Sustainable Forest Management –Stewardship Principles, Values and Objectives

DMI's Peace River Pulp Division is striving to reach the highest recognized standard of sustainable forest management in Canada. It has committed itself to achieve certification from the *Canadian Standards Association* (CSA) for "Sustainable Forest Management of a Defined Forest Area". Historically endorsed by the federal and all provincial governments in Canada through the Canadian Council of Forest Ministers (CCFM), six distinct criteria (or stewardship principles) define what sustainable forest management means to Canada under its international obligations to global society.

The CSA standard has adopted these CCFM criteria (principles) and requires companies like DMI to identify regional forest management **values**, set clear **objectives** to preserve those values and then measure their performance on an on-going basis, continually improving themselves as new science, information and "best practices" are identified. Achieving the CSA sustainable forest management standard requires companies like DMI to identify a clear set of **values** under each of the six key forest stewardship principles, then to establish **objectives**, key performance **indicators** and measurable **targets** related to the objectives. (V.O.I.T.'s)

DMI is in the early stages of seeking CSA sustainable forest management certification. We have articulated some *draft* values under each of the forest stewardship criteria, and we have developed some *preliminary* objectives. The process of identifying and developing key performance indicators and targets is yet in-progress. Simultaneously the company is currently establishing a new public and aboriginal consultation process to assist the task of identifying and affirming these VOIT's.

The following set of tables describe DMI's general approach to addressing each of the six sustainable forest management criteria (stewardship principles) followed by DMI's draft values and our preliminary list of objectives.

CCFM Criterion 1

Stewardship Principle	Element	Identified Values
Conservation of Biological Diversity -Conserve biological diversity by maintaining integrity, function, and diversity of living organisms and the complexes of which they are part.	Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally occur in the DFA.	o Landscape Composition and Arrangement o Stand Level Ecosystem Process o Continued presence of naturally occurring wildlife species o High Value Conservation Areas o Protected Areas o Fish Habitat o Forest Area with limited access o Uncommon Plant Communities o Unique habitats created by large fires and windthrow events o Ecological function in riparian zones
	Conserve species diversity by ensuring that habitats for the native species found in the DFA are maintained through time.	o Native Species Habitats
	Conserve genetic diversity by maintaining the variation of genes within species	o Within Species genetic variation of natural vegetation o Artificially regenerated tree species genetic diversity
	Respect protected areas identified through government processes. Identify sites of special biological significance with the DFA and implement management strategies appropriate to their long-term maintenance.	o Long term maintenance of protected areas and sites of biological significance.

Defined DMI Objectives

- Implement 'Coarse Filter Management' at landscape scale. The future forest landscape will be designed to maintain representative cover group-seral stage combinations of the natural forest ecosystem. Representative components of the natural biodiversity will be maintained at targeted levels within the range of natural variability.
- Practice type-cutting to maintain a variable second growth stand shape distribution similar to natural forest.
- Create a variable second growth patch size distribution.
- Maintain minimum areas of old interior forest for each defined cover group.
- Maintain a highly variable range of within stand structure on second growth stands.
- Maintain down woody debris at pre-harvest levels in a target percentage of cut blocks.
- Maintain natural range of variability of habitat conditions
- Continued presence of at-risk species.
- Protect unique or rare habitats, special zones of particular sensitivity, and occurrences of rare/endangered species.
- Protect a Continuous Reserve Network
- Maintain Government Created Protected Areas
- Protect fish habitat on the FMA Area.
- Minimize all-weather forestry road density by sustained yield unit.
- Minimize temporary forestry road length by sustained yield unit.
- Maintain uncommon plant communities on the FMA through protection areas and High Value Conservation Areas
- Maintain unharvested stems within large burns when salvage operation occur.
- In areas of significant blowdown (>100ha merchantable stand area) maintain areas of unsalvaged blowdown
- Maintain ecological function by protecting riparian habitat.
- Prevent selected habitat extermination at FMA level during spatial forecast period.
- Future forest species composition and originating propagules falls within natural range of variability
- Retain wild populations of each tree species in each seed zone by establishing in-situ reserves.
- Retain Wild Forest Tree genetic material ex-situ when required by Alberta
- Follow all applicable provincial standards for tree improvement programs.
- Respect established protected areas and sites of special significance
- Integrate transboundary values and objectives into forest management

CCFM Criterion 2

Stewardship Principle	Element	Identified Values
Maintenance and Enhancement of Forest Ecosystem Condition and Productivity -Conserve forest ecosystem condition and productivity by maintaining the health, vitality, and rates of biological production.	Forest Ecosystem Resilience Conserve ecosystem resilience by maintaining both ecosystem processes and ecosystem conditions.	o Forest health and resilience
	Forest Ecosystem Productivity Conserve forest ecosystem productivity and productive capacity by maintaining ecosystem conditions that are capable of supporting naturally occurring species	o Ecosystem Condition o Reforestation status of harvested areas o Maintenance of net forest landbase

Defined DMI Objectives

- Maintain natural ecosystem function through coarse filter management at multiple scales
- Ensure genetically diverse, regionally adapted, diverse populations of tree species.
- Work to minimize the spread of noxious or restricted weeds through annual planning and implementation of weed control plan.
- Losses of forest due to insect and disease epidemics are monitored and controlled where possible and economical.
- Create a future forest with natural species composition, arrangement, and ecological processes.
- Meet the applicable reforestation standards.
- Minimize conversion of forest land to other uses through co-operative planning efforts.

CCFM Criterion 3

Stewardship Principle	Element	Identified Values
Conservation of Soil and Water Resources - Conserve soil and water resources by maintaining their quantity and quality in forest ecosystems.	Conserve soil resources by maintaining soil quality and quantity.	o Soil Productivity
	Water Quality and Quantity Conserve water resources by maintaining water quality and quantity.	o Water Quality o Water Quantity

Defined DMI Objectives

- o Minimize area of soil with reduced productivity due to rutting and/or erosion by complying with all applicable ground rules and regulations
- o Minimize impact on soil productivity by minimizing disturbed area in blocks
- o Construct, maintain and reclaim roads in a manner that minimizes erosion of forest soils.
- o The company will work to avoid and mitigate spills of hazardous materials.
- o Conduct operations so as to have no negative impact on water quality
- o Watercourse crossings are installed in compliance with Code of Practice for Water Crossings, ground rules, and all applicable regulation
- o Permanent watercourse crossings are inspected annually.
- o Temporary water crossings are reclaimed as per all applicable ground rules and regulation
- o Establish and protect water buffers as per all applicable ground rules and regulation
- o Forestry operations are excluded from deeply incised valleys and soils with high slumping potential.
- o Maintain incremental water flow impacts resulting from forestry operations below target levels within defined functional watersheds.

CCFM Criterion 4

Stewardship Principle	Element	Identified Values
Forest Ecosystem Contributions to Global Ecological Cycles -Maintain forest conditions and management activities that contribute to the health of global ecological cycles.	Carbon Uptake and Storage Maintain the processes that take carbon from the atmosphere and store it in forest ecosystems.	o Ecosystem Function
	Forest Land Conversion Protect forestlands from deforestation or conversion to non-forests.	o Maintain net forest area

Defined DMI Objectives

- o Implement coarse filter management at the landscape and stand levels
- o Minimize landbase loss to other uses; Maintain productivity

CCFM Criterion 5

Stewardship Principle	Element	Identified Values
Multiple Benefits to Society -Sustain flows of forest benefits for current and future generations by providing multiple goods and services.	Timber and non-timber benefits - Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits.	o Sustainable timber supplies
	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	o Wildfire risk to communities o Participation Opportunities o Timber Productivity

Defined DMI Objectives

- o Establish annual allowable cuts that utilize the most current information, public values, and business needs.
- o Participate in *FireSmart* initiatives with Alberta to minimize fire threat to communities immediately adjacent to FMA.. Assess fire threat.
- o Work with stakeholders to complete their fire protection plans
- o Provide opportunities and facilitate stakeholder participation in planning.
- o Maintain long run sustained yield average timber supply.

CCFM Criterion 6

Stewardship Principle	Element	Identified Values
Accepting Society's Responsibility for Sustainable Development -Society's responsibility for sustainable forest management requires that fair, equitable, and effective forest management decisions are made.	Aboriginal and treaty rights -Recognize and respect Aboriginal and treaty rights.	o Respect for the rights of Aboriginal peoples
	Respect for Aboriginal Forest Values, Knowledge, and Uses Respect traditional Aboriginal forest values and uses identified through the Aboriginal input process	o Respect for Aboriginal forest values identified through the consultation process
	Public Participation -Demonstrate that the SFM public participation process is designed and functioning to the satisfaction of the participants.	o Public satisfaction with consultation process

Defined DMI Objectives

- o Ensure respect for Aboriginal rights through a program of relationship building with affected communities
- o Incorporate wherever possible, aboriginal values into the final selected scenario.
- o Report on public response to participation process