

Manitoba Natural Resources

Ten Year Forest Management Plan Submission Guidelines



Manitoba
Natural Resources



Foreword

Submission guidelines for Ten Year Forest Management Plans were developed in October 1996. These guidelines are periodically updated. This latest revision is in response to the Ten Year Plan to be prepared by Pine Falls Paper Company (PFPC). The updated guidelines will ensure the plan submitted by PFPC is consistent with provincial policy, practices and standards for sustainable forest management.

Companies who hold or are seeking a Forest Management Licence are required to develop forest management plans under The Forest Act. Existing Forest Management Licence Agreements specify that a long-range plan must be developed.

Ten Year Plans are submitted by the proponent to Manitoba Natural Resources. The plan is reviewed departmentally by appropriate branches and regional integrated resource management teams. The approval of a Ten Year Forest Management Plan is the responsibility of the Director, Forestry Branch, Manitoba Natural Resources.

TABLE OF CONTENTS

- 1.0 INTRODUCTION**.....1
 - 1.1 Guiding Principles**.....1
- 2.0 WOOD SUPPLY ANALYSIS**.....3
- 3.0 PUBLIC CONSULTATION REQUIREMENTS**.....5
 - 3.1 Public Consultation Plan**.....5
 - 3.2 Reporting Public Consultation**.....6
- 4.0 THE FOREST MANAGEMENT PLAN**.....7
 - 4.1 Introduction**.....7
 - 4.2 Project Description**.....7
 - 4.3 Forest Resource**.....7
 - 4.3.1 Biophysical Description.....8
 - 4.3.2 Forest Administration.....8
 - 4.3.3 Historic Forest Description.....8
 - 4.3.4 Current Forest Condition.....9
 - 4.3.4.1 Forest Inventory.....9
 - 4.3.4.2 Landscape Diversity.....10
 - 4.3.4.3 Wildlife Habitat.....10
 - 4.3.4.4 Forest Productivity.....10
 - 4.3.5 Other Resource Uses.....11
 - 4.4 Planning Context**.....11
 - 4.4.1 Legislation and Policy.....11
 - 4.4.2 Resource Goals.....12
 - 4.4.3 Criteria and Indicators for Assessing Sustainability.....12
 - 4.4.4 Third Party Operations.....12
 - 4.5 Preferred Management Approach**.....13
 - 4.5.1 Management Objectives.....13
 - 4.5.2 Management Strategies.....14
 - 4.5.3 Development Activities.....15
 - 4.5.4 Evaluation of the Preferred Management Approach.....17
 - 4.6 Operating Practices**.....17
 - 4.7 Forest Resource Information**.....17
 - 4.8 Compliance Monitoring and Assessment**.....18
- 5.0 IMPLEMENTATION STRATEGY**.....19
- GLOSSARY OF TERMS**.....21

1.0 Introduction

Planning for the management and use of the forest resource is essential to ensure the sustainability of Manitoba's forests. Goals, objectives and strategies are established through planning to guide land and resource based activities, and minimize land and resources use conflicts.

Traditionally, forest management planning in Manitoba emphasised sustained yield timber management. *Applying Manitoba's Forest Policies*, developed as part of Manitoba's overall sustainable development strategy, establishes the need to balance economic objectives with environmental and social needs. In 1996, *Manitoba's Forest Plan* was released with a commitment to move to sustainable forest management using an ecological approach.

The purpose of these guidelines is to provide direction for developing long term forest management plans that are consistent with Manitoba's commitment to sustainable development and an ecosystem approach to achieving sustainable forest management.

1.1 Guiding Principles

The planning process for forest management in Manitoba is based on the following principles.

Sustainable Forest Management

Forest management planning will be based on the concept of sustainable forest management. While existing Forest Management Licence (FML) agreements require sustained yield timber management, forest planning will move towards sustainable forest management.

The practice of sustainable forest management requires different skill sets and a broader knowledge base than sustained yield timber management. The ability to prepare and implement forest management plans based on the concept of sustainable forest management will evolve over time as new data sets are created, research is carried out, and new skills are acquired .

Ecosystem Based Management

Forests will be managed as ecosystems to conserve ecological integrity, long-term forest productivity and biological diversity, while providing an ecologically sustainable flow of natural resources and ecosystem services. Plans will be ecologically based, recognize relationships among the various components and their functions, and consider the impact of activities on the ecosystem.

Forest Management Units

Forest Management Unit (FMU) boundaries will continue to be the primary administrative unit. Forest management plans however, should recognize larger, ecologically relevant landscape units which will become the basis for sustainable forest management.

Collaboration and Participation

The approach to forest management planning will be open and consultative. The planning process should include extensive and ongoing public involvement. FML holders must include public consultation in developing forest management plans and as part of the plan implementation process.

In preparing plans forest companies will collaborate with appropriate government agencies, other resource industries, affected communities and the public. The Province also has a role in presenting government policy, legislation and objectives for sustainable use of Manitoba's forest lands and resources.

Continual Updating

Forest management planning is a dynamic process. Over time, forest management plans will:

- incorporate knowledge obtained through research initiatives and operational trials;
- reflect enhancements to forest management approaches resulting from new national direction, provincial policy or legislative changes;
- result in improved performance as changes are made, based on feedback from performance monitoring; and
- become more effectively linked with operational planning, ensuring day to day operations are consistent with objectives in long term plans.

Consideration of all Values

Sustainable forest management recognizes the timber resource and other values. Management of other forest resources is the responsibility of the Crown. These resources values must be considered by the forest industry in developing plans. Forest management planning will also recognize all current resource commitments.

Adaptive Management

Scientific knowledge will continue to expand, changing our understanding of how ecosystems work and how they are influenced by human activity. By remaining flexible and allowing for the incorporation of new knowledge and changing conditions, managers can incorporate new approaches to forest management and improve results over time.

Monitoring and Reporting

Monitoring is required to determine the progress being made towards achieving objectives for sustainable forest management and ensuring adaptive management is implemented. Reporting on results provides a way to measure progress and determine the effectiveness of planning strategies and management activities.

2.0 Wood Supply Analysis

The process used in development of the Ten Year Forest Management Plan must include a detailed analysis of the wood supply in the FML area. The modeling component of the analysis projects how the forest will develop, when managed to achieve the different objectives for various management alternatives identified in the plan.

The results of wood supply modeling must be evaluated against measurable indicators to help determine if the preferred management alternative is sustainable. The analysis must also be evaluated against management objectives, strategies and practices contained in the plan.

Manitoba Natural Resources (MNR) will provide the company with documentation requirements for verifying and confirming the wood supply analysis. This will include direction related to data collection, compilation, wood supply analysis and identification of the information and electronic data sets required by MNR. Resource constraints and assumptions used in the analysis must be documented as part of the verification process. These will be reviewed and approved by MNR as part of verifying proposed harvest levels.

The plan must include documentation of the results of the analysis for the proposed management approach and the evaluation of an even flow harvest level over two effective rotation periods. This harvest level is considered to be a simulation of the Long Run Sustained Yield Average (LRSYA). This approach is included in the plan for comparison purposes with the approach selected by the proponent. Information from the analysis that relates to the proposed management approach should indicate how results of the analysis are consistent with the management direction proposed (including objectives, strategies and practices) and indicate the linkages to the criteria and indicators identified in the plan.

3.0 Public Consultation Requirements

The public consultation process is an essential element of the Ten Year Forest Management Plan. It will provide much of the information necessary for establishing strategic direction. Formal public consultation opportunities can be provided at a number of stages in the planning process.

To facilitate a two-way flow of information, the proponent may consider developing information specifically for public consultation including:

- preparing summaries of resource information;
- presenting information on alternatives in a way that links proposals with community concerns and interests; and
- developing information using a less technical approach than required for the forest management plan.

3.1 Public Consultation Plan

The proponent is encouraged to develop a public consultation plan when preparing the Ten Year Plan. The public consultation plan should include:

1. The overall public involvement strategy to be followed by the company, including goals and objectives for public consultation;
2. A description of the planning stage(s) when consultation will occur;
3. A description of various stakeholders and public's roles, a list of public groups to be consulted, and consultation process(es) to be used;
4. An explanation of how public input will be reported and the results incorporated into the management plan.

3.2 Reporting Public Consultation

The Ten Year Forest Management Plan document must contain a section reporting on public consultation carried out as part of the planning process that:

1. Discusses how the public concerns have been addressed in the plan or will be addressed through other means;
2. Identifies how the proponent will establish a public consultation program to ensure ongoing and continuous public involvement during plan implementation, especially in local communities; and
3. Describes the mechanisms for future involvement of affected resource users, concerned interest groups and individuals, including public participation in evaluating annual plans.

Input from all sources of public involvement will be summarized and concerns documented.

4.0 The Forest Management Plan

The Ten Year Forest Management Plan will include several major components including:

4.1 Introduction

The plan must contain an introductory section that describes the document, explains the purpose of the document and sets the context for the forest management plan locally, regionally and provincially.

1. Introduction
2. Project Description
3. Forest Resource
4. Planning Context
5. Preferred Management Approach
6. Operating Practices
7. Forest Resource Information
8. Compliance Monitoring and Assessment

4.2 Project Description

The overall project, existing or proposed, will be described in terms of facilities, production capacity, wood supply requirements (including species utilization), nature of products produced, market(s) and benefits to the community.

Information about the company will be provided including company goals, corporate structure (staffing, organization, and technical capability), operating mandate, management philosophy and the broad policies under which the company operates.

4.3 Forest Resource

Information that describes the planning area, forest administration, historic forest conditions, current forest conditions and other uses within the proposed development area must be provided. Documentation should include maps at an appropriate scale, tables, graphs, lists and narrative.

4.3.1 Biophysical Description

A general physical description of the Forest Management Licence (FML) area is required. It should include, but is not limited to, information on climate, soils, geology, terrestrial and aquatic flora and fauna and water resources. Ecosystem classifications should be identified (eg. ecozones, ecoregions, ecodistricts). To the extent possible the descriptions should address ecosystem structure, function and processes.

4.3.2 Forest Administration

The company will provide:

1. An explanation of how forest lands are organized for administrative purposes. This should include Forest Sections, Forest Management Units, Provincial Forests, FML area boundaries, operating areas, status and ownership. The data is to be presented on a map suitable for display with a digital map provided to the MNR at a 1:1,000,000 level of detail.
2. An overview of how the FML area or Forest Section is administered, particularly proponent management responsibilities through negotiated agreement, provincial statute or both.

4.3.3 Historic Forest Description

The forest management plan must discuss the types of forest that occurred within the planning area in the past. This information is important in developing an understanding of the current forest condition and determining the desired future forest condition.

Changes in forest types and natural processes, fire disturbance history and the impact on future forest composition and structure must be identified. Other aspects such as disturbance size and pattern, stand size and associated flora and fauna will be noted. Where available, information on biodiversity, forest productivity and wildlife habitat and populations should be described with respect to historic trends and range of variability.

The section must contain information on past forestry operations. The discussion will be accompanied by maps at an appropriate scale and/or tables to describe all forest management activities, for the past ten year period, for the entire operating area by FMU. This information will act as a point of reference for linking past and proposed activities.

Information should include at a minimum:

1. Existing access development including roads class, ownership, status (for example active, retired, rehabilitated), stream crossings and access restrictions;
2. Harvested areas depicting year and type of harvest;
3. Renewal activities such as, areas scarified for natural regeneration, areas planted and stand tending (including information on vegetation management programs). The results of areas surveyed to meet provincial renewal standards will be linked to the renewal treatments previously completed. This must be done using a table that reconciles the current status of harvest areas with renewal activities; and
4. History of natural disturbances including fire, insects and disease.

4.3.4 Current Forest Condition

A description of the current condition of the forest provides the basis for planning the use and management of forest resources and establishes a benchmark for monitoring and reporting. Current forest condition must be described in terms of forest structure, composition, and function. This information must be linked in the plan to the indicators that will be used to measure progress toward achieving resource goals and management objectives. The plan should also contain discussion on how the current forest condition will influence the development of management strategies.

Information on the current condition of the forest must include:

1. Detailed breakdown of the forest resource inventory classification for productive and non-productive forest lands;
2. Description of landscape diversity;
3. Description of the habitat for selected wildlife species; and
4. Discussion on forest productivity.

4.3.4.1 Forest Inventory

To accurately describe the current forest condition, the forest resource inventory should be as up to date as possible. At a minimum it must be updated to reflect the results of depletion, renewal and stand tending activities for both naturally regenerated and artificially regenerated areas. The plan must indicate the date of the most recent forest inventory, how that inventory has been updated and the reliability of the information. Any enhancements to the inventory made by the proponent should be indicated. Analysis carried out using forest inventory data must use the updated database.

Forest lands within the FML area boundary not managed for timber extraction and renewal must be included in the description of the current condition, including the following:

1. Provincial parks, ecological reserves, and other protected areas and any lands permanently withdrawn from timber operations through legislation;
2. Areas where policy direction does not permit forest operations;
3. Forest lands that will be managed to meet goals for other values; and
4. Areas where forest operations have been deferred until some time in the future. (For example to meet adjacency requirements, wildlife guidelines and areas of special interest). These lands are part of the land base for determining timber production levels but are not available in the short term.

The following information must also be provided:

1. Overview of the productive forest by working group and cutting class including;
 - i) all areas depleted and successfully regenerated,
 - ii) areas depleted but not yet successfully regenerated,
 - iii) low volume stands,
 - iv) reserve areas,
2. Overview of productive and non-productive land categories by ownership/status, include information on the amount of area for each type and ownership/status class;
3. Significant anomalies in cutting class structure, species types and distribution; and
4. Area of non-productive forest.

Documentation on the forest inventory should include maps at an appropriate scale and/or tables. A digital map with information at 1:250,000 level of detail must be provided to MNR.

4.3.4.2 Landscape Diversity

Landscape diversity is an important part of the description on current forest condition. The measure of diversity can serve as a benchmark for biodiversity. The plan should contain the results of an assessment of landscape diversity at the FML area level.

4.3.4.3 Wildlife Habitat

The plan should indicate the selected wildlife species for which habitat needs must be addressed and include an assessment of habitat requirements. The habitat requirements should be related to the forest resource inventory.

4.3.4.4 Forest Productivity

An assessment of forest productivity should be included in the current condition of the forest.

4.3.5 Other Resource Uses

Some productive Crown forest lands within the boundary of the FML area will have been previously committed to other uses. Commitments such as parks and protected areas, Treaty Land Entitlements, highways and utility corridors and other Crown lands designations within the boundaries of an FML area do not constitute part of the company's FML agreement. The types of designations not included in the FML area are identified in the FML agreement when it is developed.

The plan will recognize commitments (claims, agreements) and describe the company's strategy for addressing potential land use conflicts. The plan will have a description of forest resources and other uses and activities that are dependent on forest cover. These should be described in terms of local, regional and provincial significance. All pertinent existing and proposed land use activities the company is aware of within the planning area should be described. Activities may include hydroelectric development, outdoor recreation, mining, agriculture, commercial tourism, trapping and wildrice harvesting.

The documentation of information should include maps at an appropriate scale for presentation and tables or graphic representation. A digital map at a 1:500,000 level of detail is to be provided to MNR.

4.4 Planning Context

The plan will contain a section that describes the context within which the plan has been developed and will be implemented. This includes information on:

1. Relevant federal and provincial legislation, policy and direction from other sources;
2. Broad provincial resource management direction (biological, social and economic);
3. Criteria and indicators to assess sustainability; and
4. Third party operations.

4.4.1 Legislation and Policy

The plan will reference government legislation, policies, plans and agreements that provide current direction. The company will:

1. List in an appendix all applicable acts, regulations, policy and guidelines that must be followed;
2. Identify requirements and responsibilities contained in FML agreements as they relate to planning and management obligations;
3. Reference *The Manitoba Environment Act* and the forest management activities to be licensed under this act;
4. Provide an explanation of the review and approval process at all levels of planning, including public consultation requirements.

4.4.2 Resource Goals

The general goals for resource management within the plan area should reflect the desired future condition of the forest. The future condition should be described in terms of the values to be protected and goods and services that are to flow from the area. Goals should be established based on public input, be consistent with government policy and recognize existing commitments. The desired future state of the forest is to be defined primarily on the basis of the landscape assessment.

4.4.3 Criteria and Indicators for Assessing Sustainability

Manitoba, as a signatory to Canada's Forest Accord, has committed to reporting on sustainability using a minimum of six criteria that are part of the Criteria and Indicators framework developed by Canadian Council of Forest Ministers (CCFM). The criteria and indicators are used to measure the condition of the forest and report on progress being made towards sustainability.

The criteria developed through the CCFM are:

- Conserving biological diversity;
- Ecosystem condition and productivity;
- Conserving soil and water resources;
- Global ecological cycles;
- Multiple benefits; and
- Societies responsibility for sustainable development.

Forest sustainability is assessed using a variety of measurable indicators that relate to the six criteria. During development of the plan, the indicators identified should be to evaluate the possible effects of the various management alternatives.

The proponent may develop indicators specific to the plan area. The number of measurable indicators that can be used is currently limited by our knowledge about how forest vegetation management affects other indicators (for example recreational opportunities). As knowledge is improved through research, other indicators of forest sustainability will be incorporated into the analysis.

4.4.4 Third Party Operations

Other timber disposition holders (for example quota operators) within the plan area will be given the opportunity to participate in the development of the forest management plan. The company must involve third party operators at key stages of plan development and document their acceptance of the direction contained in the plan.

4.5 Preferred Management Approach

The information required in this section will provide guidance and focus to the forest management plan by identifying the proponent's management direction. The preferred management approach is described in terms of forest management objectives, associated strategies and forest development activities. These should be linked to the desired future condition of the forest identified as part of the overall planning context. The company's timber supply analysis documentation should clearly support the selected management approach.

The discussion on the management approach will:

1. Identify the management objectives and rationale for selecting each objective;
2. Identify the strategies for achieving management objectives;
3. Describe the forest development activities that will be carried out;
4. Include an evaluation of the preferred management approach, and summarize potential timber and non-timber flows resulting from implementing the approach.

4.5.1 Management Objectives

Management objectives are to be developed for benefits or outcomes that can be achieved by managing the forest cover. Objectives must be measurable and include both short and long term objectives. The management objectives form the core of the plan. All other information in the plan should support the objectives and how they will be achieved. The rationale for each objective should be indicated.

The management objectives should address the following subject areas:

- **Ecological Factors** - biodiversity, forest connectivity, ecological integrity;
- **Timber Supply**- sustainability, softwood/hardwood/mixedwood management, fibre priorities, harvest priorities, utilization standards;
- **Forest Protection** - forest health, fire and fuels, insects and disease;
- **Road Development and Access Management**
- **Silviculture** - treatment and retreatment, reforestation lag period, site productivity, reforestation potential, growing stock, establishment period, greenup period and growth rates free to grow;
- **Water** - water quality, erosion, siltation and flooding; and
- **Fish and Wildlife** - habitat, riparian zones, escape cover, shelter, corridors and critical areas, access and vulnerable, threatened and endangered species, indicator species.

4.5.2 Management Strategies

The proponent will indicate the management strategies to be used to meet objectives. Strategies will describe a means of achieving targets or addressing issues. Any significant challenges or barriers to achieving objectives will be addressed. For each objective, the proponent will provide a detailed description of stand level management strategies to be employed over the planning period.

Key issues to be addressed in development of strategies may include but are not limited to:

- condition and supply of timber;
- forest protection;
- forest health and productivity;
- road development and access management
(for example road closure, life span, rehabilitation, wildlife, recreation);
- impact on aquatic resources;
- integration of other forest resource values;
- buffer management;
- softwood understory protection;
- mixed wood management;
- site protection; and
- forest renewal

The strategies should particularly address aspects related to maintaining forest covertypes. For example how the covertypes harvested will be regenerated and maintained through logging, regeneration treatments and intensive forest management practices. Stand level management strategies will be provided for all major forest covertypes.

4.5.3 Development Activities

The proponent must identify the forest development activities that will be carried out to implement the proposed management approach. The activities should be discussed in the context of the forest management objectives and strategies for the planning period.

The discussion should contain information on:

1. **Harvest Operations** - the available harvest area, harvest methods the forecasted progression and options, where applicable, of general operating areas;
2. **Road Development and Access Management** - primary road corridors for company road development for the planning period and mitigation that will be employed to reduce impacts on other resources;
3. **Forest Renewal** - renewal prescriptions and associated activities;
4. **Forest Health**; and
5. **Integrated Management**.

Information will include the criteria used in identifying and selecting areas for harvest, renewal and tending operations included in the wood supply modeling process; operational harvest prescriptions for working groups; the location of new primary and secondary road corridors and broad management strategies for road use. The plan should describe at the working group level the renewal and tending treatments to be implemented and the provincial renewal standards to be achieved. The treatments proposed should be consistent with the company's standard operating and renewal practices and provincial legislation, policy, guidelines and standards for forest management. Road development and management will also address concerns about access development related to other values such as wildlife.

The following information must be included:

1. Harvest Operations

- A. Projected forest structure for the plan area resulting from the proposed management approach;
- B. Overview of annual wood requirements indicating species, volumes, harvest strategy and harvest systems for each species identified;
- C. Proposed operating areas and projected schedule for development;
- D. Projected annual harvest volume by year, by major operating areas and Forest Management Unit (FMU), including all operators;
- E. Harvesting methods (clear-cut, strip-cut, mechanical systems);
- F. Understory protection approaches; and
- G. Estimate of volume by species and product.

2. Road Development, Access Management and Other Infrastructure Development

- A. Development corridors for all-weather roads and main winter access roads to operating areas;
- B. Route selection rationale and alternatives considered;
- C. Bridges and ice crossings;
- D. Road construction standards and practices (related to borrow pits, brush disposal and right-of-way widths);
- E. Road access management;
- F. Road maintenance and road reclamation/retirement;
- G. Potential effects on other resources and mitigation; and
- H. Wood storage and processing areas.

3. Forest Renewal

- A. Overview of renewal activities to be conducted by the company including cost shared programs in site preparation, planting, tending, tree improvement, research and resource surveys;
- B. Discussion on renewal methods including natural regeneration, artificial regeneration by direct seeding or planting (include supporting activities such as seed collection and tree improvement operations);
- C. Stand management activities (mechanical/chemical treatments, commercial thinning activities); and
- D. Access requirements.

The discussion must include a forecast of the types and levels of activities proposed for renewal and tending operations for the planning period. The levels must be consistent with the preferred management approach. Renewal activities are to be linked to the overall management objectives and implementation strategies.

Preharvest silviculture prescriptions, including forecasted stand tending requirements, should be described for the various cover types and the forest renewal standard to be met must be identified. Detailed discussions of the criteria, access, alternatives, objectives, priorities and forecasted treatment levels must be provided. Survey procedures must be described.

4. Forest Health

- A. Describe mitigating measures to identify and address forest health concerns during harvest and subsequent renewal treatments, including cost shared programs.

5. Integrated Management

- A. Describe how the company will integrate its forest management activities with other land uses.

Documentation must include maps at an appropriate scale for display. A digital map with information at 1:250,000 level of detail is to be provided to MNR.

4.5.4 Evaluation of the Preferred Management Approach

The management approach selected must be analysed to identify the future forest condition which is expected to result from implementation, and the implications of the approach to ensure forest sustainability and meet objectives. The discussion on the preferred management approach must include a summary of potential timber and non timber flows related to the management direction proposed.

4.6 Operating Practices

The proponent must present an overview of all forest management planning and operating practices or procedures that will be employed in the course of day to day operations, including standard operating procedures for harvest operations, road development, access management and forest renewal.

4.7 Forest Resource Information

Data collection programs to be carried out by the company must be described. This should include growth and yield studies, permanent sample plot programs and preharvest ecological surveys. The plan will indicate what programs the company intends to implement, the standards for data collection and how the programs will be co-ordinated with similar programs in Manitoba Natural Resources.

4.8 Compliance Monitoring and Assessment

Forest operations will be monitored to ensure compliance with Acts, regulations, policies, forest practice requirements and conditions set out in annual operating plans. An assessment is also carried out to identify the effect of forest management operations on forest cover and forest values. Information collected through monitoring and assessment will be used in preparing reports on forest management activities and contribute to evaluating management actions.

The forest management plan will contain a section that describes the programs to be used by the company during the ten year period to monitor forest operations. That section of the plan must include specific provisions for monitoring operations in areas of concern. The descriptions of the programs and monitoring methods to be used should include when they will be carried out, the duration of the monitoring and how the results of monitoring will be documented, reported and support adaptive management processes.

Assessment of the success of harvest, renewal and tending operations in regenerating the forest to the desired condition is a key monitoring requirement. The results of the assessment will be used to determine if regeneration levels have achieved desired results. The plan must include a discussion of the areas anticipated to be successfully renewed (i.e. reach the provincial regeneration and free to grow standards during the ten year period). The plan must also discuss the linkages between the planned harvest and renewal treatments used in determining wood supply.

5.0 Implementation Strategy

Ten Year Forest Management Plans are implemented through Annual Operating Plans and the carrying out of planned activities.

Annual Operating Plans (AOP) are the primary vehicle for plan implementation. The company will provide a description how the Ten Year Forest Management Plan and Annual Operating Plan processes will be linked. This should include how any deviation from the direction contained in the Ten Year Plan, proposed in an AOP will be identified and a rationale for the change provided.

Monitoring implementation of the plan is essential to ensure proposed activities are being carried out in a timely manner and plan objectives are achieved.

Monitoring will be conducted as part of plan implementation and information from monitoring activities reported on. Reporting provides:

- a way to account to the public on the results of forest management operations set out in the Ten Year Plan; and
- a record of forest management operations and their results. This can be used in future planning efforts and to implement adaptive management approaches.

The plan should describe:

- how a comparison of planned versus actual activities will be reported;
- how forest sustainability will be evaluated and reported; and
- how plan objectives will be evaluated and reported.

Monitoring plan implementation activities and associated records serve as a source of information for annual and five-year reporting. The information also contributes to an assessment of the status of the condition of the forest and the achievement of objectives for sustainable forest management.

Glossary of Terms

ADAPTIVE FOREST MANAGEMENT

Forest management based on the assumption that scientific knowledge is provisional and focuses on management as a learning process or continuous experiment, where incorporating the results of previous actions allows managers to remain flexible and adapt to uncertainty.

ANNUAL ALLOWABLE CUT (AAC)

The volume of wood which may be harvested, under management, on an annual basis.

ANNUAL OPERATING PLANS (AOP)

Plans prepared and submitted annually by timber operators describing how, where and when to develop roads, harvest timber and complete renewal of the forest. AOP's describe the integration of operations with other resource users, the mitigation of the impacts of logging, the reclamation of disturbed sites and the reforestation of harvested areas.

BIODIVERSITY

The variety and variability within and between living organisms from all sources such as terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part.

ECOLOGICAL APPROACH

The management of human activities so that ecosystems, their structure, composition and functions and the processes that shaped them can continue at appropriate temporal and spatial scales.

VULNERABLE SPECIES

A species that is considered at risk because it exists in low numbers or in restricted ranges due to loss of habitat or other factors.

THREATENED SPECIES

A species that is likely to become endangered if certain pressures are not reversed.

ENDANGERED SPECIES

Species that are threatened with imminent extinction; includes species whose numbers or habitats have been reduced to critical levels.

PROTECTED AREA

A land, freshwater or marine area which is protected by legislation or regulation to limit industrial extraction and development. In Manitoba these areas are protected from logging, mining, hydro electric development, oils and gas exploration and development, and any other activity that would have a significant adverse impact on habitat

EVEN FLOW

In harvest scheduling, the requirement that the harvest level in each period be equal to the harvest level in the preceding period.

LONG RUN SUSTAINED YIELD AVERAGE (LRSYA)

The hypothetical timber harvest that can be maintained indefinitely from a management area once all stands have been converted to a managed state under a specific set of management activities.

MODEL

An idealized representation of reality developed to describe, analyse or understand the behaviour of some aspect of it. A mathematical representation of relationships under study. The quest to find a subset of variables and a function between them that predicts one or more dependent variables.

OPERATING AREA

A contiguous area upon which forest development activities are planned. Impacts of proposed harvesting activities on various resource concerns (i.e. ecological diversity, habitat management, access, water management) are assessed based on the entire operating area.

PREFERRED MANAGEMENT APPROACH

A set of compatible and integrated resource management objectives and strategies that has been selected to guide plan implementation.

REFORESTATION

Activities involved in forest renewal (site preparation, tree planting, etc.)

ROTATION

The period of years required to establish and grow even aged timber crops to a specified condition of maturity.

SILVICULTURE

The theory and practice of controlling the establishment, composition, structure and growth of forests in order to achieve specified management objectives.

SUSTAINABLE FOREST MANAGEMENT (SFM)

Management to maintain and enhance the long term health of forest ecosystems, while providing ecological, economic, social and cultural opportunities for the benefit of present and future generations.