

## Volume 2, Issue 4 - Forest Renewal Issue

### Introduction

Welcome to the forest renewal newsletter. Forest renewal is one of the components of silviculture. Silviculture is the science and practice of controlling the establishment, composition, growth, health and quality of forests. This issue describes the steps involved in renewing the forest after harvesting including the systems used and where our seedlings are grown, as well as highlights of the Swan River urban forest committee.



Tree planters planting a cutover.

Forest renewal is an important part of LP's commitment to responsible forest management and land stewardship. LP has been assigned all obligations and responsibilities with respect to forest renewal and stand management within Forest Management Licence 3 (FML 3). Under the FML Agreement, LP must ensure that all harvested areas within FML 3 are regenerated to approved Provincial Standards. This commitment to forest renewal will ensure a perpetual yield from the productive forest lands that are harvested, as well as the maintenance of healthy forested ecosystems within FML 3.

All reforestation activities within FML 3 are financed by a Forest Renewal and Stand Management Trust Fund (Fund). LP and all Quota Holders harvesting merchantable timber from FML 3 contribute a fee to the Fund whose proceeds are used to ensure adequate and reasonable reforestation and stand management for the FML. This fund is administered by LP and audited by Manitoba Conservation.

LP's reforestation strategy is to regenerate harvested sites with tree species that were present before harvest. Although LP does not utilise softwood trees, LP has planted 10 million softwood trees since 1997 on areas where softwood was harvested. Regeneration is achieved through a variety of silviculture systems (see p. 4) that balance the ecology of the forest with the unique requirements of each tree species. Regeneration occurs naturally for some species, whereas others require tree planting or seeding. All silviculture management prescriptions and objectives are based on an assessment of the ecosystem prior to harvesting, and are mitigated and approved by Manitoba Conservation.

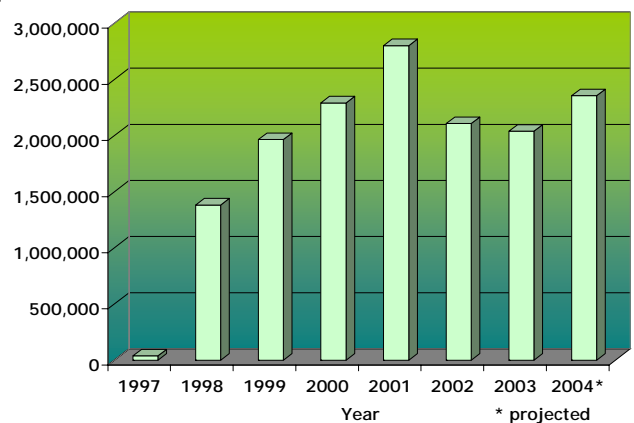
The Company's silviculture activities have dramatically increased over the last several years with the following initiatives: cone/seed collection, tree planting, site preparation and scarification, forest plantation survival assessments, forest regeneration surveys, stand tending and maintenance, establishment of tree improvement sites (family tests and seed orchards) and silviculture research trials.

#### Best Practices Meetings

June 1 Crown Land

June 2 Private Land

June 2 Truck Owner / Operator

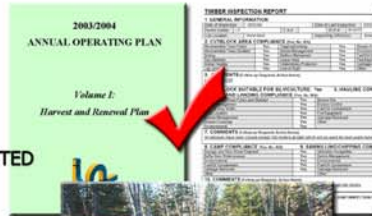


Number of trees planted per year within FML 3.

# Forest Renewal Overview

1

**FOREST RENEWAL PLAN APPROVED, HARVEST AND FINAL INSPECTION COMPLETED**



LP STAFF REVIEW THE APPROVED ANNUAL RENEWAL PLAN (PART OF THE ANNUAL OPERATING PLAN) PRIOR TO PROJECT IMPLEMENTATION. HARVESTING OF BLOCK COMPLETED AND FINAL INSPECTION IS ISSUED BY THE GOVERNMENT. FOREST RENEWAL ACTIVITIES MAY BEGIN.

2

**CONTRACTOR PRE-WORK**



A CONTRACTOR PRE-WORK MEETING IS HELD PRIOR TO STARTING EVERY FOREST RENEWAL ACTIVITY. THIS MEETING IS IMPORTANT TO COMMUNICATE THE RENEWAL PRESCRIPTION TO THE CONTRACTOR AND THEIR EMPLOYEES. AT THIS TIME, SPECIAL CONCERNS AND ISSUES ARE DISCUSSED. PRE-WORKS ARE DOCUMENTED BY LP AND SIGNED-OFF BY THE CONTRACTOR.

3

**CONE/SEED COLLECTION AND PROPAGATION**



SEED IS COLLECTED LOCALLY TO GROW SEEDLINGS AT PINELAND FOREST NURSERY FOR PLANTING. SEED COMES FROM NATURAL STANDS AS WELL AS THE COMPANY'S SEED ORCHARD SITES.

4

**SITE PREPARATION**



HARVESTED AREAS ARE SCARIFIED IN ORDER TO INITIATE NATURAL REGENERATION PROCESSES, AS WELL AS TO PREPARE THE HARVESTED AREA FOR TREE PLANTING.

5

**SEEDLING SNOW CACHES AND TREE PLANTING**



SEEDLINGS ARE SHIPPED AND STORED IN THE HARVEST BLOCK IN FEBRUARY FOR PLANTING IN MAY, JUNE AND AUGUST. PLANTING IS CONCENTRATED WITHIN THE MIXEDWOOD AND CONIFEROUS HARVESTED ECOSYSTEMS. SPECIES PLANTED ARE WHITE SPRUCE, BLACK SPRUCE AND JACK PINE.

6

**SURVEYS AND MONITORING**



ALL HARVESTED AREAS ARE SURVEYED TO MONITOR FOREST REGENERATION SUCCESS. ALL HARVESTED AREAS MUST MEET OR EXCEED PROVINCIAL FOREST REGENERATION STANDARDS.

7

**STAND TENDING AND MAINTENANCE**



SOME PLANTED AREAS MAY REQUIRE TENDING IN ORDER TO ENSURE THAT THE YOUNG SEEDLINGS BECOME ESTABLISHED AND 'FREE GROWING' FROM COMPETING VEGETATION.

8

**REGULAR INSPECTIONS**



DURING ALL FOREST RENEWAL ACTIVITIES FREQUENT INSPECTIONS ARE CONDUCTED. THESE INSPECTIONS ENSURE THAT THE FOREST RENEWAL PLAN IS BEING ACHIEVED AND THAT ALL STANDARD OPERATING GUIDELINES ARE BEING FOLLOWED, ALONG WITH ALL APPLICABLE LAWS AND REGULATIONS. THESE INSPECTIONS ARE DOCUMENTED BY THE COMPANY AND SIGNED BY THE FOREST RENEWAL CONTRACTOR.

9

**CERTIFICATE OF REFORESTATION**



HARVESTED AREAS, WHICH MEET PROVINCIAL FOREST REGENERATION STANDARDS, ARE AWARDED A 'CERTIFICATE OF REFORESTATION'. BY ACHIEVING THIS CERTIFICATE, THE HARVESTED AREA IS OFFICIALLY DEEMED SUCCESSFULLY REGENERATED.

## Swan River Urban Forest Committee

In January of 2000, a small group of concerned citizens and some employees from the Town of Swan River got together to discuss the Dutch Elm Disease (DED) problem and secure funding for DED surveillance. Since then the committee has expanded and enhanced its purposes to include a tree nursery, arboretum and an on-going greening program for the long-term beautification of the Town of Swan River.

The key activities for this volunteer group include: tree nursery management, Annual Arbour Day Events, care for newly planted trees (watering and pruning), establishing the Arboretum, Dutch Elm surveillance, and promoting a green environment for living trees in the community. Each year in early May the committee promotes "Arbour Day", where volunteers come together and plant up to 200 shade trees in the community.



Elementary school students taking part in Annual Arbour Day Events.

These trees, from 3 to 7 feet in height, are grown in the local nursery or purchased from private nurseries and transplanted to the community's boulevards and parks. In the last four years, approximately 1,000 trees have been planted including basswood, spruce, maple, oak and other native species. In the next few years the committee is working towards the enhancement and development of Green Spaces. Funds for these works come from a variety of grants from local residents and businesses, hydro, and municipal and federal sources. The Town of Swan River and LP are major partners in these projects. This year's special project is to raise capital funds for a water truck.

In the fall of 2004 20 trees will be planted on Main Street in preparation for the town's Centennial in 2008. Our take home message is "*Keep the Community Green*". The committee is always looking for members and anyone can contact Francie Baird, Chairperson at 204-734-2278 or the Town of Swan River Office 204-734-4586 for more information.

## Pineland Forest Nursery

In 8 years LP has planted 10 million trees all of which were grown at Pineland Forest Nursery in Hadashville, Manitoba. Pineland was originally established in 1953 to produce bareroot seedlings for the Province of Manitoba and has been producing greenhouse grown containerized seedlings since the early 1970's. Pineland Nursery is currently owned by the Manitoba Government and is run as a self-sustaining "Special Operating Agency". Pineland has just celebrated its 50th Anniversary.

Pineland's range of services includes custom grown containerized seedlings, seed processing, cold storage for seedlings, and seedling delivery.

It also participates in a variety of Research and Development endeavours. LP is working with Pineland on a multi-year stock trial that will aid in determining the best stock types for various conditions.

The nursery supplies up to 20 million seedlings a year for companies, governments, associations and private landowners from Manitoba, Alberta, Saskatchewan, Ontario, Minnesota, and Michigan. Each crop is tailored to suit the geographic range and conditions.

The nursery grows white spruce, black spruce, Norway spruce, jack pine, red pine, eastern white pine, Scots pine, and they have produced smaller amounts of various other species; including willow, birch and poplar. There are 65 growing structures under 7.4 acres of polyethylene, which includes a state of the art gutter complex. This allows each crop to be treated individually.

LP works closely with the 20 core staff at Pineland to ensure that the seedlings meet required specifications and are ready to be planted each spring and summer.



Aerial view of the Pineland Forest Nursery.

## Silviculture Systems

A silviculture system is a cycle of activities by which a forest stand or group of trees is harvested, regenerated, and tended over time. LP prescribes two silviculture systems when harvesting hardwood and mixedwood stands in western Manitoba: modified retention clear-cut and seed-tree. As part of these systems, LP also practices protection of advanced white spruce understorey.

Modified retention clearcutting results in the establishment of a new even-aged stand of trees that can be naturally regenerated and/or assisted by planting. Today's clear-cuts are termed modified retention because wildlife trees, snags, immature and non-merchantable trees are maintained. Treetops and branches are also left on site to maintain the site's biodiversity and nutrient productivity. Clearcutting simulates catastrophic events such as fire, wind, disease and insects. These natural events create a fully exposed microclimate, leading to regeneration of shade intolerant species. The direct sunlight warms the soil which in turn initiates and promotes suckering and sprouting.

The seed tree silviculture system retains scattered mature standing trees throughout the cut-block to provide a seed source for natural regeneration. LP typically leaves conifer seed trees singly or in clumps and incorporates them into wildlife leave patches/areas. This system results in retained trees that are more wind firm. The seed tree system is typically prescribed for the aspen/white spruce mixedwood stands.

Over three quarters of the hardwood and mixedwood stands harvested by LP have immature white spruce trees in the understorey. The protection of the white spruce understorey during harvesting reduces the necessity for assisted regeneration and is accomplished by pre-planning the harvesting strategy, training operators, modifying operating procedures, careful logging techniques and continuous on-site supervision.



Modified retention clearcut silviculture system.

## 10 Millionth Tree !

LP Canada Ltd. and the Mountain Quota Holders Association (MQHA) will be performing a commemorative planting of the 10 millionth tree within FML 3 during the 2004 Swan Valley Forestry Exhibition on Friday June 11<sup>th</sup>, 2004 @ 4:00 p.m. Industry, government, forestry contractors, and local stakeholders will be represented at the ceremony.