

**LP Canada Ltd.**

**Swan Valley Forest Resources Division**



**STANDARD OPERATING GUIDELINE**

***PLANNING***

Revised: June 22<sup>nd</sup>, 2016

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# STANDARD OPERATING GUIDELINES (SOG's)

## 1.0 General Overview

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

Originally LPC 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 criteria 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.

LPC 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 LPC to identify areas where more information is required.

## **1.2 Stakeholders Advisory Committee**

LPC established a Stakeholders Advisory Committee (SAC) at the beginning of the Ten-Year FMP process (1994) to ensure related concerns were discussed and addressed as early as possible. This ongoing committee includes representatives of provincial government departments, independent loggers, Timber Quota Holders, Duck Mountain Trappers Association, Metis organizations, Parkland Trails Snowmobile Association, environmental groups, First Nations, conservation groups, anglers, outfitters, cottage owners, and other representatives from various communities and organizations. The SAC has been important in helping define and develop the SOGs to be used throughout the planning and implementation of forest management operations within Forest Management License (FML) #3. The SAC has been instrumental in providing information during the preparation of detailed annual operating plans.

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 LPC 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 Environmental Management System and SOGs ensure LPC 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 LPC throughout the years in operational planning, ongoing review of the EMS and SOGs will be part of LPC's adaptive management planning.

### **1.3 Objectives of the SOG's**

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 LPC 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).

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## **2.0 Planning Framework**

### **2.1 Forest Management Planning**

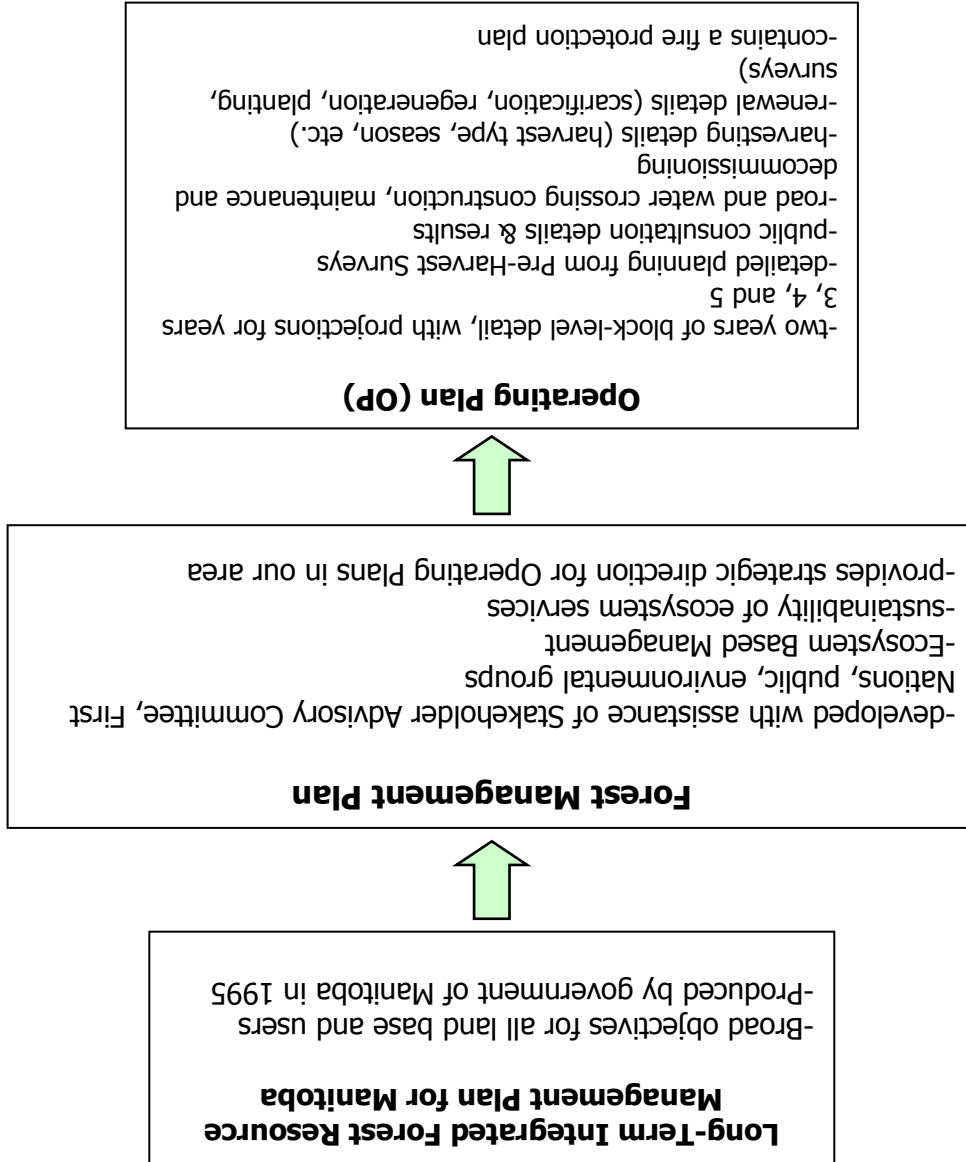
Numerous forest resource values are considered by LPC in the design of harvest blocks at the stand and landscape levels. These include watersheds, exceptional features, protected areas, silviculture, aesthetics, wildlife, fisheries, harvesting economics, site features, stand type and the needs of other users.

Harvest block boundaries are located along natural boundaries and usually follow natural terrain and/or stand boundaries to minimize the effect on the aquatic and terrestrial ecosystems, aesthetics, the potential for blowdown.

- To sustain resources, enhance productivity and improve environmental quality and human health.
  - To improve and diversify income and job opportunities through the management, protection and development of land and water resources.
  - To manage resources and related activities to preserve development options for the future.
- Long-term Forest Management Plans (FMPs) are developed with assistance from the Stakeholder Advisory Committee (SAC) and must meet or exceed applicable Federal and Provincial Acts and Regulations. The Long Term FMP objectives are:

## 2.2 Long Term Forest Management Plans

Figure 1. Forest Management Planning Process



- To protect ecological systems, maintain the genetic diversity of species, and preserve the resilience and productivity of the natural environment.

A forest management plan is a document containing pertinent information and prescriptions by which forest policy and objectives are translated into a set of specific treatments on a forest landscape for a specified period of time.

- Describes objectives and strategies to manage the ecosystems within FML #3 over the long term, while recognizing and considering the needs of other resources and users of those resources
- Illustrates ecosystem-based management
- Demonstrates sustainability of ecosystem services
- Provisions to address aesthetic, ecological, historical or cultural considerations
- Forest renewal and stand management activities
- Monitoring plan

The forest management planning process includes a series of forest management plans covering various time periods. Typical planning time frames range from 1 – 20 years in length in order to allow for longer-term, intermediate-term and shorter-term perspectives on harvesting and reforestation activities. Short term plans (Operating Plans) typically provide details on two years' road building, harvest, and silvicultural operations along with a projection for future years. Long term plans (10 – 20 years) typically provide more information on landscape issues and solutions, and models sustainability of timber and non-timber resources several rotations into the future.

### **2.3 Operating Plans**

Operating plans are prepared within the controlling framework of the Long Term FMP, and the Standard Operating Guidelines (SOGs). These are developed in accordance with various Federal and Provincial policies and guidelines.

Planners design proposed harvest blocks by taking many factors into consideration, such as stand type, terrain, water and exceptional features. These blocks receive a Pre-Harvest Survey to collect a wide variety of site-specific ecosystem data. Harvest survey data is reviewed and proposed harvest blocks may be edited (*e.g.* boundary and/or prescription change) if warranted.

The layout of harvest areas, construction and tenure of access roads, harvest scheduling, renewal, and road construction operations will be conducted in an environmentally sensitive manner. Considerations for structure retention, understory protection, mitigating impacts on fish and wildlife species and minimizing impacts of insects and diseases on regenerating forests are incorporated into planning.



Harvest blocks receive a unique number. A Pre Harvest Cutblock Prescription is generated for each proposed harvest block. Maps and volume information are generated for harvest blocks by operating area.

### **3.0 Block-Level Planning**

Forest planners consider many factors when developing potential harvest blocks. Detailed harvest information is provided for all harvest blocks. For those blocks falling within areas identified as having a severe erosion risk, or found to be such during the pre-harvest surveys, further information will be prepared on managing these areas. This information is provided as mutually agreed upon between LPC and the Province of Manitoba during the review of the OP. The detailed harvest information provided will include necessary information to address the specific resource considerations for the harvest block.

#### **3.1 Season of Harvest**

Forest planners consider and assign a season of harvest (i.e. winter, dry/frozen, or all-season) to each cutblock. Permanent moisture conditions (i.e. Soil Moisture Regime and drainage class) of both the proposed cutblock and proposed access are considered.

#### **3.2 Operability**

Specific operating conditions and the type of harvest equipment to be used is based on the nature of the soils and soil moisture conditions, slope, timber volumes, stand structure, contractor availability, season, potential for erosion and safety considerations.

#### **3.3 Water Features**

Water features (*e.g.* wetlands, lakes, streams, etc.) will be considered and managed appropriately during the planning phase. Forest along water features may be managed or buffered, depending upon site-specific characteristics and the social values of the water feature.

#### **3.4 Cover Type**

Deciduous and coniferous cutblocks are planned according to provincial guidelines and the silvics of the tree species.

Mixedwood cutblocks are harvested with the following in mind:

- Where there is merchantable hardwood in a conifer stand, the hardwood is harvested in conjunction with the conifers.
- Where there are conifers in a hardwood stand, the conifers may be left as single trees or clumps for wildlife purposes, or they may be harvested simultaneously.
- Where an isolated bluff of conifers is present in a large contiguous hardwood block, it may be harvested or left for seed trees.

### **3.5 Integrated Harvesting Practices**

As detailed in the FML agreement, harvesting operations are integrated as much as possible to accommodate softwood and hardwood harvest. Volumes harvested by quota holders and licencees, are coordinated to provide full use of the timber resource, as well as to minimize duplication of effort.

### **3.6 Contingency Planning**

Contingency blocks are supplemental areas identified for potential harvest if there are unforeseen shortfalls of wood that may be caused by early breakup, late freeze-up or wet summer soil conditions. Contingency blocks are specified in the OP in the same detail required for harvest blocks.

### **3.7 Second-Pass Cutblocks**

Second and third pass removals are allowed only when the adjacent previously harvested cutblocks have reached as defined in the province of Manitoba's guidelines. The timing of harvest can be shortened or lengthened for specific sites if there are wildlife habitat concerns, watershed protection, timber loss from disease or blowdown, with the Province of Manitoba's consent.

## **4.0 Forest Protection**

Fires, insects, and diseases are natural disturbances that affect the forest. LPC attempts to minimize the negative effects of these natural disturbances by implementing cooperative and pro-active approaches to planning.

### **4.1 Fire Protection Plan**

Under Paragraph 23 of LPC's Forest Management License Agreement (1994), the Province of Manitoba is responsible for all forest protection services including protection from fire, insect and disease within FML # 3. The Mountain Forest Section has many values to a variety of stakeholders, and therefore must be protected against wildfires. LPC cooperates fully with the Province of Manitoba in the prevention, detection, and suppression of forest fires within the Mountain

Forest Section. The Fire Protection/Suppression Plan, as part of the Annual Operating Plan includes detail regarding equipment, manpower and transportation facilities available for the prevention, detection and suppression of forest fires in FML # 3, as well as Forest Management Units 12 and 14.

## 4.2 Insects and Disease

Insects and diseases are part of forest ecosystems. Insects are a very important part of the food chain and are eaten by birds, bats and other forest dependent species. Insects also pollinate many flowering plants. It is important to know, however, when insect population levels change from normal (or endemic) levels to localized extreme (or epidemic) levels. Harvest and renewal planning must be aware of the presence and severity of insect and disease infestations to properly manage the forest and ensure adequate regeneration. Failure to account for insects and disease may have serious impacts on the future forest. The best opportunity to identify any localized forest health problems is during field work, such as during a Pre-Harvest Survey, plantation assessment, regeneration survey, or free-to-grow survey. LPC follows the Province of Manitoba Forest's Health and Ecology requirements by:

- a) training field staff to identify significant insects and diseases with help from the Province of Manitoba;
- b) tallying trees with health problems at each plot;
- c) rating each pest by tree species and severity level when traveling between plots;
- d) sending forest health data to the Province of Manitoba Forest Health for a 'coarse filter' screening.

LPC field surveys have, in previous years, found severe infestations of *Armillaria* root rot (*Armillaria mellea*), Western gall rust (*Endocronartium harknessii*), forest tent caterpillar (*Malacosoma disstria*), *Hypoxylon* canker (*Hypoxylon mammatum*) and poplar borer (*Saperda calcarata*).

In cooperation with the province of Manitoba, LPC has adjusted its Operating Plan to accommodate for several outbreaks of pest infestations over the past several years. LPC will continue to work cooperatively with the Province of Manitoba Forest Health and Ecology in this regard.

The Forest Management License (FML) Agreement between the Province of Manitoba and LP Canada Ltd. (LPC) states that: *23 B ii) Similarly, an annual [insect and disease] plan shall also be submitted on Feb. 1st each year.* This annual insect and disease plan outlines any activities the Company proposes for the protection and/or management of any known insect or disease problem on FML 3. Instead of submitting an independent insect and disease plan on Feb. 1st of each year, insect and disease site-specific strategies are integrated into the Annual Operating Plan, which is submitted on Feb. 28th of each year.

### **4.3 Forest Protection Planning Requirements**

Issues relating to forest protection are included in the OP where a concern may exist. Concerns that may be addressed include:

- Sensitive sites or critical habitats or sites vulnerable to insect and disease damage in future years of the harvest projection.
- Management prescriptions for harvest and renewal strategies as related to forest protection.
- Planning rationale in support of forest renewal objectives especially as they apply to insect and disease protection measures.
- Minimizing impacts of insects and disease on regenerating forests.

## **5.0 Design Considerations for Wildlife Management**

### **5.1 Wildlife Habitat Planning**

Wildlife habitat is strongly considered while planning cut and leave areas. LPC can influence habitat, but LPC does not manage wildlife populations. The province of Manitoba is responsible for wildlife management.

### **5.2 Wildlife Guidelines**

Commitments to meeting the wildlife objectives will be shared by LPC, the province of Manitoba and the SAC. Each group will strive to ensure that the intents and objectives pertaining to flora, fauna, ecosystem management and conservation within FML #3 are met. To assist in meeting the objectives, all participants should be aware of relevant guidelines. Guidelines which are used in wildlife planning are The Forest Management Guidelines for Riparian Management Areas, Terrestrial Buffer Guidelines, The Forest Management Guidelines for Wildlife in Manitoba, Roads Management, and The Recommended Fish Protection Procedures for Stream Crossings in Manitoba.

LPC's biologist, provincial biologists, and the SAC will make recommendations on detailed aspects of wildlife planning and management during the preparation and review of OPs. The above guidelines are a minimum requirement. Where possible, operations and methods will be adapted to better manage habitat planning.

## **6.0 Recreational and Cultural Planning**

### **6.1 Planning Considerations**

To ensure that other ecosystem services continue within the FML area, the following are considered in the planning process:

- access
- alternate uses
- stakeholder considerations
- parks/closed areas
- exceptional features
- buffers (aesthetic, riparian, research etc.)
- adjacency
- heritage sites
- natural boundaries
- topographic considerations
- insects & disease
- block size

### **6.2 Recreational Considerations**

FML #3 provides a wide range of benefits to local communities and Manitobans, independent of forestry. The Duck and Porcupine Mountains are renowned as superb hunting, fishing, and camping areas. The area has supported a strong trapping tradition and is an attractive destination for wilderness and cultural enthusiasts. Recognition of other resource values in FML #3 will be documented and integrated into various Forest Management Plans. Recreational, commercial, and cultural planning requirements will be addressed early in the process.

Outfitters operate in the licence area. Bear bait sites and other outfitting infrastructure such as access trails will be managed or mitigated with individual outfitters. Deer outfitters will likewise be incorporated into the planning process or mitigated, as appropriate.

Snowmobiling and ATV use have become popular activities in the FML #3 area. Many of the trails used are old logging roads that may occasionally be utilized for logging purposes. When and if this occurs, the various clubs will be contacted in advance and arrangements made to minimize disruptions.

Proposed harvest blocks adjacent to traditional trails may incorporate buffers along the trail, to ensure the aesthetics are maintained.

### **6.3 Heritage Resource Considerations**

Heritage resources are works of nature or human activity having prehistoric, historic, cultural, natural, scientific, or aesthetic value. The potential impacts to heritage resources from forestry operations focus upon the disturbance of sites and their contents. Roads have a greater potential impact to heritage resources than harvest blocks.

Pre-Harvest Surveys may identify potential heritage resources sites. The required mitigation measures for significant sites are determined by the Historic Resources Branch in consultation with LPC.