

**LP Canada Ltd.**

**Swan Valley Forest Resources Division**



**STANDARD OPERATING GUIDELINE**

***HARDWOOD  
SILVICULTURE***

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## **STANDARD OPERATING GUIDELINES (SOG's)**

### **1.0 General Overview**

LP Canada Ltd. (LP) is committed to working closely with surrounding communities that may be affected by forest management operations and to ensuring orderly development of the forest resource to accommodate all forest values.

Originally LP included a group of Standard Operating Procedures (SOP's) in Section 9 of the 10 Year Forest Management Plan (FMP). With the subsequent development of an Environmental Management System (EMS) for the Swan Valley Operations, it is appropriate to adapt the original SOP's into a complimentary set of Standard Operating Guidelines (SOG's) within the EMS.

LP Canada Ltd. is committed to the implementation of ecosystem based management within FML #3 and is presently developing the required infrastructure. This includes the development of an ecosystem based resource inventory, adjustments to planning and operational practices and the research necessary to achieve a better understanding of the ecosystems present and the processes occurring within them.

### **1.1 Sustainable Forest Management (SFM)**

The Canadian Council of Forest Ministers (CCFM) began a process in 1993 to define measure and report on the forest values Canadians want to sustain and enhance. The CCFM, along with technical and scientific advisors to lend support, consulted with officials and scientists of federal, provincial and territorial governments, experts from industry, the academic community, non-governmental organizations, the Aboriginal community and various other interest groups. The results of these consultations were documented in *Defining Sustainable Forest Management: A Canadian Approach to Criteria and Indicators* (1995). The development of these criteria and indicators (C & I) was an important step in meeting Canada's domestic commitments on sustainable forest management.

The purpose of the Criteria and Indicators are to provide a common understanding and scientific definition of sustainable forest management in Canada. Together they form a framework for describing and measuring the state of our forests, forest management practices, values and progress towards sustainability. This information is then used to develop forest management policy and to determine areas where research is required to fill information gaps and develop new technologies. The C & I approach not only recognizes that forests are ecosystems but also realizes forests provide a wide range of social, economic and environmental benefits to Canadians and realizes the necessity of public education and participation in the process of sustainable forest management.

There are six criteria relating to sustainable forest management. Each criterion has been broken down into 27 elements to yield 83 indicators to help track progress in

achieving sustainable development and social, economic and environmental objectives. The six criterion of SFM are:

- Conservation of biological diversity.
- Maintenance and enhancement of forest ecosystem condition and productivity.
- Conservation of soil and water resources.
- Forest ecosystem contributions to global ecological cycles.
- Multiple benefits of forests to society.
- Accepting society's responsibility for sustainable development.

LP is striving towards sustainable forest management, as defined by the above criterion, in its forest management practices. These SOG's are a partial fulfillment of SFM. The Stakeholders Advisory Committee plays an integral role in the public participation, contribution of societal values and knowledge dissemination component of SFM. Pre-harvest surveys, permanent sample plots, ecological monitoring and research programs contribute to SFM by providing baseline data, site specific ecological information and enable LP to identify areas where more information is required.

## **1.2 Objectives of the Standard Operating Guidelines**

The EMS and SOGs provide a framework for the company to achieve and maintain a particular standard, as set out in these documents as well as the approved 10 Year FMP, Environment License 2191E and the FML #3 Agreement.

- The government's objectives will be met by the forest management planning process described in the EMS and the SOGs.
- Provide direction to LP for planning, implementing and monitoring timber harvest operations on the forest management area.
- Outline the planning and operating standards of Ecosystem Based Management for timber harvest, road development, reclamation and integration of timber harvesting with other forest uses.
- Describe the planning and submission requirements for timber harvest operations.
- The EMS and SOGs are dynamic enough to provide sufficient flexibility to accommodate most site conditions. The principles in the EMS and SOGs are considered to be the normal expectations for harvest operations.
- The EMS and the SOGs are expected to be applied using sound judgment based on practical experience and technical competence.
- The EMS and SOGs provide documentation, structure and accountability associated with a particular activity.

Ecosystem based management refers to the development of management systems that attempt to simulate ecological processes with the goal of maintaining a satisfactory level of diversity in natural landscapes and their pattern of distribution in order to ensure the sustainability of forest ecosystems and forest ecosystem processes (Canadian Council of Forest Ministers, 1997).

The SOGs are unique to FML #3. They have been developed with specific reference and compliance to Federal and Provincial legislation, regulations and guidelines, and the requirements and conditions of the FML #3 agreement signed in September 1994, with the Province of Manitoba. They are also consistent with the requirements as set out in Environment Act License 2191E issued to LP in 1996.

Many of the provisions, options and approaches in these SOGs may be considered for other jurisdictions, but they cannot be considered as a precedent for those jurisdictions. These provisions are based on concerns and conditions specifically related to operations within FML #3. They take into account potential future uses. They are an interrelated set of provisions, and not stand-alone solutions.

The EMS and SOGs ensure LP meets or exceeds government regulations. They cannot, however, be considered a final position. Rather, they are part of a dynamic plan that will adapt or adjust as determined by legislation or societal attitudes, interests and concerns. As the SAC will assist LP throughout the years in operational planning, ongoing review of the EMS and SOGs will be part of LP's adaptive management planning.

## **2.0 Hardwood Silviculture Practices**

Louisiana-Pacific Canada Ltd. (LP) is committed to implementing forest renewal and stand management practices in all stands that were harvested subsequent to the date of the signing of the Forest Management License Agreement 3 (i.e. Sept. 21<sup>st</sup>, 1994). LP is responsible for all hardwood renewal in Forest Management Licence 3, both Quota Holder hardwood blocks and LP hardwood blocks. LP performs all hardwood reforestation activities, financed by a hardwood renewal account.

LP's forest renewal strategy is to reforest harvested ecosystems to their original tree species composition at the landscape level. Hardwood renewal is primarily accomplished through natural regeneration.

## **3.0 Hardwood Regeneration Strategies and Tactics**

A significant portion of the licence area are pure hardwood or hardwood mixedwood stands. Typical harvest areas are predominantly aspen, but also contain some balsam poplar, white birch, and residual white spruce.

Modified clear cutting is the most appropriate silvicultural system utilized within the hardwood ecosystem. Aspen, poplar and birch are aggressive pioneer species that have the ability to regenerate vegetatively by 'suckering' from the roots or coppice growth from the root collar of the stump. Removal of the overstory tree canopy creates hormonal changes, stimulating suckering. Increased soil temperatures also trigger aggressive suckering, resulting in dense, vigorous natural regeneration. Hardwood

ecosystems regenerate quickly after logging, and establish a dense, vigorous hardwood stand.

There are many factors which influence the regeneration capacity of young hardwood stands. These factors include:

- machine traffic levels, especially skidding and avoidance of soil compaction;
- previous site disturbances ('high-grade' logging of conifer from mixedwood stands);
- competition from grasses and shrubs; and
- amount of residual overstory and leave tree structure density, health and vigour.

#### **4.0 Hardwood Regeneration Surveys**

All harvested hardwood areas are regeneration surveyed three to five years post-harvest to determine regeneration stocking. If a significant portion of a hardwood cutblock is inadequately regenerated, supplementary silvicultural treatments will be applied if at all possible.

All persons performing regeneration surveys for LP (staff or contractors) will be licenced regeneration surveyors through the province of Manitoba. Approved Manitoba provincial methods and procedures outlined within the current province of Manitoba hardwood regeneration survey manual will be followed.