

# VOIT

Values  
Objectives  
Indicators  
Targets

2008 Detailed Forest Management Plan  
Tolko Industries Ltd.  
Footner Forest Products Ltd.

<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.1 Ecosystem Diversity:</b> Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that occur naturally in the DFA
<b>Value</b>	<b>1.1.1</b> Landscape scale biodiversity
<b>Objective</b>	<b>1.1.1.1</b> Maintain biodiversity by retaining the full range of cover types and seral stages <sup>3</sup>
<b>Indicator</b>	Area of old, mature, and young forest in each DFA subunit <sup>4</sup> by cover class <sup>5</sup>
<b>Target</b>	<p>Over the 200-year planning horizon;</p> <p>a) <i>Gross landbase</i>: greater than X%<sup>1</sup> old forest, greater than Y% mature plus old forest, less than Z% young forest; and</p> <p>b) <i>Net landbase</i>: greater than X% old forest, greater than Y% mature plus old forest, less than Z% young forest.</p> <p><b>Note:</b> Old forest retention shall include the full natural range of ages</p>

[1] "X" variable in target description to be determined by the FMP planning process.

[3] Seral Stage: Seral stages definitions should include the following categories: Initiation, Establishment, Aggradation (stem exclusion), Mature, and Old (Song 2002, Ecological Basis for Stand Management in Alberta). Old forest is defined as stands 40 years older than MAI culmination age.

[4] Subunit: any acceptable stratification of the DFA. Delineation of planning "subunits" for the DFA will be made during FMP planning. However, delineation should reflect ecological considerations. Planning subunits may correspond to planning compartments.

[5] Cover-classes: definition will be developed through FMP planning. In general, cover-class is a coarser grouping than the cover type (AVI stand label) but provides finer resolution than the cover groups (C, CD, DC, D) and will reflect leading species and mixedwood types.

#### Comments:

- Targets will be determined during the Timber Supply Analysis that will occur in 2008
- Information provided by the Natural Range of Variability will be used as a guide
- Unit of measure will be a percentage (as described above) for the Gross and Net Landbase
- Reporting will occur at the Stewardship Report (5 years after DFMP submission)

<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.1 Ecosystem Diversity:</b> Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that occur naturally in the DFA
<b>Value</b>	<b>1.1.1</b> Landscape scale biodiversity
<b>Objective</b>	<b>1.1.1.2</b> Maintain biodiversity by avoiding landscape fragmentation
<b>Indicator</b>	a) Range of patch <sup>6</sup> sizes by subunit and entire DFA
<b>Target</b>	a) A distribution of harvest area sizes that will result in a patch size pattern over the 200 year planning horizon approximating patterns created by natural disturbances

[6] Patch: a stand of forest in the same seral stage, and not split by a linear feature greater than 8m wide. Linear features in this definition include roads, pipelines, powerlines, and rivers, but does not include seismic lines.

**Comments:**

- This is an output of the Timber Supply Analysis.
- Reporting will be of hectares of Patch Sizes.
- Reporting will occur in the Stewardship Report (5 years after DFMP submission).

<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.1 Ecosystem Diversity: Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that occur naturally in the DFA</b>
<b>Value</b>	<b>1.1.1 Landscape scale biodiversity</b>
<b>Objective</b>	<b>1.1.1.2 Maintain biodiversity by avoiding landscape fragmentation</b>
<b>Indicator</b>	<b>b) Area of old interior forest<sup>7</sup> of each cover class by subunit and entire DFA</b>
<b>Target</b>	<b>b) Area of old interior forest will not be less than X% of each cover class over the next 200 years</b>

[7] Interior forest: a forested area greater than 100 hectares in size located beyond edge effect buffer zone [7.2] along the forest edge [7.1]. For interior forest objective use a common age definitions for all cover classes to prevent breaking up forest patches that have a common origin date.

[7.1] Forest edge: any of the following: a) a linear disruption in forest cover greater than 8m in width, or, b) the line along which forest seral stage class changes.

[7.2] Edge effect buffer zone: 60 m where adjacent area is non-forested or less than 40 years old; 30 m where adjacent forest stand is  $\geq 40$  years and less than mature forest; 0 m where adjacent stand is mature forest.

**Comments:**

- This will be an output of the Timber Supply Analysis (constraint on harvest).
- In the DFMP: Maps and Tables of indicator at 0, 10, and 50 yrs.

<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.1 Ecosystem Diversity:</b> Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that occur naturally in the DFA
<b>Value</b>	<b>1.1.1</b> Landscape scale biodiversity
<b>Objective</b>	<b>1.1.1.3</b> Maintain biodiversity by minimizing access
<b>Indicator</b>	Open all-weather forestry road density by subunit. Subunit is Caribou and non-Caribou areas, as well report will include for DFA.
<b>Target</b>	Less than Xkm/km <sup>2</sup>

**Comments:**

- Companies to provide current snap shot, along with projection of roads at end of 10 years.
- Calculated as a density due to wildlife habitat concerns with fragmentation.
- Reporting in Stewardship Report (5 years following DFMP submission).

<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.1 Ecosystem Diversity:</b> Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that occur naturally in the DFA
<b>Value</b>	<b>1.1.1</b> Landscape scale biodiversity
<b>Objective</b>	<b>1.1.1.3</b> Maintain biodiversity by minimizing access
<b>Indicator</b>	Open seasonal / temporary forestry road length by DFA, and operating area ( <i>Operating Area = subunit</i> )
<b>Target</b>	Less than Xkm by subunit.

**Comments:**

- Tracking system to be developed to know how much access has been created over the past year, 2 years, etc., as well as determine how access does not need to be tracked anymore.
- Access controlling indicator, therefore companies to monitor and plan accordingly.

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<b>CSA SFM Element</b>	<b>1.1 Ecosystem Diversity:</b> Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that occur naturally in the DFA
<b>Value</b>	<b>1.1.1</b> Landscape scale biodiversity
<b>Objective</b>	<b>1.1.1.4</b> Maintain plant communities uncommon in DFA or province
<b>Indicator</b>	Area or occurrence of each uncommon plant community within DFA
<b>Target</b>	X% of identified community will be maintained (separate target for each identified community), assuming that % will be based on requirements to maintain a healthy community.

**Comments:**

- Discussion on-going of how this would be monitored on the landbase and determination of extent of community.
- Overlay of Alberta Natural Heritage Information Center data layers on proposed openings will provide a trigger for investigation.
- Companies to develop rare plant community listings.
- Reporting at Stewardship Report.

<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.1 Ecosystem Diversity:</b> Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that occur naturally in the DFA
<b>Value</b>	<b>1.1.1</b> Landscape scale biodiversity
<b>Objective</b>	<b>1.1.1.5</b> Maintain unique habitats provided by wildfire and blowdown events.
<b>Indicator</b>	Areas of unsalvaged burned forest
<b>Target</b>	<p>The companies will assess fire areas on a case by case basis (with ASRD), evaluated based on distance to mill, timber types, lumber prices and other economic drivers. Unsalvaged areas will be left untouched, and for areas salvaged the following criteria will apply.</p> <p><i>Live trees:</i> Retain all unburned trees in green islands and retained patches recognizing timber condition, access, non-timber needs.</p> <p><i>Burned trees - Compartment Scale:</i> Retain greater than 10% of merchantable black trees in patches greater than 100 ha.</p> <p><i>Burned trees - Harvest Area Scale:</i> Retain greater than 10% of merchantable black trees in patches 10 -100 ha; and retain greater than 5% of merchantable black trees in small patches, single trees according to logger's choice.</p>

**Comments:**

- Companies to analyze previous 10 years of fires to develop a benchmark.
- Reporting at Stewardship Report.



<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.1 Ecosystem Diversity:</b> Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that occur naturally in the DFA
<b>Value</b>	<b>1.1.1</b> Landscape scale biodiversity
<b>Objective</b>	<b>1.1.1.5</b> Maintain unique habitats provided by wildfire and blowdown events.
<b>Indicator</b>	Area of unsalvaged blowdown
<b>Target</b>	<p>The companies will access blowdown areas on a case by case basis with ASRD, evaluated based on distance to mill, timber types, lumber prices and other economic drivers. Unsalvaged areas will be left untouched, and for areas salvaged the following criteria will apply.</p> <p>In areas of significant blowdown, greater than X% will be left unsalvaged.</p>

**Comments:**

- Companies to analyze previous 10 years of fires to develop a benchmark.
- Reporting at Stewardship Report.

<b>CCFM Criterion</b>	1. Biological Diversity
<b>CSA SFM Element</b>	1.1 Ecosystem Diversity: Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that occur naturally in the DFA
<b>Value</b>	1.1.1 Landscape scale biodiversity
<b>Objective</b>	1.1.1.6 Retain ecological values and functions associated with riparian zones
<b>Indicator</b>	Compliance with OGR
<b>Target</b>	Consistent with OGR

**Comments:**

- 100% compliance required.
- Reporting at Stewardship Report.
- Reporting on # of infractions where riparian zones were not retained or where functions were impaired.

<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.1 Ecosystem Diversity:</b> Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that occur naturally in the DFA
<b>Value</b>	<b>1.1.1 Landscape Scale Biodiversity</b>
<b>Objective</b>	<b>1.1.1.7</b> Manage the DFA to emulate natural disturbance patterns
<b>Indicator</b>	Proportion of cover types (C,CD, DC, & D)
<b>Target</b>	Area harvested (ha) will return to the pre-harvest declaration

**Comments:**

- Indicator used in the current Sustainable Forest Management Plan.
- Recording annually, summarized at the Stewardship Report.

<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.1 Ecosystem Diversity:</b> Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that occur naturally in the DFA
<b>Value</b>	<b>1.1.2</b> Local/stand scale diversity
<b>Objective</b>	<b>1.1.2.1</b> Retain stand level structure
<b>Indicator</b>	a) 1 % volume of coniferous and deciduous/ stems residual structure within a harvest area, representative of the status (live/dead) sizes, and species by subunit and entire DFA.
<b>Target</b>	<p>a) A combination of single stems, clumps, and islands comprising 1% of the harvested / volume / within a subunit.</p> <p>Note: A wide range in variability in harvest area-level retention within a sub-unit is desired so long as the target level is achieved.</p> <p>Note 2: Maximum historical is 3%, but this occurred in larger openings. Smaller openings would have less retention.</p>

**Comments:**

- Indicator used in the current Sustainable Forest Management Plan.
- Recording annually, summarized at the Stewardship Report.

<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.1 Ecosystem Diversity:</b> Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that occur naturally in the DFA
<b>Value</b>	<b>1.1.2</b> Local/stand scale diversity
<b>Objective</b>	<b>1.1.2.1</b> Retain stand level structure
<b>Indicator</b>	b) Percentage of harvested area by subunit with downed woody debris <sup>8</sup> equivalent to pre-harvest conditions
<b>Target</b>	b) X% of harvest areas having downed woody debris retained on site, by stratum, 100% of harvest blocks will have downed woody debris retained on site.

[8] Downed woody debris: wood lying at an angle of less than 45 degrees from the ground and having a diameter greater than 7.5 cm.

**Comments:**

- On going discussions with Alberta on requirements.
- May involve monitoring such as, DWD loading as compared to similar adjacent uncut stands (higher, equal, lower)
- Company personnel to do the monitoring by comparing to similar and adjacent uncut stands.

<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.1 Ecosystem Diversity:</b> Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that occur naturally in the DFA
<b>Value</b>	<b>1.1.2</b> Local/stand scale diversity
<b>Objective</b>	<b>1.1.2.2</b> Maintain integrity of sensitive sites
<b>Indicator</b>	Sensitive sites (e.g. mineral licks, major game trails) by subunit and entire DFA. (listed in OGR's under section 7.7.6)
<b>Target</b>	Strategies to maintain consistent with provincial guidelines / ORG.

**Comments:**

- Reporting will be # of sites protected.
- Items to record are what is it? Where is it located (gps)?
- Cutblock updates (annual mapping) will capture buffer used to protect.
- Reporting at Stewardship Report

<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.1 Ecosystem Diversity:</b> Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that occur naturally in the DFA
<b>Value</b>	<b>1.1.2</b> Local/stand scale diversity
<b>Objective</b>	<b>1.1.2.3</b> Maintain aquatic biodiversity by minimizing impact of water crossings.
<b>Indicator</b>	Forestry water crossing in compliance with Code of Practice for Watercourse Crossing within each subunit.
<b>Target</b>	Designs meet standards of the Code of Practice for Watercourse Crossings

**Comments:**

- Applies to culverts / bridges that are over 1.5 meters in diameter/span.
- Reporting of # of crossings meeting / not meeting design specifications
- Creek Crossing Database to assist with recording.
- Stewardship Reporting

<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.2 Species Diversity:</b> Conserve species diversity by ensuring that habitats for the native species found in the DFA are maintained throughout time.
<b>Value</b>	<b>1.2.1</b> Viable populations of identified plant and animal species
<b>Objective</b>	<b>1.2.1.1</b> Maintain habitat for identified high value species (i.e., economically valuable, socially valuable, species at risk, species of management concern)
<b>Indicator</b>	Area (ha) of suitable habitat within the DFA or subunit
<b>Target</b>	Maintain above X hectares

**Comments:**

- Will be a product of the Timber Supply Analysis (constraint on harvest).
- DFMP will need to show habitat availability at various stages over time (tables of hectares and maps to show spatially).
- Further meetings with ASRD wildlife biologist required.



<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.3 Genetic Diversity:</b> Conserve genetic diversity by maintaining the variation of genes within species.
<b>Value</b>	<b>1.3.1 Genetic integrity of natural tree populations</b>
<b>Objective</b>	<b>1.3.1.1 Retain "wild forest populations"<sup>9</sup></b> for each tree species in each seed zone through establishment of in-situ reserves by the organization or in cooperation with Alberta
<b>Indicator</b>	Number and area (ha) of in situ genetic conservation areas
<b>Target</b>	Number (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

[9] Wild: genetic materials of native species originating from natural regeneration (Standards for Forest Tree Improvement in Alberta).

**Comments:**

- Indicator is for identified stands/forests that would be valuable for their genetic qualities and assistance in collected genetic material (eg., seed) over time.
- Companies will cooperate with Alberta for this program.
- Reporting will be area (ha) and location.

<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.3 Genetic Diversity:</b> Conserve genetic diversity by maintaining the variation of genes within species.
<b>Value</b>	<b>1.3.1</b> Genetic integrity of natural tree populations
<b>Objective</b>	<b>1.3.1.2</b> Retain wild forest genetic resources through ex-situ conservation
<b>Indicator</b>	Number of provenances and genetic lines in ex-situ gene banks and trials
<b>Target</b>	Active conservation program for all Controlled Parentage Program plan species and other species in cooperation with Alberta

**Comments:**

- Indicator is for information purposes only, to show that the companies are involved in either Controlled Parentage Programs or Genetics / Tree Improvement Agreements within Alberta.
- Tolko has recently signed on for 2 agreements.

<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.3 Genetic Diversity:</b> Conserve genetic diversity by maintaining the variation of genes within species
<b>Value</b>	<b>1.3.1</b> Genetic integrity of natural tree populations
<b>Objective</b>	<b>1.3.1.3</b> To ensure that cutblocks are reforested with genetically diverse seedlings
<b>Indicator</b>	The amount of area(ha) planted with seedlings from orchard stock
<b>Target</b>	<25% of area harvest in the DFA will be planted with seedlings from orchard seed.

**Comments:**

- Indicator as used in the current Sustainable Forest Management Plan.

<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.3 Genetic Diversity: Conserve genetic diversity by maintaining the variation of genes within species</b>
<b>Value</b>	<b>1.3.1 Genetic integrity of natural tree populations</b>
<b>Objective</b>	<b>1.3.1.4 To ensure that cutblocks are reforested with genetically diverse seedlings</b>
<b>Indicator</b>	Native seed used in operational reforestation will be best suited to the area being reforested.
<b>Target</b>	Seed deployment will comply with ASRD guidelines for movement of seed.

**Comments:**

- Indicator as used in the current Sustainable Forest Management Plan.

<b>CCFM Criterion</b>	<b>1. Biological Diversity</b>
<b>CSA SFM Element</b>	<b>1.4 Protected Areas - Respect protected areas identified through government processes</b>
<b>Value</b>	<b>1.4.1 Areas with minimal human disturbances within managed landscapes</b>
<b>Objective</b>	<b>1.4.1.1 Integrate transboundary values and objectives into forest management</b>
<b>Indicator</b>	Stakeholder consultation
<b>Target</b>	Ongoing consultation with relevant protected areas agencies

**Comments:**

- Alberta has indicated this VOIT is not a avenue to establish protected areas.
- Indicator is to continue stakeholder consultation.
- Companies to report such consultation.
- Annual and Stewardship Reporting

<b>CCFM Criterion</b>	<b>2. Ecosystem Productivity</b>
<b>CSA SFM Element</b>	<b>2.1 Ecosystem resilience</b>
<b>Value</b>	<b>2.1.1 Reforested harvest areas</b>
<b>Objective</b>	<b>2.1.1.1 Meet reforestation targets on all harvested areas</b>
<b>Indicator</b>	Annual % of SR regeneration surveys
<b>Target</b>	Annually 100% of regeneration surveys will be SR

**Comments:**

- Target is the assumption used within the forest management plan.
- Reforestation commitment.
- Reporting annually on % of sufficiently stocked regeneration surveys.
- As per current reporting requirement in Sustainable Forest Management Plan.
- Alternative Regeneration Standard will guide how to meet this target.
- Annual and Stewardship Reporting

<b>CCFM Criterion</b>	2. Ecosystem Productivity
<b>CSA SFM Element</b>	2.1 Ecosystem resilience
<b>Value</b>	2.1.1 Reforested harvest areas
<b>Objective</b>	2.1.1.1 Meet reforestation targets on all harvested areas
<b>Indicator</b>	Cumulative % of reforested areas that meet reforestation target
<b>Target</b>	Cumulatively 100% of reforested areas will meet the reforestation targets.

**Comments:**

- As per previous VOIT, however this is a cumulative summary.

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<b>CCFM Criterion</b>	2. Ecosystem Productivity
<b>CSA SFM Element</b>	2.1 Ecosystem resilience
<b>Value</b>	2.1.2 Maintenance of forest landbase
<b>Objective</b>	2.1.2.1 Limit conversion of productive forest landbase to other uses
<b>Indicator</b>	Amount of change in forest landbase
<b>Target</b>	A program to maintain the forest landbase. The companies will strive to negate loss of forest landbase through recovery efforts during planting operations (planting dispositions and well sites adjacent to operations).

**Comments:**

- Indicator to identify how the landbase is changing and are the companies able to reclaim losses.
- Summarize at Stewardship Report.

WORKING DOCUMENT



<b>CCFM Criterion</b>	2. Ecosystem Productivity
<b>CSA SFM Element</b>	2.1 Ecosystem resilience
<b>Value</b>	2.1.2 Maintenance of forest landbase
<b>Objective</b>	2.1.2.2 Recognize lands affected by insects, disease or natural calamities
<b>Indicator</b>	Amount of area affected
<b>Target</b>	<p>Area (ha) affected by significant outbreaks, infestations and natural calamities.</p> <p>(Assuming the only requirement is to report affected area on an annual basis, possibly amend plan accordingly. The companies will maintain annual forest information providing by ASRD and collect their own. Together they will adjust plans accordingly, e.g. Spruce Budworm Plan, FHP).</p>

**Comments:**

- Indicator is a summary of all lands affected by natural events.
- Information used to enhance operational plans and within the next DFMP (2017).
- Reporting at Stewardship Report.

<b>CCFM Criterion</b>	2. Ecosystem Productivity
<b>CSA SFM Element</b>	2.1 Ecosystem resilience
<b>Value</b>	2.1.3 Control invasive species
<b>Objective</b>	2.1.3.1 Control non-native plant species (weeds)
<b>Indicator</b>	Noxious weed program
<b>Target</b>	Noxious weed program in place and implemented. Report on # of observations of noxious weeds on the FMA.

**Comments:**

- Companies to complete “Weed Program”, and follow during operations.
- Only able to control “forest” activities.
- Need to address all weed infestations.
- Reporting at Stewardship Report.

<b>CCFM Criterion</b>	<b>3.</b> Soil and water
<b>CSA SFM Element</b>	<b>3.1</b> Soil quantity and quality
<b>Value</b>	<b>3.1.1</b> Soil productivity
<b>Objective</b>	<b>3.1.1.1</b> Minimize impact of roading and bared areas in forest operations
<b>Indicator</b>	Compliance with OGRs
<b>Target</b>	Less than 5% on average across the DFA

**Comments:**

- Intent is to ensure that access roads are regenerating.
- Companies to develop a monitoring program, with direction from SRD.
- Annual and Stewardship Reporting

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<b>CCFM Criterion</b>	<b>3. Soil and water</b>
<b>CSA SFM Element</b>	<b>3.1 Soil quantity and quality</b>
<b>Value</b>	<b>3.1.1 Soil productivity</b>
<b>Objective</b>	<b>3.1.1.2 Minimize incidence of soil erosion and slumping</b>
<b>Indicator</b>	Incidence of soil erosion and slumping
<b>Target</b>	Zero instances of soil erosion and slumping.

**Comments:**

- Reporting of # of occurrences.
- Annual and Stewardship Report.

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<b>CCFM Criterion</b>	<b>3. Soil and water</b>
<b>CSA SFM Element</b>	<b>3.2 Water quantity and quality</b>
<b>Value</b>	<b>3.2.1 Water quantity</b>
<b>Objective</b>	<b>3.2.1.1 Limit impact of timber harvesting on water yield</b>
<b>Indicator</b>	Forecast impact of timber harvesting on water yield.
<b>Target</b>	Zero Water Act penalties, compliance with FMP within acceptable limits.

**Comments:**

- Tied with Watershed Analysis.
- Reporting of hectares harvested versus planned, plus any Water Act penalties.

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<b>CCFM Criterion</b>	3. Soil and water
<b>CSA SFM Element</b>	3.2 Water quantity and quality
<b>Value</b>	3.2.2 Effective riparian habitats
<b>Objective</b>	3.2.2.1 Minimize impact of operations in riparian areas
<b>Indicator</b>	Riparian buffers maintained as outlined in OGRs
<b>Target</b>	Complete compliance with OGR's

**Comments:**

- Reporting of Environmental Incidents within Riparian buffers.

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<b>CCFM Criterion</b>	<b>3. Soil &amp; Water</b>
<b>CSA SFM Element</b>	<b>3.2 Water quantity and quality</b>
<b>Value</b>	<b>3.2.3 Maintain water quality</b>
<b>Objective</b>	<b>3.2.3.1 To minimize the effects of timber harvesting and/or silvicultural operations on water quality and/or quantity</b>
<b>Indicator</b>	Satisfactory installation & removal of watercourse crossings
<b>Target</b>	0% percent of the Companies watercourse crossings will require reclamation work following removal

**Comments:**

- Same VOIT as currently within Sustainable Forest Management Plan.

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<b>CCFM Criterion</b>	4. Global Ecological Cycles
<b>CSA SFM Element</b>	4.1 Carbon uptake and storage
<b>Value</b>	<i>To be determined</i>
<b>Objective</b>	<i>To be determined</i>
<b>Indicator</b>	Results of carbon budget modelling
<b>Target</b>	<i>To be determined.</i> Companies will commit to develop when Alberta sets Value, Objective and Target.

**Comments:**

- Alberta has not provided guidance on this VOIT at this time.

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<b>CCFM Criterion</b>	4. Global Ecological Cycles
<b>CSA SFM Element</b>	4.2 Forest land conversion
<b>Value</b>	4.2.1 Maintenance of forest landbase
<b>Objective</b>	<i>To be determined</i>
<b>Indicator</b>	Results of carbon budget modelling
<b>Target</b>	<p><i>To be determined</i></p> <p>Companies will commit to develop when Alberta sets Value, Objective and Target</p>

**Comments:**

- Alberta has not provided guidance on this VOIT at this time.

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<b>CCFM Criterion</b>	5. Multiple Benefits to Society
<b>CSA SFM Element</b>	5.1 Timber and non-timber benefits
<b>Value</b>	5.1.1 Sustainable timber supplies
<b>Objective</b>	5.1.1.1 Establish appropriate AACs
<b>Indicator</b>	Process described in Annex 1 is followed and standards are met
<b>Target</b>	Complete compliance. At or under AAC levels over any 5 year period.

**Comments:**

- Reporting on m3 (Annual Allowable Cut)
- Product of Timber Supply Analysis and monitored Annually and by quadrant (5 years).

WORKING DOCUMENT

<b>CCFM Criterion</b>	5. Multiple Benefits to Society
<b>CSA SFM Element</b>	5.2 Communities and Sustainability
<b>Value</b>	5.2.1 Risk to communities and landscape values from wildfire is low.
<b>Objective</b>	5.2.1.1 To reduce wildfire threat potential by reducing fire behaviour, fire occurrence, threats to values at risk
<b>Indicator</b>	<p>1) Percentage reduction in Fire Behaviour Potential area (ha) within the FireSmart Community Zone, <i>where target stands exist in an open compartment</i></p> <p>2) Percentage reduction in Fire Behaviour Potential area (ha) across the DFA now and over the planning horizon</p>
<b>Target</b>	<p>1) Reduce the area (ha) in the extreme and high Fire Behaviour Potential rating categories by X% within the FireSmart Community Zone</p> <p>2) Reduce the area (ha) in the extreme and high Fire Behaviour Potential rating categories by X% across the DFA</p>

**Comments:**

- Companies will work with Alberta to develop plans that meet their FireSmart plans.
- Companies awaiting Alberta to provide direction on priority community zones.

<b>CCFM Criterion</b>	5. Multiple Benefits to Society
<b>CSA SFM Element</b>	5.2 Communities and Sustainability
<b>Value</b>	5.2.2 Provide opportunities to derive benefits and participate in use and management
<b>Objective</b>	5.2.2.1 Integrate other uses and timber management activities
<b>Indicator</b>	Extent of various uses
<b>Target</b>	To be determined in the planning process. Track opportunities provided to the public.

**Comments:**

- Similar to VOIT in current Sustainable Forest Management Plan.
- Tracking opportunities annually and summed at Stewardship Report.

<b>CCFM Criterion</b>	5. Multiple Benefits to Society
<b>CSA SFM Element</b>	5.2 Communities and Sustainability
<b>Value</b>	5.2.3 Forest Productivity is maintained.
<b>Objective</b>	5.2.3.1 Maintain Long Run Sustained Yield Average
<b>Indicator</b>	Regenerated stand yield compared to natural stand yield
<b>Target</b>	No net decrease from the natural stand productivity

**Comments:**

- Continue with Growth and Yield program to prove Indicator and Target.
- Annually report progress on program, and as results are determined report on productivity (mean annual increment) in managed and natural stands.
- Alternative Regeneration Standards will assist.

<b>CCFM Criterion</b>	<b>5. Multiple Benefits to Society</b>
<b>CSA SFM Element</b>	<b>5.2 Communities and Sustainability:</b> Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits
<b>Value</b>	<b>5.2.4</b> To ensure that there is a continuous supply of timber and non-timber benefits from the forest.
<b>Objective</b>	<b>5.2.4.1</b> To conduct operations while minimizing impacts on areas of historical, recreational, unique ecological, aesthetic, or other land uses of significance.
<b>Indicator</b>	Compliance with the Historical Resources Act
<b>Target</b>	100% Compliance with the Historical Resources Act

**Comments:**

- VOIT as used within current Sustainable Forest Management Plan.

<b>CCFM Criterion</b>	<b>5. Multiple Benefits of Society</b>
<b>CSA SFM Element</b>	<b>5.2 Communities and Sustainability:</b> Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and to participate in their use and management.
<b>Value</b>	<b>5.2.5</b> To support local & Aboriginal interests
<b>Objective</b>	<b>5.2.5.1</b> To support local & Aboriginal businesses where economically feasible
<b>Indicator</b>	The number (%) of business and employment opportunities given to local employers and/or citizens
<b>Target</b>	The target is to have > 80% of the contracts administered by the Companies on the DFA completed by local businesses.

**Comments:**

- VOIT as used within Sustainable Forest Management Plan.

<b>CCFM Criterion</b>	<b>6.</b> Accepting society's responsibility for sustainable development
<b>CSA SFM Element</b>	<b>6.1</b> Aboriginal and treaty rights and aboriginal forest values
<b>Value</b>	<b>6.1.1</b> Compliance with government regulations and policies
<b>Objective</b>	<b>6.1.1.1</b> Implement Aboriginal Involvement Program
<b>Indicator</b>	Meet Alberta's current expectations for aboriginal consultation
<b>Target</b>	Consult at the community level with designated representatives of affected aboriginal communities

**Comments:**

- Report # of opportunities for consultation.
- Recording will be done on internal EMS/CSA websites.



<b>CCFM Criterion</b>	6. Accepting society's responsibility for sustainable development
<b>CSA SFM Element</b>	6.2 Public participation and information for decision-making
<b>Value</b>	6.2.1 Meaningful public involvement is achieved
<b>Objective</b>	6.2.1.1 Implement public involvement program
<b>Indicator</b>	Meet expectations of Section 5 of CSA Z809-02
<b>Target</b>	To be determined in the planning process

**Comments:**

- On going development for this VOIT required by Alberta.

WORKING DOCUMENT