.g. pipeline, well site, coal mine, etc.), and that are non-HWP dispositions.

ToC

Internal Audit – This is an audit undertaken annually by someone other than the registrar. These audits are used to encourage continual improvement. These audits can be carried out by Company personnel and/or by external parties selected by the Company. In either case, the persons conducting the audits are properly trained, objective and impartial. Internal audits are submitted to the Company's senior management for review and action plans are developed to address any areas for improvement or shortcomings.

Invasive non-native plant species – The Alberta Weed Control Act lists seven Restricted Weeds and 23 Noxious Weeds. Together, these species are defined as invasive non-native plant species. The species are listed at: http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/faq8261

LiDAR (Light Detection and Ranging) – LiDAR is an optical remote sensing technology which measures properties of scattered light to find range and/or other information of a distant target. The prevalent method to determine distance to an object or surface is to use laser pulses. Similar to radar technology, which uses radio waves instead of light, the range to an object is determined by measuring the time delay between transmission of a pulse and detection of the reflected signal. Tree height, landform shape, and even understory height can be measured using LiDAR with a high degree of accuracy.

Locally Adapted Material – Material from, or derived from, the seed zone or the breeding region in question

Long Term Access Plans – A Long Term Access Plan (LTAP) is a plan showing the current and proposed future permanent roads or access corridors for an identified area on the Forest Management Area (FMA). The intent is to address identified access concerns and coordinate access development and management for HWP and other industrial users of the landbase such as the oil & gas industry.

Lowland – Land or an area of land that is influenced by water at or near the surface. Lowlands are also known as wetlands. See Upland.

Mature seral stage – This is the stage tree life characterized by the onset of reduced height growth (ending of the pole seral stage) and lasts until the mortality rates of mature trees begin to increase significantly, creating canopy gaps (beginning of the old seral stage).

Merchantable landbase – The merchantable landbase is that portion of HWP's Forest Management Area that is productive (e.g. capable of growing trees) and contributes to the Annual Allowable Cut (e.g. isn't netted out for some reason such as being in a riparian reserve, on steep slopes, or protected for some other reason).

Minimum training requirements – This is the training required as a minimum to carry out a particular job function and are set by HWP (although also sometimes set through legislation; for example, first aid). The minimum training requirements also set out the expiry date of that training – for example; first aid needs to be renewed from time to time (depending of the first aid course).

Natural disturbances – Natural disturbances are agents that cause the death of most trees in an area. They include fire, wind (blowdown), floods, insects, disease, etc. Disturbances that damage most of the trees in a stand are called stand-replacing disturbances.

Natural Regions – Land area that contains similar plant and animal species. Natural regions are defined by the visible features of an area, while ecoregions are defined by environmental, geological and geographical factors. Ecoregions and natural regions generally overlap, but are not the same. Alberta Natural Regions are described at: http://www.abheritage.ca/abnature/index.htm

Non-compliance incidents – These are incidents, caused by Hinton Wood Products activities, where there has been a contravention of government legislation, policy, or HWP's Operating Ground Rules. All

incidents that are reportable to government are considered a non-compliance incident. These non-compliance incidents are reported on annually in the Company's SFM Stewardship Report.

Noxious weed – This means a plant that is designated under the Alberta Weed Regulations as a noxious weed and includes noxious weed seeds – there are 23 noxious weeds listed in the Regulation. They are: Russian knapweed (Centaurea repens L), Field bindweed (Convolvulus arvensis L.), White cockle (Silene alba), Bladder campion (Silene cucubalus Wibel), Cleavers (Galium aparine L. and Galium spurium L.), Hoary cress (Cardaria spp.), Knawel (Scleranthus annuus L.), Perennial sow thistle (Sonchus arvensis L.), Cypress spurge (Euphorbia cyparissias L.), Leafy spurge (Euphorbia esula L.), Stork's bill (Erodium cicutarium L.), Canada thistle (Cirsium arvense L.), Toadflax (Linaria vulgaris Hill.), Persian darnel (Lolium persicum Boiss. & Hohen.), Scentless chamomile (Matricaria perforata Merat.), Common tansy (Tanacetum vulgare L.), Blueweed (Echium vulgare L.), Spreading dogbane (Apocynum androsaemifolium L.), Field scabious (Knautia arvensis L.), Hound's-tongue (Cynoglossum officinale L.), Oxeye daisy (Chrysanthemum leucanthemum L.), Tall buttercup (Ranunculus acris L.), and Purple loosestrife (Lythrum salicaria L.).

ToC

Nuisance weed – This means a plant that is designated under the Alberta Weed Regulations as a restricted weed and includes restricted weed seeds – there are 36 nuisance weeds listed in the Regulation.

Old seral stage – The old seral stage is characterized by canopy gaps, dead trees (standing and fallen), and the presence of additional tree age cohorts resulting from canopy gap dynamics. Under some conditions, this stage can continue to occupy a site for long periods because of natural within-stand dynamics, until a stand-replacing disturbance occurs.

Open Houses – These are public open houses hosted by Hinton Wood Products each year (normally in October or November). They are normally held in Hinton and Edson (Grande Cache is optional) at easily accessed venues such as the shopping mall in Hinton and Grande Cache and the Recreation complex in Edson. At the open house, copies of Hinton Wood Products' SFM Plan, planned or approved Compartment Operating Plans, the GDP Summary Document (see definition in VOIT #41) and general information about the Woodlands Department will be available for the public to view and comment on.

Operating Ground Rules – These are the rules that provide direction for the implementation of the Company's forest management activities and have been agreed to between Hinton Wood Products and the provincial government. The development of a set of Operating Ground Rules is a requirement of the Forest Management Agreement signed between the Company and the provincial government.

Partners in Injury Reduction (PIR) – The Partners in Injury Reduction (PIR) Program is designed to encourage injury prevention and the development of effective workplace health, safety and disability management systems. PIR is a voluntary program that operates through the combined efforts of the Workers' Compensation Board – Alberta, Alberta Human Resources and Employment, industry partners (such as the Alberta Forest Products Association), safety associations, employers and labour groups. The PIR program provides a definable process by which the Company can measure the successful development and maintenance of safety programs.

Pedigree – A record of parentage, sometimes also including data on the performance of parents or other relatives.

Performance Survey – The performance survey is designed to ensure established trees are performing to specified standards and are likely to develop into stands that will meet management objectives. The survey must be carried out 8 to 14 years after harvesting.

Pheromones – These are chemical attractants released by a MPB once it has successfully attacked a pine tree. These chemicals signal other beetles to come and attack the same tree. By synthetically reproducing these pheromones and placing them on a trees, we can attract beetles to particular trees,

thereby making them easier to find and easier to control (through either the milling of those trees or by cutting and burning them).

Plant Community – A plant community is as a distinct assemblage of plant species that can often be associated with particular environmental conditions and given the right conditions, reoccurs predictably. Plant communities can be separated into three major types: terrestrial, wetland and aquatic.

Pole seral stage – The pole seral stage represents that stage of a stand's life from the point of crown closure in fully-stocked stands (the end of the young seral stage) until trees are mature and height growth slows (the beginning of the mature seral stage).

Plant species at risk – A plant species at risk is a vascular plant species that has been designated as Endangered or Threatened under the Alberta Wildlife Act or the Canada Species at Risk Act (Schedule 1). The Company may also choose to include selected plant species that are a Species of Special Concern in Alberta or Canada, or a Rare Vascular Plant in Alberta in VOIT # 7.

Pre-harvest silvicultural planning – A pre-harvest silviculture plan is a plan applied to a cutblock that sets out the most ecologically appropriate method to harvest and reforest the cutblock. It would typically include instructions on how to harvest the site, in what season the site should be harvested and by what equipment, how the site should be prepared after harvesting, whether it should be planted or naturally regenerated, and what other future stand tending activities might need to take place (e.g. brushing).

ToC

Principles for Aboriginal Relationships Document – This document outlines HWP's principles for Aboriginal relationships. A full copy of this document can be found in Appendix Three.

Prime contractors – These are the contractors that are employed full-time by HWP to harvest timber on the FMA. The prime contractors often sub-contract out certain components of their operations to other contractors (e.g. skidding, loading, etc.). From time to time, the Woodlands department may bring on additional contractors to harvest volume (these are not considered to be prime contractors).

Provenance – The region or geographical source where trees were originally found and is native, and where its genetic constitution has developed through natural selection in between periods of glaciation.

Quicknotes – Quicknotes give a brief overview on Hinton Wood Products strategy or view on a number of different topics (e.g. old growth, etc.). These will also be found in the interactive section of the webpage.

Recreation Program – Hinton Wood Products has a Recreation Program that is one component of our larger Special Places in the Forest Program. Currently, HWP manages and maintains 16 campgrounds and 8 trail systems on and adjacent to the FMA. For further information on our Recreation Program and Special Places in the Forest Program, please visit our website (www.westfraser.com/hintonforestry).

Riparian – The area adjacent to watercourses or waterbodies (e.g. rivers, streams, lakes, ponds, fens, etc.) with a high density, diversity, and productivity of plant and animal species relative to nearby uplands.

Range of natural variation– The range that a particular seral stage within a particular forest type might vary under natural circumstances is called the range of natural variation.

Recreation Action Plan – A Recreation Action Plan is developed each year. The Action Plan outlines HWP's plans for maintaining, upgrading, or building new recreation infrastructure. The appendix of the Recreation Action Plan contains a Performance Report – this report will compare the plan from the previous year against actual results. The Recreation Action Plan will continue to be revised annually.

Recreation infrastructure – This is defined as all recreation sites, programs and associated structures that Hinton Wood Products currently manages and maintains. Improvements to the recreation infrastructure include, but are not limited to, things such as campsites, trails, signs, picnic tables, fire pits, kiosks, toilets, woodbins, and shelters.

Recreation Strategic Plan – The intent of this Strategic Plan is to provide direction and a framework for the annual production of a Recreation Action Plan. The Recreation Strategic Plan contains a number of goals and objectives centred around providing recreation opportunities on the FMA. The goals and objectives contained in the Strategic Plan are reported on annually as part of the Performance Report found in the Recreation Action Plan.

Recreation survey - In the summer of 2001 & 2002, Hinton Wood Products carried out a survey of the people using Hinton Wood Products managed campgrounds, both on and adjacent to our Forest Management Area. The results of this survey have been used to help determine where and what infrastructure should be upgraded. The survey results can be found on HWP's website by following the Recreation Program/2002 Recreation Survey results links.

Reforestation – Reforestation refers to the process of reforesting a harvested area after it has been logged. For the majority of HWP's operations, this first means some type of site preparation activity. After site preparation, the blocks are either planted or allowed to regenerate naturally.

Reforestation delay – This is the time period between skid clearance (completion of harvesting) and initiation of reforestation activities. It is determined by calculating the time (in days) between final skid clearance and the initiation of reforestation activities (generally site preparation) on the site. The operating year for reforestation is May 1–April 30, and regulations allow two full operating years for reforestation treatment after the year in which skid clearance is obtained.

ToC

Regeneration Survey – A survey used to determine if a stand has been satisfactorily restocked.

Registration – A Provincial process that allows a seed or vegetative lot to be used for deployment.

Restricted weed – This means a plant that is designated under the Alberta Weed Regulations as a restricted weed and includes restricted weed seeds – there are 7 restricted weeds listed in the Regulation. They are: Red bartsia (Odontites serotina Dum.), Diffuse knapweed (Centaurea diffusa Lam.), Spotted knapweed (Centaurea maculosa Lam.), Nodding thistle (Carduus nutans L.), Eurasian water milfoil (Myriophyllum spicatum L.) , Dodder (Cscuta spp.), and Yellow star-thistle (Centaurea solstitialis L.)

Right-of-way – Typically this can be thought of as the cleared portion of the road; that is from the edge of the timber on one side of the road to the edge of the timber on the other side of the road, and includes the ditches and running surface.

Riparian areas – These are zones of direct interaction between terrestrial and aquatic environments. All riparian areas on the DFA are part of the Special Management Area landbase category. This includes the entire riparian landform complex (watercourse channel, floodplain, terrace, hillslope, plus in some cases related upland areas).

Road construction – Road construction is required to access timber, but must be carried out in a manner that minimizes the loss of soil productivity. The Operating Ground Rules contain standards and operating practises that ensure all roads are constructed in a manner, consistent with the Forest Soil Conservation Guidelines.

Satisfactorily Restocked – Satisfactorily restocked according to the definitions described in the Regeneration Survey Manual for the type of survey, species, height, etc. The term may refer to an individual plot, a portion of a cutblock, or an entire cutblock. In general, "satisfactorily restocked" means that a particular site is stocked with trees of a suitable species that meant specific criteria as set out by the Company and government.

Seed zone – A geographic area defined on the basis of ecological characteristics and genetic information as set by the Province that seed is collected from.

Seral stages – Seral stages represent the four major forest succession stages, which are classes of what is really a continuous ecological gradient of stand development and structure related to time since disturbance. Stand age is used as a surrogate for stand structure information. The age where a plant community changes from one seral stage to another can differ among plant communities. Each stand is classified into a seral stage based on time since last disturbance and classification criteria developed for the major community type. The range that a particular seral stage within a particular forest type might vary under natural circumstances is called the range of natural variation.

Significant environmental impacts – Any change to the environment, wholly or partially resulting from the Company's environmental aspects, that has a significant impact (e.g. soil erosion into a stream resulting from poor road construction).

Site preparation – Site preparation involves the preparing of a forested site for reforestation (either by planting or natural regeneration). On HWP's FMA site preparation normally involves some type of mechanical manipulation of the soil.

Soil erosion – Soil erosion is the wearing away of the land surface by wind or water. Erosion occurs naturally from weather or runoff, but can be intensified by land-clearing practices related to road building or timber cutting.

ToC

Special Feature – A special feature is any rare or unusual natural feature (usually small in area), such as a rare ecological site, a sensitive site or a special landscape feature, on the Forest Management Area (FMA). Some specific examples of special features are tufa springs, waterfalls, mineral licks, stick nests, den sites, rock outcrops/talus slopes, and unique landforms, such as glacial erratics.

Special Places in the Forest Program – Cultural Sites – It should be noted that under the Company's Special Places in the Forest Program, cultural and historical sites have been given a different definition from the Historical Resources Act for clarity and ease of understanding by the general public. Under the Special Places in the Forest Program, cultural sites are sites that date from the time before European contact (approximately 200 years ago). These sites are of particular spiritual significance to Aboriginal peoples of Alberta and may include isolated artefact finds (such as arrowheads), toolstone quarries and workshops, campsites, tipi ring sites, isolated hearths and sweat pits, grave sites, cairns, and trails. For the purposes of HWP's Special Places in the Forest program, only those sites that have been determined to be of high local significance or regional significance will be classified under the Company's Special Places in the Forest.

Special Places in the Forest Program – Historical Sites – Historical sites are sites that date from the time after European contact with North America. They may include sites with standing structures/structural remains such as towns mining camps, cabins, mines, graves, trails, roads, and railroads. These sites are managed to maintain their historical significance. For the purposes of HWP's Special Places in the Forest program, only those sites that have been determined to have high local significance or regional will be classified as Special Places in the Forest.

Special Places in the Forest Program – The Special Places in the Forest Program recognizes that there are unique sites within our working forest and that these areas need to be managed in a special way. Some of these areas are protected, while others are specially managed for such values as wildlife, watersheds, aesthetics, recreation, education, geology, timber and cultural or historical significance. The four components of the Special Places in the Forest program are: protected areas, educational areas, cultural and historical areas, and special management areas and special features. See the Hinton Wood Products website for more detailed information on the Special Places in the Forest Program.

Species at risk – A species at risk is defined as a species designated as threatened or endangered in Canada (Canada Species at Risk Act designation) or Alberta (Alberta Wildlife Act designation). Species at risk do not include species identified as threatened or endangered until they have been designated under the relevant legislation. For the purposes of this SFM Plan, species at risk do not include species identified as special concern, vulnerable, lower risk, or sensitive by federal or Alberta processes, or as a result of a local species status evaluation.

Species community – A group of plants and animals living and interacting with one another in a specific region under relatively similar environmental conditions.

Species conservation strategy – A species conservation strategy is a document that provides information on the status and conservation of a species at risk that occurs on the Forest Management Area (FMA) landbase, in relation to Company responsibilities and commitments. These strategies extend to habitat conservation, Company activities, and co-operation with accountable government agencies to address actions of others and population management issues.

Species of special concern – a species of special concern because of characteristics that make it particularly sensitive to human activities or natural events.

Stand-replacing disturbances – Disturbances that damage most of the trees in a stand are called stand-replacing disturbances.

Standard Operating Procedure – Standard Operating Procedures (SOPs) are those documents found and described on the Company's Environmental Management System. SOPs have been put into place to ensure that risks associated Hinton Wood Products activities are properly managed for. SOPs describe procedures that must be followed and forms that must be filled out, for each of the main phases of work carried out by Hinton Wood Products staff (e.g. planning, operations, silviculture, administration, etc.). SOPs also ensure that employees understand how all aspects of their jobs should be carried out.

ToC

Stochastic landscape disturbance model – Stochastic is synonymous with "random." The word is of Greek origin and means "pertaining to chance". It is used to indicate that a particular subject is seen from point of view of randomness. Stochastic is often used as counterpart of the word "deterministic," which means that random phenomena are not involved. Therefore, stochastic models are based on random trials, while deterministic models always produce the same output for a given starting condition.

Stream Crossing Guidelines – Fisher, G.L., A.G.H. Locke, and B.C. Northey. Stream Crossing Guidelines: Operational Guidelines for Industry. Edmonton: Alberta Energy and Natural Resources, Forest Service, 1985.

Stream geomorphology – This refers to the shape and forms of a stream, and how the nature of the stream relates to its origin, development, and change over time. In order to determine a stream geomorphology, factors influencing the stream's geomorphology need to be evaluated. These can include: discharge volume/velocity, sediment volume/size, geometry (width/depth), slope, and streambed roughness. Numerous classification systems exist for assessing streams and other waterways.

Succession – The gradual and orderly process of ecosystem development brought about by changes in community composition and the production of a climax characteristic of a particular geographic region.

Sustainable Forest Management Policy – HWP SFM Policy sets out the overall intentions and direction of the Company related to its environmental performance, as formally expressed by our top management. A copy of HWP's SFM Policy can be found on our webpage at www.westfraser.com/hintonforestry (hit the forest management link).

Timber Salvage – Timber salvage is the recovery and use of merchantable timber that is damaged (killed) by fire, insects, disease, or blowdown. Timber salvage also applies to timber that is cut on the FMA landbase for non-Hinton Wood Products permanent dispositions (roads, wellsites, pipelines, mines, powerlines, etc).

Traditional Culture Study – A Traditional Cultural Study is the process of recording aboriginal elder knowledge regarding traditional way of life and uses of the land. It includes such information as locations of spiritual areas, gravesites, berry and food gathering areas and trapline locations. Further information on the scope and nature of TCS studies is available through; "A Guide to Conducting A Traditional Knowledge and Land Use Study, published by Natural Resources Canada, 2001" and "Best Practices

Handbook for Traditional Use Studies, published by Alberta Aboriginal Affairs and Northern Development, 2003".

TreeBune – The TreeBune is a Hinton Wood Products' Woodlands department newsletter that is emailed to all Hinton Wood Products and Hinton Pulp employees and retirees, various MLAs, town councillors, HWP logging contractors, and local public advisory group members as well as others that are on the distribution list. In all, approximately 700 TreeBunes are distributed three-four times a year. The TreeBune contains articles about activities taking place in the Woodlands department – examples of topics from previous articles include: planting, logging, biodiversity, SFM plans, recreation, wildlife and ENGO campaigns.

Tree Improvement Program – Hinton Wood Products' tree improvement program is a program that improves stand performance through breeding and genetic testing. The overall goal is to use seed from genetically superior trees to grow seedlings, which would then be planted on Hinton Wood Products' Forest Management Agreement area. These seedlings would have superior genetic traits that give them advantages such as increase growth, insect and disease resistance, and superior milling qualities. It is important to note that these trees have not been genetically engineered.

ToC

Uncommon plant community – An uncommon plant community is a Natural Subregion/Ecosite/Ecosite Phase that occurs on the DFA and has a total area of < 1,000 ha. Natural Subregions, Ecosites and Ecosite Phases are as defined in the Field guide to ecosites of west-central Alberta (Beckingham et al. 1996) and mapped through the Ecological Land Classification (ELC) inventory for the DFA.
Upland – Land or an area of land that is not influenced by water at or near the surface. See Lowland.

Visual impact assessment – A visual impact assessment is an assessment of the impact of proposed operations on visual resource values (aesthetics). Assessments based on the viewscape (what can be seen) from specific viewpoints are completed using computer modelling to predict what the modified visual landscape would look like. The assessments are then subjectively evaluated and either accepted or revised based on a new operations scenario. The final Compartment Operating Plan describes the assessment and the operations plan proposed to minimize aesthetic impact.

Waste Management Program – HWP Waste Management Program is outlined in the Company's Waste Management Plan. This Plan is available of HWP's Environmental Management System and all staff must be aware of its existence.

Watercourse crossing – A watercourse crossing is any structure used to provide access across a waterbody such as a culvert, bridge, etc.

Watershed basin – A watershed basin is a surface land area that is drained by a watercourse, where all land upstream of a designated point on a stream drains into that stream.

West Yellowhead Mountain Pine Beetle Coordinating Committee – The multi-agency West Yellowhead Coordinating Committee was formed in 2004 to deal with the emerging issue of MPB. The federal and Alberta governments and other land management partners have formed this Committee in order to work collaboratively with respect to forest management and to protect the economic value of the provincial forest and achieve ecological integrity objectives of the national and provincial parks and protected areas. The Coordinating Committee has three subcommittees that report back into the main Committee – a Communications Committee, an Operations Committee, and a Technical Committee.

Wetland – A lowland area, such as a marsh or swamp, which is saturated with moisture. See Lowland.

Young seral stage – The young seral stage starts with a major disturbance and continues until regenerated trees have dominated the site and crown closure occurs (in stands where tree density is high enough to support crown closure). This stage is typically dominated by a single age cohort of trees but may have more than one cohort, particularly if veteran trees and other vegetation survived the major disturbance. This seral stage is analogous to the stand-establishment period.

ToC

APPENDIX 2 – FUTURE VOITS

- The VOITs in this Table will be addressed as part of the 2014 DFMP and will be reported on in HWP's annual Stewardship Report as they are vetted through FRAG

CCFM Criterion	CSA SFM Elements	Value	Objective	Indicator	Target	Acceptable Variance
Criterion #1 Conservation of Biological Diversity	**1.1 Ecosystem Diversity** – Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally occur in the DFA.	Biodiversity at the landscape scale	Maintain biodiversity by retaining the full range of cover types and seral stages	Seral Stage	**Over the 200 year planning horizon:** Total area (ha.) in 4 seral stages: • Old forest (Pl -180+) • Mature (Pl - 80 – 180) • Pole (Pl - 20 – 80) • Young (Pl - 0 – 20) In 5 or 6 cover types: • Pine • Mixed wood (Deciduous/Coniferous) • Spruce (split into Sw and Sb categories) • Hardwood Will be maintained within the range of natural variation as determined by Andison research and as described in the 1999 DFMP.	
		Biodiversity at the landscape scale	Maintain biodiversity by avoiding landscape fragmentation	Range of event and patch sizes and shapes by Natural Sub-Region and by the entire DFA	A distribution of harvest event sizes and shape and, within events, disturbed and undisturbed patches that will result in patch and event sizes over the 200 year planning horizon approximating size and shape ranges created by natural disturbances.	
		Biodiversity at the landscape scale	Maintain biodiversity by minimizing access	Road density (by road category) by watershed (subunit category). Other subunit categories may be used for special cases (e.g. caribou range).	1. Less than ? km/km^2 roads (by road category) by (subunit category). [There may be multiple target statements depending on the number of road categories and subunit categories 2. Apply operational procedures to build, use and reclaim seasonal/temporary roads.	A maximum of 5% of subunits over the acceptable target in the first 10 years of the DFMP.
	1.2 Species Diversity – Conserve species diversity by ensuring that habitats for the native species found in the DFA are maintained through time that naturally occur in the DFA	Biodiversity at the local/stand scale	Retain stand level structure	Stems/ha residual structure (both living and dead) within a harvest area, representative of the status (live/dead), size, and species of the overstory trees by cover type and the entire DFA.	A combination of single stems and clumps (<0.04 ha.) comprising X% of the harvested stems/ha within a cover type (e.g. pine, Mixed woods, Spruce, etc.) Note: A wide range in variability in harvest area-level retention within a subunit is desired as long as the target level is achieved.	
		Viable populations of identified	Maintain habitat for identified high value species (i.e., economically valuable,	Area of suitable habitat within the DFA or subunit	1. Determine habitat target for selected species. 2. Maintain area of habitat supply for selected	

CCFM Criterion	CSA SFM Elements	Value	Objective	Indicator	Target	Acceptable Variance
		species (both plants & animals)	socially valuable, species at risk, species of management concern)		species (e.g. caribou, grizzly, trumpeter swan, moose, elk) as determined by habitat supply analysis	
	1.3 Genetic Diversity – Conserve genetic diversity by maintaining the variation of genes within species.	Genetic integrity of natural tree populations	Retain "wild forest populations" - for each tree species in each seed zone through genetic conservation areas established by the company or in cooperation with Alberta.	Genetic conservation areas.	Number (X) and area (X) of genetic conservation areas for each seed zone conforming with Section 3 of the Green Area section of Standards for Tree Improvement in Alberta.	At the end of the 10 DFMP term the target is achieved or exceeded.
Criterion #5 – Multiple Benefits to Society	**5.2 Communities and Sustainability** – Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and to participate in their use and management	Reduce the risk to communities from wildfire	To reduce wildfire threat potential by reducing fire behaviour, fire occurrence, threats to values at risk and enhancing fire suppression capability	Percentage change in amount of large contiguous area forest in high and extreme threat in hectares across the DFA over the planning horizon.	As the part of the DFMP, conduct analysis of fire threat on FMA and adjust harvest schedule to reduce large contiguous areas of forest that have high and extreme wildfire threat.	