

# **MAGPIE FOREST**

## **INDEPENDENT FOREST AUDIT**

### **2001-2006**



***Prepared by:***

***Arbex Forest Resource Consultants Ltd.  
Oxford Mills, Ontario  
November 2006***



# TABLE OF CONTENTS

<b>1.0. EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>2.0. INTRODUCTION .....</b>	<b>1</b>
2.1. AUDIT PROCESS .....	1
2.2. FOREST MANAGEMENT CONTEXT .....	5
2.2.1. <i>Map of Management Unit (SFL)</i> .....	5
2.2.2. <i>Description of the Management Unit</i> .....	6
2.2.3. <i>Forest Management Issues</i> .....	8
<b>3.0. SUMMARY OF AUDIT FINDINGS .....</b>	<b>10</b>
3.1. COMMITMENT .....	10
3.2. PUBLIC PARTICIPATION .....	11
3.2.1. <i>Local Citizens' Committee</i> .....	11
3.2.2. <i>FMP Standard Public Consultation Process</i> .....	14
3.2.3. <i>Native Peoples' Consultation</i> .....	17
3.2.4. <i>Annual Work Schedule Public Inspection</i> .....	18
3.3. FOREST MANAGEMENT PLANNING .....	19
3.3.1. <i>Planning Team Activities</i> .....	19
3.3.2. <i>Resource Stewardship Agreements</i> .....	19
3.3.3. <i>Source of Direction</i> .....	20
3.3.4. <i>Introduction</i> .....	20
3.3.5. <i>Management Unit Description</i> .....	21
3.3.6. <i>Objectives and Strategies / Management Alternatives</i> .....	22
3.3.7. <i>Operational Planning</i> .....	24
3.3.8. <i>Plan Review, Approval</i> .....	25
3.3.9. <i>Plan Amendments</i> .....	25
3.3.10. <i>Contingency Plans</i> .....	25
3.3.11. <i>Annual Work Schedules</i> .....	25
3.4. PLAN IMPLEMENTATION .....	26
3.4.1. <i>Areas of Concern</i> .....	26
3.4.2. <i>Harvest</i> .....	27
3.4.3. <i>Renewal</i> .....	31
3.4.4. <i>Tending and Protection</i> .....	35
3.4.5. <i>Renewal Support</i> .....	35
3.4.6. <i>Access</i> .....	36
3.5. SYSTEMS SUPPORT .....	38
3.5.1. <i>Human Resources</i> .....	38
3.5.2. <i>Documentation and Quality Control</i> .....	39
3.6. MONITORING .....	39
3.6.1. <i>General Monitoring</i> .....	39
3.6.2. <i>Annual Report</i> .....	42
3.6.3. <i>Report of Past Forest Operations</i> .....	42
3.7. ACHIEVEMENT OF MANAGEMENT OBJECTIVES AND FOREST SUSTAINABILITY .....	43
3.8. CONTRACTUAL OBLIGATIONS .....	57
<b>4.0. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>62</b>
<b>5.0. AUDIT CONCLUSION .....</b>	<b>65</b>

## Appendix A

*Comparison of Trends Analysis of Planned vs Actual Forest Operations Report*

## Appendix B

*Audit Team Members and Qualifications*

**Appendix C**  
*Independent Forest Audit Guiding Principles*

**Appendix D**  
*Glossary for List of Acronyms Used*

**Appendix E**  
*Summary of Input to Audit Process*

## LIST OF TABLES

TABLE 1. FIELD SAMPLING INTENSITY ON THE MF.....	4
TABLE 2. SUMMARY OF PRODUCTION FOREST LAND AREA BY WORKING GROUP (2004 FMP).....	7
TABLE 3. PLANNED VS. ACTUAL WOOD UTILIZATION FOR 1999-2004 PLANNING TERM.....	29
TABLE 4. COMPARISON OF ACTUAL TO PLANNED RENEWAL 1999-2004 (AREA IN HA).....	32
TABLE 5. SILVICULTURAL SUCCESS RATES BY FOREST UNIT (SURVEYS CONDUCTED BETWEEN 1999 AND 2003). ....	34
TABLE 6. PLANNED VS. ACTUAL SITE PREPARATION 1999-2005.....	34
TABLE 7. PLANNED VS. ACTUAL CHEMICAL TENDING 1999-2005 .....	35
TABLE 8. ROADS DESIGNATED UNDER THE ROAD MAINTENANCE AGREEMENT.....	38
TABLE 9. INDUSTRY COMPLIANCE INSPECTIONS, MAGPIE FOREST, 2001-2006.....	41
TABLE 10. OMNR COMPLIANCE INSPECTIONS, MAGPIE FOREST, 2001-2006.....	41
TABLE 11(A). SUMMARY OF THE STATUS OF THE 1999 MAGPIE FMP OBJECTIVES .....	43
TABLE 11(B). SUMMARY OF THE STATUS OF THE 2004 MAGPIE FMP OBJECTIVES .....	48
TABLE 12. SUMMARY OF CONTRACTUAL OBLIGATIONS AND AUDITOR COMMENTS ON THE LEVEL OF ATTAINMENT OF THE CONTRACTED OBLIGATIONS FOR SFL # 542003.....	57
TABLE 13. STATUS OF 2001 IFA RECOMMENDATIONS AND AUDITOR OBSERVATIONS .....	61
TABLE 14. SUMMARY OF AUDIT RECOMMENDATIONS AND SUGGESTIONS.....	65

## LIST OF FIGURES

FIGURE 1. MAGPIE FOREST. ....	6
FIGURE 2. AREA SUMMARY OF MANAGED CROWN LAND ON THE MAGPIE FOREST.....	7
FIGURE 3. CURRENT AGE CLASS DISTRIBUTION OF THE PRODUCTIVE FOREST .....	8
FIGURE 4. PLANNED VS. ACTUAL HARVEST AREAS BY PLANNING TERM.....	28

## 1.0. EXECUTIVE SUMMARY

This report presents the findings of an Independent Forest Audit (IFA) conducted on the Magpie Forest (MF) for the five-year period from April 1<sup>st</sup>, 2001 to March 31<sup>st</sup>, 2006.

The audit conformed to the requirements of the 2006 Independent Forest Audit Process and Protocol (IFAPP) prepared by the Ontario Ministry of Natural Resources (OMNR). The Independent Forest Audit (IFA) process is based on a detailed assessment of eight broad principles. Each principle has a series of specific criteria which are examined to determine whether or not the management of the Forest was in compliance with the legislation, regulations, and policies that were in effect during the audit term.

The Forest is managed by Dubreuil Forest Products Ltd. (DFPL) under Sustainable Forest Licence (SFL) # 542003. Administration of the Forest is the responsibility of the Wawa District, Ontario Ministry of Natural Resources (OMNR).

The audit period encompassed;

- The last three years (April 2001-March 2004) of the implementation of the 1999 Forest Management Plan (FMP).
- The planning and development of the 2004 FMP and the first two years (April 2004 - March 2006) of its implementation.

Following a comprehensive review of records and documents, field investigations and information received from interviews, meetings and questionnaires, it is our conclusion that the implementation of the 1999 FMP, and the development and implementation of the 2004 FMP substantially met Forest Management Planning Manual (FMPM) requirements based on the following findings:

- Appropriate information was available to support planning efforts.
- A planning team with the required expertise was established and supported by the OMNR and DFPL.
- Forest management planning activities and investigations adhered to FMPM requirements.
- A Local Citizens Committee (LCC) was properly constituted and participated in the planning and implementation of the FMPs.
- Public consultation and First Nation consultation requirements were met.
- Areas of Concern (AOC) were properly planned, and prescriptions were implemented and monitored.
- Plan implementation (e.g. harvest, renewal, tending) adhered to appropriate standards and manuals.
- Road use management strategies while controversial, met requirements.

- DFPL compliance efforts were appropriate for the scale of operations, and with the exceptions noted in this report, were generally well done.
- Records were well organized, accessible, and current.
- Staff had received appropriate training.

However, some shortcomings were identified. These included:

- A large area of depleted land requires Free To Grow (FTG) assessment.
- Company installations of some water crossings were below standard.
- OMNR compliance monitoring on the Forest was inadequate.

There has been a long-standing dispute over road access between road-based recreationalists and remote tourism operators. This continuing issue resulted in six requests to the Ministry of the Environment (MOE) for an EA Individual Environmental Assessment (IEA)<sup>1</sup>, five formal issue resolution processes and the LCC refusal to fully endorse the 2004 FMP. The access issue also contributed to:

- The expenditure of significant time, staff resources, and money on dispute resolution and individual environmental assessments (bump-ups).
- Late approval of the 2004 FMP with related economic and social implications.

The Forest was sustainably managed during the audit period. Indicators for the assessment of sustainability including biodiversity, ecosystem productivity, soil and water conservation, the provision of societal benefits and sustainable development were met. However, we do identify issues that will affect long-term forest sustainability. The amount of managed Crown forest available for timber production is decreasing. This reduction is partially attributed to area removals resulting from the implementation of the Natural Disturbance Pattern Emulation Guideline (NDPEG). The preponderance of mature and overmature stands on the Forest will also result in reduced future wood supplies. The benefits that accrue from forest management will not be sustainable if the area available for timber production continues to diminish.

A total of 8 recommendations and 1 suggestion are provided to address issues identified by this audit.

On balance, it is our finding that the Magpie Forest is well managed. DFPL was substantially in compliance with the legislation, regulations, and policies that were in effect at the time of the audit.

We recommend that the Minister extend Sustainable Forest Licence (SFL) # 542003 for a further 5 years.

---

<sup>1</sup> In this report Individual Environmental Assessments are also referenced as EA “bump-ups”.

## **2.0. INTRODUCTION**

This report presents the findings of an Independent Forest Audit (IFA) conducted on the Magpie Forest (MF) for the five-year period from April 1<sup>st</sup>, 2001 to March 31<sup>st</sup>, 2006. The Forest is managed by Dubreuil Forest Products Ltd. (DFPL) under Sustainable Forest Licence (SFL) # 542003. Administration of the Forest is the responsibility of the Wawa District, Ontario Ministry of Natural Resources (OMNR), Northeast Region. The audit period encompasses the last three years (April 2001-March 2004) of the 1999 Forest Management Plan (FMP) and the first two years (April 2004 - March 2006) of the 2004 FMP.

### **2.1. Audit Process**

Ontario legislation requires that Forest Management Units be audited every five years by an Independent Auditor. The audit applies to the OMNR and all licencees. The audit reviews the FMP in relation to specific planning manual requirements in place at the time of plan approval, including a review of actual operations, and required monitoring and reporting. The effectiveness of forest management activities is examined based on planned vs. actual results as verified through record examination and field sampling. The audit reviews whether actual results in the field are comparable with planned results, and determines if they are accurately reported.

The 2006 Independent Forest Audit Process and Protocol (IFAPP) provides a comprehensive and consistent method of evaluating forest management activities on Crown land. It contains approximately 400 individual procedures that direct the auditors to collect, analyze, interpret, and document appropriate information to determine if various criteria have been met. The results of the evaluation of evidence against the criteria determine the audit findings. Those findings are then analyzed and aggregated to determine the outcome of the audit.

The IFAPP states that the purpose of the Independent Forest Audit is to assess:

- The compliance of forest management planning activities with the Forest Management Planning Manual (FMPM) and the Crown Forest Sustainability Act (CFSA).
- The compliance of forest management activities with the CFSA, the manuals approved under the CFSA applicable guides and with forest management plans.
- The effectiveness of forest management activities in meeting the forest management objectives set out in the forest management plan, as measured in relation to the criteria established for the audit.
- The relative success of forest management activities carried out compared to those that were planned.
- The effectiveness of any action plans implemented to remedy shortcomings revealed by a previous audit.

- The licensee's compliance with the terms and conditions of the forest resources licence.

The audit process is based on a detailed assessment of eight IFAPP principles:

- Commitment.
- Public participation.
- Forest management planning.
- Plan implementation.
- System support.
- Monitoring.
- Achievement of management objectives and sustainability.
- Contractual obligations.

A description of the principles is contained in Appendix C. Each principle has a series of criteria in the 2006 IFAPP based on applicable legislation, manuals, and guidelines related to forest management. If the criteria are met the principle has been achieved.

The audit was conducted by Arbex Forest Resource Consultants Ltd. The audit team consisted of three professional foresters and three professionals with expertise in fish and wildlife management, forest management planning, land use planning, public consultation, and compliance. A list of audit team members and their qualifications is presented in Appendix B.

The audit consisted of the following elements:

**Audit Plan:** An Audit Plan describing the schedule of audit activities, audit team members, audit participants and the auditing methods was prepared and submitted to DFPL, the OMNR Wawa District and the Chairperson of the Magpie Forest Co-Management Committee (referred to as the Local Citizens Committee (LCC) for this audit report).

**Public Notices:** Several methods were used to solicit public participation and comment in the audit. A bilingual notice soliciting input from the public was placed on the local cable television station (Radio Television Dubreuilville) and a notice was placed in the Algoma News. Letters inviting comment and containing a bilingual questionnaire were distributed to a random selection of thirty-five percent of the individuals on the Magpie Forest Management Plan (MFMP) mailing list. The purpose of the questionnaire was to provide an opportunity for the public to identify forest management concerns or issues. A total of three responses to the survey were received.

First Nations with traditional interests on the MF were contacted by telephone, e-mail and regular mail.



Two members of the audit team attended a regularly scheduled meeting of the Magpie LCC on May 10<sup>th</sup>, 2006, to provide information on the purpose of the audit, and to encourage participation.

**Pre-audit Meeting and Field Site Selection:** Two auditors met with DFPL staff on May 10<sup>th</sup> in Dubreuilville and randomly selected sample sites for the field work phase of the audit. On May 11<sup>th</sup>, 2006 a pre-audit meeting was held with DFPL and OMNR staff to review and finalize the audit plan.

**Pre-audit Document Review and Interviews:** The audit period covered the five-year period from April 1<sup>st</sup>, 2001 to March 31<sup>st</sup>, 2006. All documents associated with the implementation of the 1999 - 2004 FMP, and the planning, development and implementation of the 2004 - 2009 FMP were reviewed. Telephone interviews and e-mail exchanges were conducted with representative stakeholders.

**Site Audit:** The Arbex team spent eight days in Dubreuilville (July 10<sup>th</sup> - July 17<sup>th</sup>) conducting field sampling, record reviews and interviews. Interviews included DFPL and OMNR staff, LCC and First Nation representatives and other stakeholders (e.g. tourist operators, anglers, hunters). The field site inspections represented approximately a 20 percent sample of the forest management operations that had occurred on the Forest over the five-year audit period (Table 1). Field sample sites were stratified to ensure representation of silvicultural activity, season of operation, contractors, year of operation, and Areas of Concern (AOC).

A comparison of invoiced silvicultural work with field activities was completed for a 20 percent sample of work listed in the "Forest Renewal and Maintenance Agreement, Specified Procedures Report (Draft)"<sup>2</sup>. Additionally, all roads (10) approved in the 2006 Road Maintenance Agreement between OMNR and DFPL were traveled and/or observed by helicopter.

Field sampling included site-specific examinations (e.g. planting sites, AOCs) as well as broader overviews made from aerial observations (e.g. moose aquatics, free-to-grow areas). Individual sites were selected to represent a primary activity (e.g. harvesting, site preparation, chemical tending); however, all associated activities at the site were assessed at the same time, allowing us to augment the planned sampling intensity. Two audit teams spent three days traveling roads on the Forest; one team spent one day sampling by helicopter. During this travel, road construction, maintenance and water crossings, as well as additional AOCs and management practices were observed.

---

<sup>2</sup> Projects sampled were conducted in 2004/2005.

TABLE 1. FIELD SAMPLING INTENSITY ON THE MF.

<b>Activity</b>	<b>Total Area (ha) / Number (2001-2006)</b>	<b>Area Sampled (ha)</b>	<b># of Sites Visited (Primary Audit Activity)</b>	<b>Percent<sup>3</sup> Sampled (%)</b>
Harvest	10,385	1,667	10	17
Planting	6,079	1,323	21	22
Natural Regeneration	5,615	1,446	12	26
Seeding	317	110	2	35
Chemical Site Preparation	173	127	2	73
Mechanical Site Preparation	3,952	684	9	18
Chemical Tending	3,897	699	13	18
Thinning	83	52	1	62
Specified Procedures Sites	4,364	3,739	39	85
Free-to-Grow	12,326	2,800	25	22
Areas of Concern <sup>4</sup>	1,200 <sup>5</sup>	AOCs were examined in the field and buffers on supplementary aerial photography were measured, using appropriate scales to obtain widths.	144 <sup>6</sup>	12
Water Crossings	41		26	63

<sup>3</sup> Percent sampled represents the location of primary audit activity. In addition to the primary audit activity all additional silvicultural, protection and construction activities on that site were also inspected. For example, a site selected primarily to audit planting activities was also inspected for associated chemical tending, culvert construction, etc.

<sup>4</sup> A significant number of AOCs on the forest are linear features (e.g. riparian areas, moose aquatic) as opposed to point features (e.g. nest sites). For this reason most of the assessment was area based and observed via helicopter.

<sup>5</sup> Calculated from 2004 FMP Supplementary Documentation.

<sup>6</sup> Examined in the field (ground and air observations) and measured on supplementary aerial photography.

The audit report includes a description of the audit process and a discussion of findings and conclusions. Recommendations are directed at deficiencies in forest management and associated processes that require corrective action. Recommendations must be dealt with in a formal Action Plan developed by the OMNR within 2 months of receipt of the final audit report. Suggestions are directed at less serious issues and simply provide advice for improvement. A “best practice” highlights a management practice or level of performance that the auditor felt was exceptional.

## **2.2. Forest Management Context**

The vast majority of the MF is located within the OMNR Wawa District, with a small easterly portion lying within the OMNR Chapleau District (but is administered by the Wawa District). Dubreuilville is the only organized community within the boundaries of the Forest; nearby communities include Wawa, White River, Missanabie and the Michipicoten First Nation Reserve located to the east of the Forest on Dog Lake. There are small settlements at Franz, and Lochalsh. Secondary Highway 519 connects Dubreuilville to Highway 17, while the Algoma Central Railway and the Canadian Pacific Railway cross the Forest at Franz. Figure 1 shows the geographic location of the Forest.

A Forest Management Agreement was signed between OMNR and DFPL in 1984 and the boundaries of the Forest have not changed. The MF has been managed by DFPL since that time. During the audit period there was one overlapping salvage harvest licence.

### **2.2.1. Map of Management Unit (SFL)**

Figure 1 shows the location of the Magpie Forest.

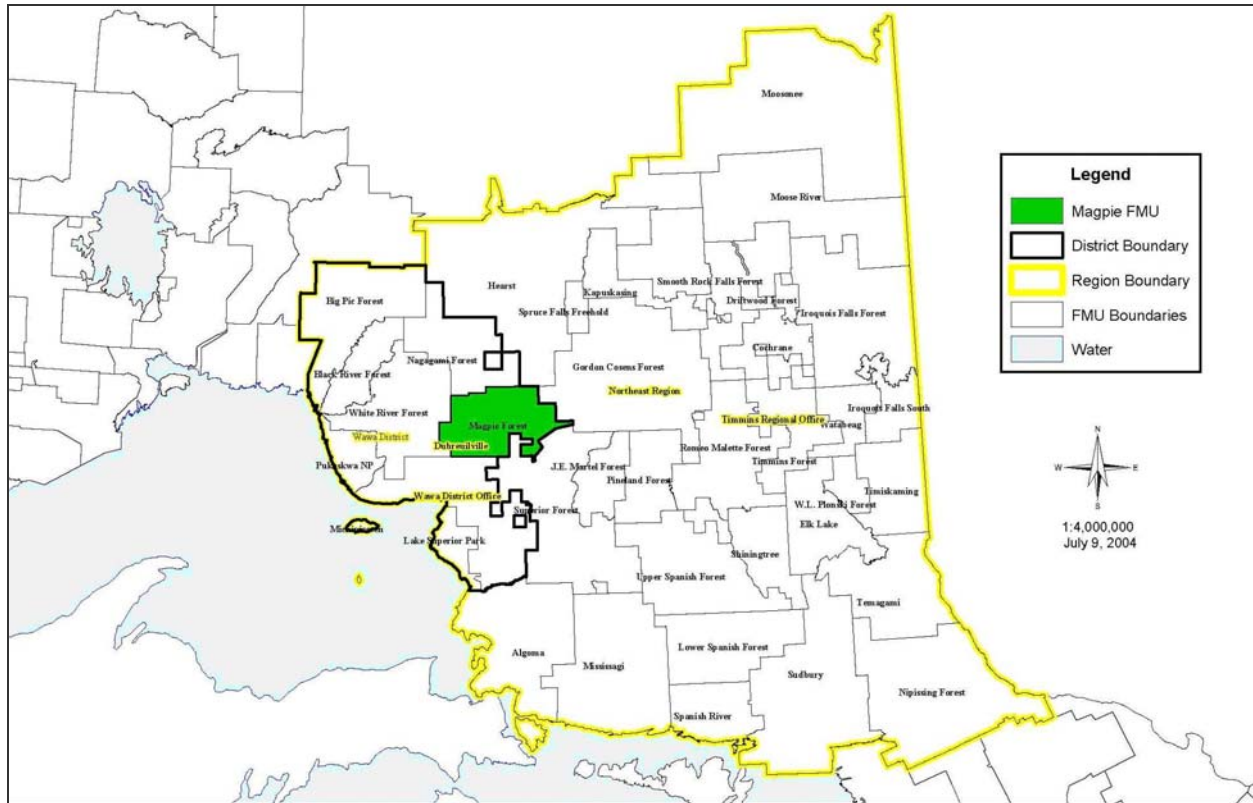


FIGURE 1. MAGPIE FOREST.

## 2.2.2. Description of the Management Unit

The total area of the MF is 440,344 hectares. Crown lands comprise 393,977 hectares, and patent lands occupy 46,367 hectares. Figure 2 shows the proportional distribution of land classifications.

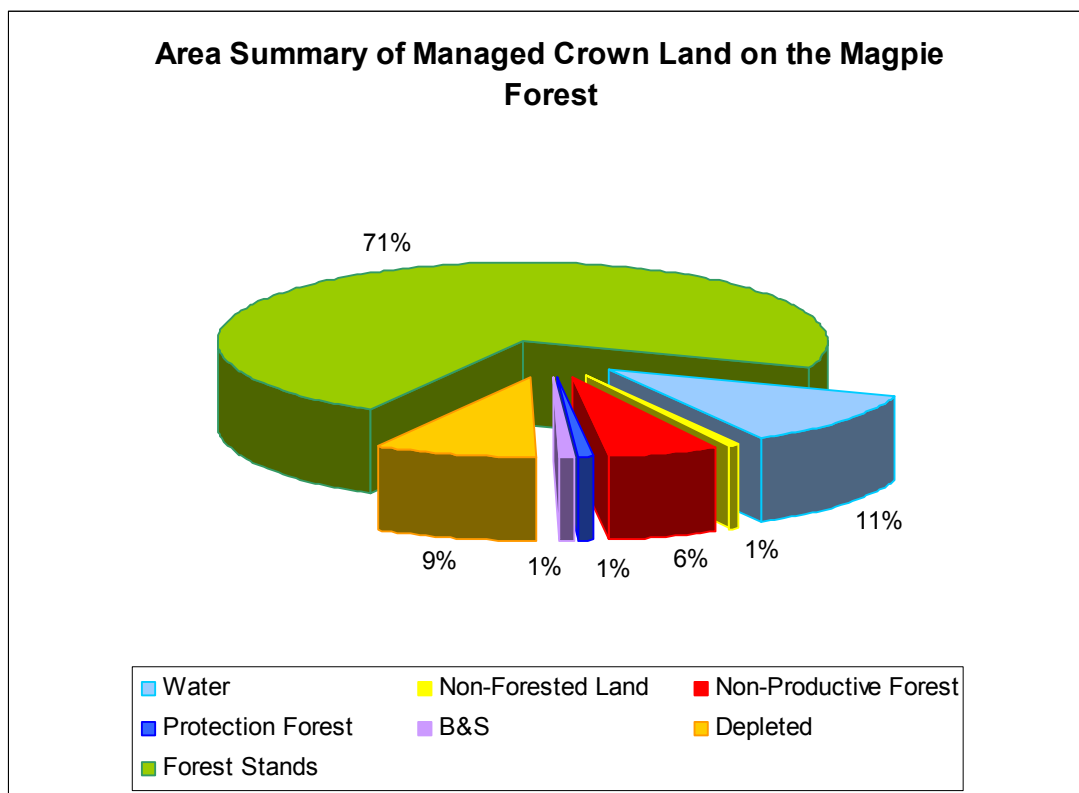


FIGURE 2. AREA SUMMARY OF MANAGED CROWN LAND ON THE MAGPIE FOREST.

The MF is situated with the Boreal Forest Region. Approximately ninety-four percent (94%) of the production forest area is comprised of four working groups: white birch (14%), jack pine (27%), trembling aspen (30%), and black spruce (23%). Eastern white cedar, larch (tamarack), white spruce, and mixed-spruce working groups make up the remaining 6% of the area available for timber production. Table 2 presents a summary of the production forest land area by working group.

TABLE 2. SUMMARY OF PRODUCTION FOREST LAND AREA BY WORKING GROUP (2004 FMP)

Classification	Area in Hectares
<b>Production Forest</b>	321,616
B & S / NSR lands	4,685
Depleted	48,372
<b>Area By Working Group</b>	
Jack Pine	71,858
Spruce	74,215
Balsam	2,026
Cedar	3,687
Poplar	78,253
White Birch	38,520
<b>Total:</b>	<b>268,559</b>

Source: Table 1 Comparison and Trend Analysis of Planned vs. Actual Forest Operations Report

The current age class distribution of the productive forest is shown in Figure 3.

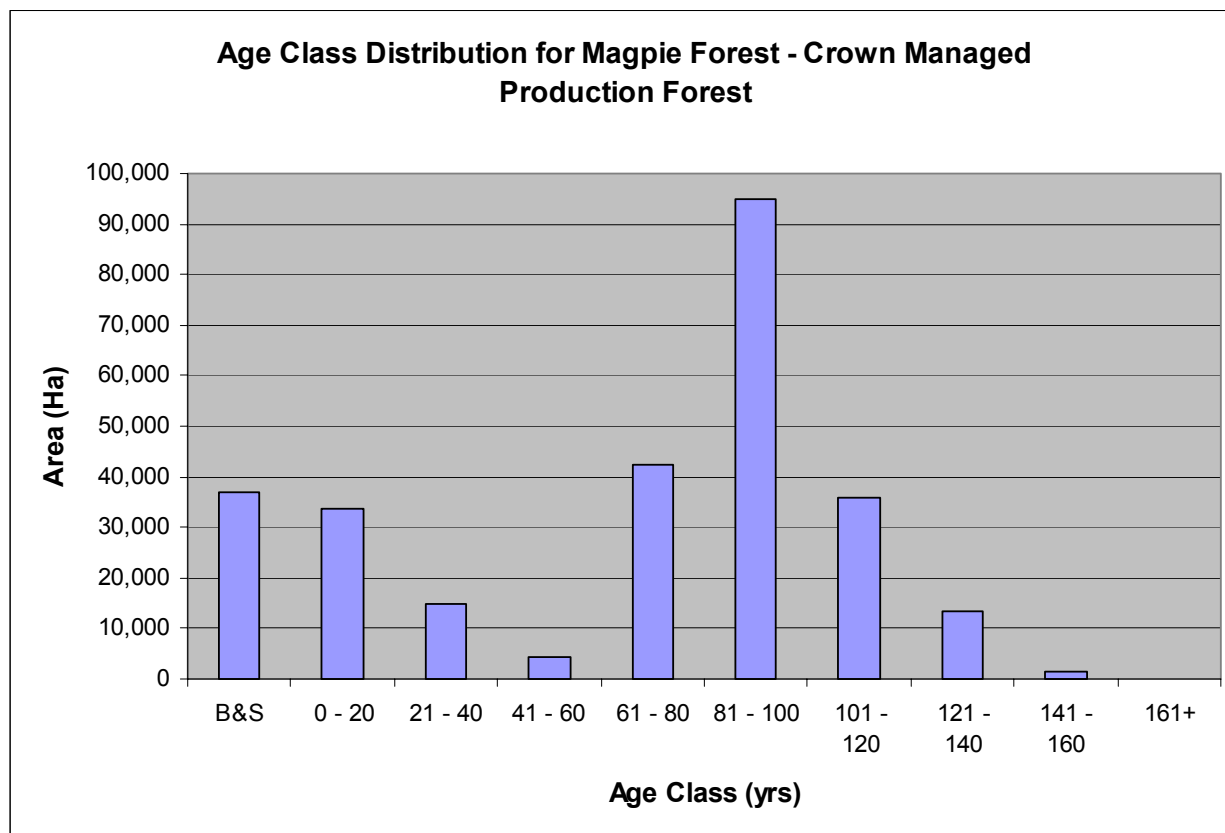


FIGURE 3. CURRENT AGE CLASS DISTRIBUTION OF THE PRODUCTIVE FOREST

There is a significant imbalance in the current age class structure with a preponderance of mature and overmature area. There is a significant lack of area of forest between 31 and 70 years of age (only 6% is 31 to 70 years old and 64% is over 70 years old). This forest structure will significantly influence the development of management strategies and decisions:

- The lack of area in the 31-70 age classes will result in reduced wood supplies in the future.
- The current overabundance of mature and overmature forest will result in a significant amount of natural stand conversion.
- As the age class structure of the forest changes so will the abundance of wildlife habitat. Species that prefer old growth will decline as the current amount of old growth forest is reduced.

### 2.2.3. Forest Management Issues

The following issues were identified by the Plan Author in the 2004 FMP.

## Land Use/Road Use

Land use conflicts have continued to exist between tourism operators and road-based recreationalists. The municipality, anglers and hunters, snowmobilers, and trappers have expressed their desire for increased access; tourism operators are opposed to additional access. Forest management planning has become entangled with land use planning decisions. The LCC continues to have issues with the balance between access and remoteness on the Forest.

## The Current Forest Condition

A significant amount of the Forest is mature to overmature. Due to effective wild fire protection and the lack of other depletions, it is naturally maturing towards a composition that is not consistent with the historic, current, or desired future forest condition. There is a concern that sustainability of some fire dependent forest ecosystems is in jeopardy.

## Landscape Planning

There is a concern that strategic forest management planning exercises (e.g., the use of SFMM to determine available harvest area by forest unit and age class) is not easily integrated with spatial forest management planning. In addition, due to past forest fragmentation the larger marten habitat areas required by the guideline only occurs on ~2% of the Forest.

## Wood Supply

The current age class imbalance will produce a diminishing wood supply over the next 50 years. The Plan Author felt the current forest management guidelines, objectives, and strategies limited opportunities to deal effectively with this situation.

## NDPEG

The NDPEG was implemented for the first time in its entirety for the 2004 FMP and the effects of the implementation on wood supplies have not been quantified. From the Company perspective these effects are significant.

## Marten Core Habitat Areas

To meet the marten habitat guidelines, the planning team deferred ~10% of the capable forest, along with an additional ~11% of the non-capable forest (area not capable of providing marten habitat) in core areas. While there are opportunities in the guidelines for limited harvesting in core areas to access the non-capable core areas, current interpretations of the guidelines, along with their spatial isolation, prohibits the practice.

### 3.0. SUMMARY OF AUDIT FINDINGS

#### 3.1. Commitment

Policy statements must be developed which include the organization's vision, mission, guiding principles, and codes of management practice. The corporate mission and vision must be readily available and reflected in the daily operations.

DFPL has an Environmental Policy that commits the company “... *to sustainable forest management and continual improvement of our environmental performance within our woodlands operations.*” Some of the specific actions contained in the policy include:

- Providing a safe work environment.
- Meeting all legal and other requirements (i.e. applicable government policies, guidelines).
- Planning and implementing forest management activities to ensure long term forest sustainability.
- Continual improvement in environmental operations.
- Promoting environmental and sustainable forest management awareness among employees.

Company policies and directives were posted on bulletin boards, and interviewed employees were aware of them. We located and reviewed various training manuals (e.g. Safe Chainsaw Handling, Workplace Hazardous Materials Information System (WHMIS)) and a comprehensive Employee Orientation Handbook. DPFL is in the process of implementing a formal Environmental Management System (EMS) with the intention of obtaining Sustainable Forestry Initiative (SFI) certification.

Staff interviews supported by a review of DFPL staff meeting agendas, bulletin board information, and training materials indicated that company policy directions had been widely distributed. Field inspections confirmed that corporate sustainability objectives provided a base for the delivery of day- to- day field operations and, with exceptions documented in this report, adhered to all applicable rules and regulations.

The MF does not have any First Nations residing within its boundaries and DFPL had not developed corporate policy statements specific to them. However, record review and interviews indicated that the company had participated in discussions with First Nations and the OMNR to explore opportunities to expand First Nation involvement in forest management. Section 3.2.3 describes the OMNR and Company involvement with the Michipicoten and Missanabie First Nations.

The corporate OMNR has produced a number of strategic directions to deliver its goals, strategies, and actions. The most recent document is Our Sustainable Future (February 2005) and it contains a long-term corporate vision of a “*Healthy environment through*



*sustainable development*” and a mission of *“ecological sustainability.”* It describes an operating philosophy and contains specific organizational goals. Goal statements contain a specific strategy for *“improved aboriginal relations through economic development opportunities and partnerships”*. Interviews with OMNR staff indicated that they were aware of corporate directions and had incorporated them into their work routines.

We conclude that DFPL and the OMNR Wawa District had fully met IFAPP requirements to develop corporate policy and directions related to sustainable forest management.

## **3.2. Public Participation**

### **3.2.1. Local Citizens' Committee**

A Local Citizens Committee (LCC) must be established to help the planning team prepare the forest management plan. Membership is to include local citizens representing a range and balance of community interests. Responsibilities include ensuring the effectiveness of public consultation, assisting with the identification and analysis of management alternatives, participating in the development of values maps, monitoring the implementation of the plan, and providing advice to the District Manager (DM) on plan amendments and issue resolution. Each FMP must contain a LCC general statement of agreement or disagreement with the plan.

We reviewed meeting agendas and minutes, met with the full LCC and conducted interviews with individual members. In addition DFPL and OMNR were questioned about the activities and effectiveness of the LCC.

The LCC membership included designates from major stakeholders. The notable exception was the lack of representation from the remote tourism sector. We determined there was considerable animosity between remote tourist operators and the LCC/ local public. There was an LCC view that remote tourism representatives used the IEA (bump-up) provision as an alternative to participation in established planning process mechanisms. This created the perception that local interests were “penalized” by following established consultation processes; while use of the “bump-up” provision after FMP approval gave tourism interests a bargaining position denied those who “followed the rules”. Our review suggests that this LCC assertion has a basis in fact (discussed further in Section 3.2.2 of this report).

There was also no First Nations representation on the LCC. Invitations to participate were extended; however, First Nation representatives indicated to us that other priorities took precedence.

The OMNR made several unsuccessful attempts during the audit period to enlist the participation of the remote tourism sector on the LCC. The 2001 IFA also noted issues associated with the involvement of remote tourist operators and a recommendation was

provided. We note that the problem is well understood by the OMNR and significant time, energy and dollars have been spent trying to resolve it. We do not believe a further recommendation is required. The issue is discussed in Section 3.2.2.

Our review of minutes and supplementary FMP documentation indicated that the activities of the LCC substantially met FMPM requirements. It was engaged in the full range of forest management planning and operational topics. Meeting agendas and minutes included planning team updates, public consultation schedules, Area of Concern planning, proposed allocation updates, road corridor updates and reviews of Annual Work Schedules. The members were informed of the identification and analysis of management alternatives for the 2004 FMP, and had an opportunity to pose questions and make suggestions. They were involved in the development and review of values maps.

A member was appointed to the Planning Team, and regular presentations were made to the LCC on the planning process. For example, in February and July 2002 the Plan Author presented the LCC with FMP Training Modules. On a number of occasions the members were provided with opportunities to identify issues (e.g. questionnaire, February 2003). The OMNR District Manager accompanied members on a field trip to view examples of their concerns regarding public road access (July 2003).

We determined that the DFPL and the OMNR were diligent in ensuring that all FMP requirements associated with the LCC were completed. However, it is clear the LCC members were placed on a steep learning curve, and were overwhelmed with the amount and the complexity of the material presented to them. They informed us that they appreciated the efforts made to keep them informed; however, they also indicated that they felt pressured to simply agree with the information presented to them because:

- Deadlines were always pressing, discouraging questions, and dialogue.
- Member requests for more information or registering objections had to be made against the backdrop that delays threatened adherence to deadlines, licence approval and, ultimately, forestry and mill operations (the primary source of employment in Dubreuilville).
- They were all volunteers and did not have the time to properly read and consider the material presented to them.

Members were not critical of DFPL or OMNR staff. Rather, they felt the forest management planning process was too complex and timelines were too stringent.

The LCC Terms of Reference conformed to the 2004 FMPM requirements; however, it also included a range of additional responsibilities that included participation in other activities such as moose management, fish stocking, etc. We suggested to the Chairperson that if the LCC Terms of Reference was focused primarily on the FMP process, and did not include participation in other activities, that it might be able to participate more effectively. We also discussed with the LCC, a report produced by the Northeast Region Advisory Committee (RAC) which suggested structural and functional

changes to the Wawa LCCs. The report suggested:

*“...the District Manager re-evaluate the number of LCCs and develop an effective structure that can be nurtured and well supported by the MNR.” One aspect of that recommendation includes “...smaller number of LCCs may make it possible to increase the range of stakeholders able to participate actively.”*

A “smaller number” suggests some amalgamation of LCCs in the Wawa District, and the assignment of responsibilities on more than one Forest. We were informed by the LCC representatives that they did not support any form of amalgamation. It was their view that each Forest required a local LCC to properly express local views, and to possess the local knowledge to respond effectively to AWS submissions, road locations, etc. It was their view that the OMNR had a responsibility to support individual LCCs on individual Forests. In addition, the Chairperson indicated that that it was important that they retain involvement in the broader range of natural resource management issues since:

- Dubreuilville is a small community and can only attract enough volunteers to staff one committee.
- The community’s economic well being is linked entirely to decisions that affect the Forest. Citizens believe that all decisions are linked (i.e. fisheries, wildlife, forestry, access) and believe they should be consulted and have input on all of them.

Conversations with OMNR staff also indicated that they felt the need to utilize the LCC for input on a broader range of natural resource topics for basically the same reasons.

We understand and concur with those reasons. Based on our audit team’s collective experience, and knowledge gained from a number of Independent Audits, we agree that to effectively respond to FMPM requirements, a LCC should not have responsibility for more than one Forest. Members are volunteers; in our opinion they do not have the time to gain a detailed understanding of more than one Forest. We acknowledge that the Wawa District has responsibilities for several LCCs in addition to the Magpie Forest, and the scope of this audit did not include a review of the issues associated with their collective management. For this reason we do not provide a recommendation. Discussions with the OMNR District Manager revealed that no decisions had been made with respect to LCC amalgamations.

A very significant aspect of the approved 2004 FMP was that the LCC statement did not support the plan. It states;

*“....the plan author has done an excellent job on the plan pertaining to forestry issues, when it comes to road issues, the committee finds it one sided. The (LCC) has put forward a few proposals that would help diffuse the ongoing feud between local citizens and remote tourism. When these proposals are brought to the outfitters they refuse them and everything was brought back to its original state.”*

and...

*“We think that road management strategies should not be part of the FMP’s process. Until we see changes to the land use strategies on the side of local citizens, we cannot accept this plan as is “*

The dispute between road-based tourism operators and local recreationalists who want access to the Forest and remote tourism operators who oppose road access is discussed further in Section 3.2.2.

### **3.2.2. FMP Standard Public Consultation Process**

The FMPM requires that public consultation opportunities be provided during the forest management planning process. These opportunities are to include an invitation to participate in the planning process, two public information centres, review of the draft plan, and inspection of the approved plan. The public must be given opportunities to access the OMNR issue resolution process and to request an Individual Environmental Assessment of any proposed forest management activity to the status of an individual environmental assessment.

We determined that public notices were issued on time and their contents complied with FMPM requirements for the development of the 2004 FMP. The Draft Plan was submitted late to OMNR, resulting in a delay in the Public Review of Draft Plan (February 2004 vs. the TOR date of September 2003). The 4 month delay was due to planning inventory issues which set back the anticipated delivery times for the balance of the planning process. The submissions of the Final Plan and OMNR approval were also late, resulting in a delayed notice of inspection of the approved Plan (September 22<sup>nd</sup>, 2004 vs. the TOR date of January 2004).

An appropriate mix of communications media was used in the planning process including French and English public notices in local newspapers and on Dubreuilville cable TV. The material presented at the information centres met FMPM requirements.

As required, a list of required alterations was available to the public during the public review of the Draft Plan. Opportunities for accessing the issue resolution and the EA bump-up process were communicated in all public notices and required Environmental Registry notices were issued.

A long standing and continuing issue on the Magpie Forest is the dispute between road-based tourism operators and local recreationalists who want access to the Forest, and remote tourism operators who oppose road access. This issue has had a major impact on forest management planning and operations for many years, and this situation continued with the 2004 FMP.

The LCC position on this issue was that that the community of Dubreuilville receives little or no financial, social or cultural benefits from remote tourism. Their view was that remote tourism protection (i.e. access and harvest restrictions) is detrimental to the forest industry, to resident’s enjoyment of the Forest, and to the attraction of new road-

based recreation (e.g. all terrain vehicles (ATV)) to the community. Residents of Wawa District that were interviewed did not hold as strong a view, but did question the level of local economic benefits from the remote tourism industry. Tourism operators indicated that access was the main issue on the Magpie Forest and that there was a need for a broader geographic based recreational access planning process to provide a diversity of recreational use.

A further confounding factor is that there is very little verifiable information on tourism contributions to local economies including the Dubreuilville area.

Impacts of this chronic issue included:

- Expenditure of large amounts of time and money on dispute resolution and individual environmental assessments (bump-ups).
- Late FMP approval and implementation with related economic and social implications.
- Inability of the LCC to fully endorse the 2004 FMP due to outstanding concerns over this issue.

There were five formal issue resolution processes conducted in relation to the 2004 Magpie FMP. The issues were all related to access and roads. They included:

- Public discontent with road closures during the first two weeks of the moose hunt.
- Disputes over OMNR policy related to access and road abandonment by motorized recreational users (e.g. ATVs, snowmobilers, trappers).
- Disputes about road access to within 3 km of tourism lakes.

A multi-stakeholder issue resolution process was conducted during the planning of the 2004 FMP. Involved parties included anglers, hunters, trappers, the Municipality of Dubreuilville, snowmobile associations, DFPL, remote and road accessed tourism operators, and the joint assembly of Wawa LCCs. The series of meetings, field tours, correspondence, and discussions that took place was in keeping with the 1996 FMPM dispute resolution process.

The FMP was approved by the Regional Director on September 20<sup>th</sup>, 2004. Six “bump-up” requests were received between October 18<sup>th</sup> and October 21<sup>st</sup>, 2004. The “bump-up” requests were related to the issue resolution process, adherence to District Land Use Guidelines, and impacts to the all-terrain vehicle (ATV) and remote tourism industry. These requests were received by MOE after September 1<sup>st</sup>, 2004, thus the processes of the 2004 FMPM (as opposed to the 1996 FMPM) were followed.

Our investigations lead us to agree with Company, OMNR and LCC concerns that the “bump-up” provision, in some instances, appears to be used as an alternative to full participation in the FMP process, and also as a last minute tactic to delay the

implementation of forest management planning decisions. In our view it is a costly and inappropriate substitute. It also diminishes the value of that EA provision in the eyes of the public. Perhaps changes to the EA bump-up process to discourage this practice could include the posting of a substantial “bump-up” application fee which would not be refunded if the request were judged by MOE to be frivolous. We realize that changes to the current “bump-up” provisions in the EA Act would require changes to legislation; however, it is our opinion that the continuing high cost of not doing so warrants the effort on the part of government.

**Recommendation # 1:**

Corporate OMNR should formally request that MOE review the current Individual Environmental Assessment (“bump-up”) provision of the Environmental Assessment Act with the intent of establishing criteria that require full participation in the FMP planning process as a pre-requisite to its use.

Except for timing issues discussed below, the issue resolution and EA bump-up procedures, including OMNR requests to allow forest operations to commence pending the outcome of the bump-up requests, were followed.

OMNR’s response to MOE on the bump-up request was provided in approximately 30 days, whereas the 2004 FMPM requires a 15 day response deadline. The OMNR response dealt with all six individual environmental assessment requests and because of this we felt the response time was reasonable. The 2004 FMPM indicates that the decision of the Minister of the Environment will normally be made within 45 days after the last opportunity for a bump-up request (for the Magpie FMP, early December 2004). The MOE decision was actually received in May 2005, approximately 5 months after the target date although MOE “concurrence” to allow operations to proceed conditionally, pending its decision on the “bump-up” requests was received in November 2004. Delays in rendering “bump-up” decisions contribute to uncertainty and increased costs associated with forest management planning and operations.

**Recommendation # 2:**

Corporate OMNR should ensure that corporate MOE fully understands the economic and social implications of delayed decisions, and request timely decisions on individual environmental assessment requests.

Wawa District has undertaken a number of initiatives to try to resolve resource access issues. These include:

- Development of formal road use management strategies (1984).
- Public consultations resulting in a tourism amendment (1992) to the District Land Use Guidelines.

- The establishment of a Roads Committee to make recommendations to the District Manager.

The Northeast Regional Advisory Committee (RAC) also produced a report in 2005 that provides recommendations on the issue of road access.

The 2005 RAC report recommends:

- Better resource inventory information.
- Broader based tourism policy (to include road based tourism, ATV's snowmobiling).
- Enhancement of Crown land recreational use and planning.
- Review of current land use policies.
- Improved leadership, including amalgamation of LCCs, better LCC training, broader representation on the LCC, and strong LCC leadership.

The RAC recommendations have the potential to assist OMNR in making progress on many of the access issues, especially in the area of recreational access planning. Compromise has been very difficult to achieve since protection of the remote tourism industry is in conflict with the wishes of others to access the same land and resource base.

Our assessment is that the Wawa District is using all available options to resolve the access disputes. However, discussions, and inevitable tradeoffs, would be aided by better information on the economic benefits of remote tourism. We did not find independent or comprehensive information on the economics of remote tourism and its contribution to the local economies (i.e. Dubreuilville, Wawa). The limited available information was based on estimates from the remote tourism industry itself, and we were unable to determine how, or if it had been verified.

### **Recommendation # 3:**

Corporate OMNR should encourage the Ministry of Tourism to obtain independent current economic information on the contribution of the remote tourism industry to local economies in and around the Magpie Forest.

### **3.2.3. Native Peoples' Consultation**

The FMPM requires that native communities be provided with the option to choose an additional consultation and documentation opportunity with respect to forest management planning, referred to as the Forest Management Native Consultation Program (FMNCP). In addition, OMNR District Managers are required to conduct negotiations with native communities to identify and implement ways of achieving more

equal participation by Aboriginal peoples in receiving benefits from forest management.

Separate invitations to participate were sent to the Missanabie Cree and Michipicoten First Nations. The Michipicoten First Nation has a reserve on Dog Lake, east of the Forest. The Missanabie First Nation does not have a reserve; however, members have a traditional interest in areas of the Forest. The Missanabie Cree has been pursuing a Treaty Land Entitlement Claim with the Federal and Provincial Governments that could potentially impact portions of the Magpie Forest land base. At the time of the audit, we were informed that discussions had been discontinued and court action was pending.

Both First Nations were offered the FMNCP. The Missanabie Cree informed the OMNR they would participate in the program. Michipicoten First Nation elected to utilize the standard consultation approach. There was no response from the Michipicoten First Nation to invitations to become involved. Notices met language requirements, and interviews with First Nation representatives indicated the language used in the notices (i.e. English) was acceptable.

A Draft Native Background Information Report was prepared for the Missanabie Cree First Nation; there was a follow-up Preliminary Report on the Protection of Identified Native Values, and a Final Report on the Protection of Identified Native Values.

The OMNR had comprehensive reporting on Class EA Condition 34. Across the District there were ongoing and regular discussions concerning economic opportunities such as harvesting contracts, tree planting and thinning contracts. The OMNR facilitated workshops (e.g. March, 2005 in Wawa) to discuss issues and topics related to forestry and First Nations. Discussions with First Nation representatives did not reveal any major issues.

Our assessment is that the OMNR conformed to all requirements of the FMPM with respect to First Nations, and met its obligations with respect to EA Condition # 77 and Condition # 34.

#### **3.2.4. Annual Work Schedule Public Inspection**

The FMP Annual Work Schedule (AWS) is produced every year to guide the implementation of operations. It lists operations which were approved in the FMP and are scheduled for implementation for that year. The LCC and the public must be given an opportunity to review the AWS.

We determined that all AWSs were reviewed by OMNR district staff and by the LCC. All FMPM requirements for public Notices of Inspection of the approved AWS and any aerial herbicide, prescribed burns, and insect pest management programs were met.



### **3.3. Forest Management Planning**

#### **3.3.1. Planning Team Activities**

The FMPM requires that the District Manager appoint a planning team. The team is to be chaired by the Plan Author who must be a Registered Professional Forester (R.P.F).

The team must represent a wide range of natural resource expertise. A Terms of Reference must be developed by the Plan Author and approved by the OMNR District Manager. It must identify the tasks required for the preparation of the plan and identify the responsibilities of planning team members. A detailed timeline must be established. Planning team members must make themselves available to answer questions from the public.

We determined the planning team was appointed by the District Manager. The Plan Author was chair of the planning team, and was a R.P.F. The planning team was well supported by OMNR and DFPL, and all required background information was made available.

There were major discrepancies between planning timelines as outlined in the TOR versus the actual dates for public review of the draft plan (August 2003 vs. February 24<sup>th</sup>, 2004) and plan approval (January 2004 vs. September 20<sup>th</sup>, 2004). These FMP timetable discrepancies were due to planning inventory technical issues and consultation time associated with the dispute resolution process.

A 10% sample of inquiries from the correspondence summary file indicated that they were well documented and responses were completed. The correspondence review confirmed that the most controversial issue was access roads.

Except for delays discussed above, the process to produce the 2004 Magpie FMP was well documented and met FMPM requirements.

#### **3.3.2. Resource Stewardship Agreements**

Every FMP must include a statement confirming a commitment to maintain the viability of the tourism industry and to establish a level of remoteness as recognized in the Tourism and Forestry Industry Memorandum of Understanding (MOU). Every reasonable effort is to be made to pursue the development of Resource Stewardship Agreements (RSA). RSA provisions that directly affect the FMP must be incorporated into it.

We determined that the FMP text confirmed a commitment to maintain the viability of the tourism industry. DFPL was provided with a list of resource-based tourism establishments and it sent out letters inviting all licenced resource based tourism establishments to become involved in the RSA process. It kept a comprehensive file of its correspondence, and discussions with individual tourism operators, government agencies and other parties. The OMNR provided a scoping session for tourism operators, provided an updated tourism values map and included it in FMP

supplementary documentation. The Ministry of Tourism provided a list of tourist operators, facilitated RSA discussions, and sent out reminder letters to tourism establishments that did not initially respond.

Despite the considerable efforts by all parties, no RSAs were signed. Reasons cited were that many tourism operations were not immediately affected by DFPL operations, and that the Wawa District Land Use Guidelines and related tourism amendments provided direction, albeit disputed, for many potential tourism–forest management issues (Section 3.2.1 discusses the LCC refusal to support the 2004 FMP).

We note that in interviews with industry, OMNR, and the LCC that some concern was expressed that the RSA process is parallel to the FMP and land use planning processes, and may not be complimentary to them. The RSA process has led to some confusion for the general public and the LCC. While forest management prescriptions resulting from the RSA process must be approved in the FMP, we determined that there is a perception that two private industries are making deals on public lands without full public knowledge and participation. Our experience, based on completion of a number of IFAs, is that the RSA process works well in some areas but not in others. On the Magpie Forest, we believe that the longstanding access issues have resulted in such a high level of mistrust that the intent and purpose of private industry to industry negotiations is not universally accepted. There is no practical recommendation that we can provide to assist in the resolution of this problem. The OMNR and DFPL are already aware of the problem and attempting to deal with it through better communications with the LCC and in future public consultations.

Recognizing these difficulties, it is our assessment that OMNR and DFPL made every effort to develop Resource Stewardship Agreements (RSAs). Their activities were consistent with the intent of the “Guide to Resource Stewardship Agreements”, and the “Management Guidelines for Forestry and Resource-Based Tourism”.

### **3.3.3. Source of Direction**

We determined that the planning team received all required sources of direction (e.g. manuals, guidelines, policies, directives). Plan objectives were prepared in accordance with the requirements of the FMPM. Management objectives were established within the context of broader direction in legislation, policy, regional strategic direction, local land use, and resource management direction. Adherence to these directions was reflected in the AWS and field operations.

### **3.3.4. Introduction**

The FMP introduction contained a properly prepared and signed statement of how OMNR’s Statement of Environmental Values (SEV) was considered in the preparation of the Plan. As required, an index to the environmental assessment components of the plan was included.

### **3.3.5. Management Unit Description**

The description of the MF in the 2004 FMP met FMPM requirements. Description tables adhered to required formats, and included information about the administration, geology, current forest condition and other forest resources. Social and economic information was provided. An estimate of landscape processes for net primary production was provided. The latest Forest Resource Inventory (FRI) for the MF was completed in 1992 and was based on interpreted information derived from aerial photography obtained in 1989. Digital updates of the inventory were completed in 1996, 1999, and 2000 to include natural disturbances, harvest depletions, and to reclassify barren and scattered areas that had been declared free-to-grow (FTG). Stands declared FTG between 8-20 years old at 2004 were re-surveyed and heights updated in the inventory.

The full range of non-timber values, including cultural heritage sites, native values and critical wildlife and fisheries habitat was described in the text, along with the appropriate guidelines and manuals that provided direction on protection and mitigation. Strategies for the identification of the value and its protection were described. A review of prescriptions for operations, supported by field observations indicated that non-timber values were being protected as per the FMP strategies and objectives.

We sampled public comment documents where values information had been provided (e.g. from Information Centers) to determine if it was being recorded on values maps. There was a high level of consistency. Interviews with the OMNR Area Biologist revealed that there was a systematic process to verify values information and to record it. There was also a process to formally maintain value maps (i.e. add and remove information as required). We concluded that the OMNR had done a good job of responding to information provided by the public.

The FMP included a full description of locally featured wildlife species, as well as rare, vulnerable, threatened, or endangered species. It included objectives and strategies to support wildlife and fisheries species, as well as information and maps describing preferred habitat.

A detailed socio-economic profile for the MF had been prepared. The economic analysis and community profiles met FMPM requirements. Community profiles included a description of demographics and migration, the economic environment and non-industrial use of the Forest.

The Socio-Economic Impact Model (SEIM) directs the planning team to identify socioeconomic impacts expected to be created by the quantity of timber that is supplied to the wood processing facilities and by the associated silvicultural investments. However, an additional major socioeconomic impact on the MF has been the ongoing disputes associated with access and protection of remote tourism. In this regard, we were unable to obtain current, independent economic information on the remote or road-based tourism operations on the MF. The lack of this information was a concern to the LCC and we note that the June 2005 case study "Resolving Access Issues: A Case Study" prepared by the Northeast RAC (discussed in Section 3.2.2) also lacked

independent economic information on remote tourism impacts (negative and/or positive) on local communities. It appears to us that this information is critically important when making decisions and tradeoffs that have economic impacts on the forest industry and others. A recommendation is provided in Section 3.2.2.

### **3.3.6. Objectives and Strategies / Management Alternatives**

Through the FMP process, long term strategic direction for the Forest and objectives for forest management are determined by examining forest policies, strategic land use documents, legislation, resource issues, the current state of the forest, benefits expected from the forest, and the protection of forest values. These objectives are used to create management alternatives which are compared to determine forest sustainability and the provision of benefits (e.g. employment, wood fibre). The categories of FMPM objectives include:

1. Forest diversity.
2. Social and economic.
3. Provision of forest cover.
4. Silviculture.

We reviewed the FMP and minutes of meetings. Interviews were conducted with DFPL, OMNR, planning team and LCC members, tourist operators and First Nations representatives. Resource model outputs (e.g. SFMM, SEIM) were examined for the 2004 FMP.

The Magpie FMP objectives were organized according to the four objective types required by the CFSA:

1. *Objective Category 1 - Forest Diversity*

To provide a forest that, through time, has structural, compositional, and spatial attributes of a natural, fire-driven, boreal forest ecosystem, at the stand and landscape level (i.e. age class structure, forest units, spatial diversity).

2. *Objective Category 2 - Social and Economic Matters*

To derive sustainable, economic, social, recreational and cultural benefits from the Forest (i.e. wood supply, remote and road based tourism and recreation).

3. *Objective Category 3 - Forest Cover*

To provide forest cover for those values which depend on forest cover (i.e. wildlife habitat, habitat units).

4. *Objective Category 4 - Silviculture*

To direct forest development through time toward the desired future forest condition via the application of cost effective silviculture treatments (i.e. renewal and maintenance).

Each of the four (4) objective categories had associated strategies and where appropriate, quantified targets. The identification of objectives, targets, and strategies was complete and presented in a well organized format.

Six management alternatives (three of which are mandatory) and a benchmark scenario were developed and analyzed.

1. Nominal Managed Decreased Harvest Flow with normal silvicultural funding (Mandatory).
2. Timber Production Potential with normal silvicultural funding (Mandatory).
3. Timber Production Potential with unlimited silvicultural funding (Mandatory).
4. Anticipated Industrial Demand with unlimited silvicultural funding.
5. Maximum Timber Production Potential with normal silvicultural funding.
6. Intermediate Managed Decreased Harvest Flow with normal silvicultural funding (Selected Management Alternative).

All management alternatives were individually assessed for their achievement of the projected targets for each objective. Alternative 6 provided the best package of desired benefits and outcomes and was determined to be the Selected Management Alternative (SMA).

We agree with the planning team's conclusion that the Selected Management Alternative is sustainable. It passed both the non-spatial and spatial tests of sustainability and was the best fit for the achievement of the FMPs objectives.

We completed a review of the results of 2004 FMP Strategic Forest Management Model (SFMM). This included an examination of:

- The methodology and assumptions used in the modeling.
- A review of the individual management alternatives.
- An assessment of sustainability and objective achievements.

Overall, the areas reported in the FMP tables and modeled in SFMM were fairly consistent. Minor differences by forest unit were explained in the plan text. The development and description of SFMM inputs, modeling outputs and sensitivity analysis on key inputs met all requirements:

- The yield curves were realistic and reasonable.
- The managed fire disturbance rates were reasonable given the high proportion of overmature forest that has not burned.
- Appropriate natural succession rules were included in the FMP.

- The post renewal succession rules were reasonable and similar to adjacent forests.
- Reserves were identified and modeled.

Our conclusion is that the SFFM analysis met all requirements and did a good job of depicting the forest into the future.

### **3.3.7. Operational Planning**

Operational planning selects areas for harvest, tending, and renewal operations for the five-year term of the forest management plan. Preferred silvicultural treatment packages and the silvicultural ground rules are identified and prescriptions to protect specific values are developed through Area of Concern (AOC) planning. Locations of new primary and secondary road corridors are determined.

Our record reviews and interviews with DFPL and OMNR staff indicated that adequate information was available for planning AOC requirements. Operational prescriptions were appropriate and included alternate methods of operation to support the protection of the value. Conditions for tertiary roads that entered AOCs were documented in the FMP. A review of prescriptions, values maps, and supplemental aerial photography supported by field observations determined that harvesting and silvicultural activities were appropriate, and values within AOCs were protected. A more detailed discussion on AOCs is included in Section 3.4.1.

The Silvicultural Ground Rules (SGRs) were developed according to appropriate guidelines. The Silvicultural Treatment Packages (STPs)<sup>7</sup> were appropriate for forest types and included the silvicultural system, the harvest method, the renewal, and tending treatment and the regeneration standards and targets. Forecasted renewal activities were consistent with those projected from SFMM, and supported the achievement of FMP objectives.

Areas selected for forest management activities were consistent with the selection criterion described in the FMP and the SFMM output file. The forecasted levels of harvest (both area and volume) and renewal were sufficient to provide for the achievement of the plan objectives. As required by the FMPM, contingency harvest areas were identified. The requirement is to provide a minimum of 3 months, and a maximum of one year, of harvest operations. The contingency area was sufficient to support operations for a period of approximately seven months (1,576 ha or approximately 62% of the allowable harvest area).

---

<sup>7</sup> Silvicultural Ground Rules (SGRs) specify the silvicultural systems and types of harvest, renewal, and tending treatments that are available to manage forest cover and the type of forest that is expected to develop over time. A silvicultural treatment package (STP) is the path of silviculture treatments from the current forest condition to the future forest condition; STPs include the silvicultural system, harvest and logging method(s), renewal treatments, tending treatments, and regeneration standards.

Detailed road planning was incorporated in the FMP, and data was provided to support the need for forest access. Road planning was consistent with FMP objectives and met FMPM requirements. The public was provided with opportunities to review road plan(s) and provide comment. There were no new primary or secondary roads planned for the plan term. There is a formal Roads Committee (the LCC and remote tourism have members on it) that reviews road closures and provides input to decisions.

We conclude that operational planning requirements were fully in compliance with the FMPM.

### **3.3.8. Plan Review, Approval**

The FMPM requires that the draft FMP must be submitted for OMNR and public review, and alterations required by the OMNR must also be made available to the public. The draft and final plan must be certified by the Plan Author, and the final plan must be certified by the OMNR District Manager and approved by the OMNR Regional Director.

Required alterations were supplied to the planning team. The FMP was approved by the Regional Director on Sept 20<sup>th</sup>, 2004 approximately 8 months late. This delay is discussed in Section 3.2.2.

All appropriate certification and approvals required by the FMPM were in place.

### **3.3.9. Plan Amendments**

During the audit period, there were 14 amendments, to the forest management plans (6 to the 1999 FMP and 8 to the 2004 FMP). All required FMP amendment processes and procedures were followed and correctly documented. Amendments were certified by an RPF, reviewed by the LCC, distributed as required, and listed in the FMP.

Our review of the amendments (all administrative) that were made during the audit period found that they were consistent with the FMP and the FMPM. The AWS revisions that were made during the audit period were appropriately documented.

### **3.3.10. Contingency Plans**

There were no contingency plans during the plan term.

### **3.3.11. Annual Work Schedules**

The approved Annual Work Schedules (AWS) met FMPM requirements and were submitted on time. We note the 2004/05 AWS was submitted and approved in two parts due to the late approval of the 2004 FMP. In our opinion this was appropriate.

Forest Operation Prescriptions (FOPs) were referenced in the AWS and certified by an RPF.

### **3.4. Plan Implementation**

#### **3.4.1. Areas of Concern**

An Area of Concern (AOC) is a defined geographic area, within an area selected for forest management activity which is adjacent to an identified value on the values map. It represents an area where forest operations will be reviewed, controlled, modified, or excluded, as required to protect the value associated with the area.

The 2004 FMP identified a variety of AOCs. We determined that prescriptions for conducting operations in AOCs were developed from information contained in the various guidelines in effect for the management and protection of fish and wildlife. A complete list of implementation manuals was contained in the Supplementary Documentation of the approved FMP. Operation prescriptions for designated remote lakes, canoe routes, and road accessible tourism were consistent with principles contained in the Wawa District Land Use Guidelines (DLUG) and Management Guidelines for Forestry and Resource Based Tourism. The location and extent of AOCs were shown on a FMP map and were identified by a code that linked the map to the operating prescription.

There was a formal process that dealt with the discovery of previously unidentified values (i.e. a stick nest, creek that did not appear on maps). DFPL provided the location and description of the value to the OMNR and the values map was updated. The applicable operational prescription was also provided to the OMNR for compliance monitoring. Operating prescriptions for reserve, harvesting, renewal and maintenance and tertiary road conditions were located for each type of AOC. Where applicable, alternate prescriptions and an environmental analysis were completed. For example, AOC prescriptions for Category “A” canoe routes included an alternative prescription for modified operations as indicated in the Wawa DLUG, and an environmental analysis that described potential effects, advantages and disadvantages associated with the activity, as well as conditions that would apply to tertiary roads. During the field audit we compared planned prescriptions to actual results and concluded that they were fully met. We compared and measured AOC distances on the ground to guideline requirements, and also verified distances using supplementary aerial photography of field inspection sites.

Native Background Information Reports contained cultural information. Trails and other information (unregulated campsites) were contained on the Magpie Additional Values Map. We inspected the maps and completed field verification for those values that were located at our field inspection sites. We concluded that the values maps were accurate and complete.

For the development of the 2004 FMP the Forest Management Guide for Natural Disturbance Pattern Emulation (NDPEG) was used to plan forest disturbances and produce areas for planned disturbance. NDPEG provides guidance on clearcut size and how cuts should be distributed to assist forest managers in simulating more natural patterns at the landscape level. The guide also address how forest managers can better simulate aspects of wildfire results and structural attributes during forest



management activities at the forest stand level. In four of sixty-two disturbances, the planning team calculated residual content for a planned 5 year disturbance (as opposed to a 20 year disturbance) because of a lack of residual timber in areas harvested prior to the NDPEG.

Planning team members, and others, informed us that the implementation of NDPEG involved significant immediate costs (i.e. lost volume, increased road costs) as well as long term economic and social costs associated with future wood supplies. It was also felt by some that NDPEG did not have a strong science-based foundation. As a result of these significant concerns, the FMP states:

*“Alternate approaches to the rigid application of the guide need to be examined to reduce the complexity of its application in the planning phase, and to reduce the negative impacts that the application of this guide will have on forest development, wood supply, and operating costs.”*

The audit team has encountered the issue of economic and social concerns associated with the implementation of guidelines in other IFAs. The issue revolves around tangible economic costs and intangible social and ecological benefits. With respect to the NDPEG, we note that the guide itself states:

*“ Most of the direction in this guide represents new and untested requirements.”*

and;

*“ If in the monitoring of the implementation of the guide it is determined that there are significant and unmanageable economic, ecological or social impacts, consideration will be given to a review and possible revision of the guide before the normal five-year review.”*

We understand that OMNR is currently undertaking such a review of NDPEG. DFPL (and other forest companies) and OMNR field staff have considerable experience in the implementation of NDPEG which will be useful in the review of the economic and potential ecological and social impacts of the guideline.

#### **Suggestion # 1:**

The OMNR review of NDPEG should involve planning team members and field practitioners (forest industry and OMNR) directly involved with the implementation of the guide.

### **3.4.2. Harvest**

There is a range of acceptable silvicultural treatments for harvest, renewal and tending that can be undertaken at various intervals throughout the life of a forest stand. The intended effect of these treatments is to direct forest development toward the desired future forest condition.

For the MF, we determined that fifty-six different Silvicultural Treatment Packages (STPs) were developed using the experience of DFPL staff and OMNR manuals. No treatments were identified as exceptions to the Silvicultural Ground Rules (SGRs). The management plans contained a listing of allocated stands and showed the silvicultural system for each stand.

We sampled approximately 17% of the actual harvest activities (Table 1). In addition, harvest was also viewed in conjunction with field investigations of other audit activities. All harvest sites were approved for operations in the AWS, and the prescriptions were in accordance with the SGRs. Our field investigations indicated that harvest prescriptions were appropriate for the site conditions.

During the site inspections we noted that snag tree retention was variable on sites. In general, areas harvested later in the period retained more trees than in those harvested earlier. We noted that while sufficient residual stems were being retained on cutovers, in many cases the size and species composition of the residuals were not representative of the pre-harvest forest. We were informed that operators had a tendency to retain non-marketable species to achieve NDPEG targets (there was no market for white birch). We determined that DFPL was aware of the problem and was proactively dealing with their operators to correct it. We do not feel a recommendation is required.

The actual harvest during the 1999-2004 planning term was 11,060 ha compared to the planned harvest of 14,090 ha (78% of planned). Figure 4 shows planned vs. actual harvest areas by planning term. The underachievement of the harvest was attributed mainly to the area bypassed. Areas were bypassed because they were severely damaged by wind, or they were inoperable due to terrain or unmarketable species. All of the harvest blocks in the 1999-2004 FMP were harvested or bypassed (18.8% of the planned harvest area). There were no uncut areas carried forward to the 2004 FMP.

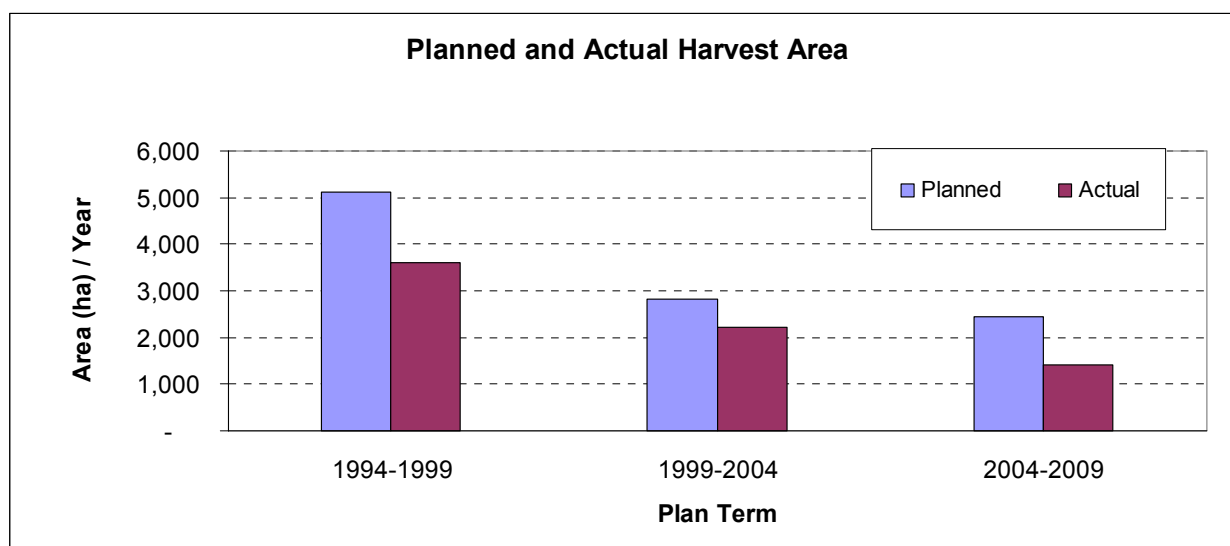


FIGURE 4. PLANNED VS. ACTUAL HARVEST AREAS BY PLANNING TERM

Table 3 shows the planned vs. actual wood utilization for the 1999-2004 planning term.

As shown in Figure 4 there has been a significant decrease in the planned and actual harvest area from the 1994 FMP to the 2004 FMP. The current planned harvest area is approximately 48 % of the area that was planned in 1994. The Plan Author attributes this decline to changes in analytical tools (SFMM versus MADCALC), an aging forest and a plethora of additional guidelines and modeling objectives which have reduced the allowable harvest area (AHA). Forecasts from the current plan indicate that the decline will continue for another four (ten-year) periods. The AHA in 2044 is forecast to be 1,855 ha per year, which is 73% of the current AHA. The specter of diminishing allowable harvest areas is disconcerting, as the current wood supplies appear to be insufficient to meet mill demands.

TABLE 3. PLANNED VS. ACTUAL WOOD UTILIZATION FOR 1999-2004 PLANNING TERM.

<b>Species/Product</b>	<b>Planned Harvest Volume (m<sup>3</sup>)</b>	<b>Actual Harvest Volume (m<sup>3</sup>)</b>	<b>% Achievement</b>
Spruce/Pine/Fir	1,029,829	1,020,887	99
Cedar / Larch	11,182	1,857	17
Poplar Pulp	506,660	357,038	70
Poplar Veneer	32,531	26,850	83
White Birch	26,748	1,500	5
<b>Total:</b>	<b>1,609,940</b>	<b>1,408,132</b>	<b>87</b>

The total volume of spruce, pine, fir (SPF) harvested on the Forest met planned amounts for the 1999-2004 planning term. The actual harvest from allocated areas was approximately 92% of the plan (940,285 m<sup>3</sup> vs. 1,029,819 m<sup>3</sup>). An additional 80,602 m<sup>3</sup> was harvested in salvage cutting within windthrown areas. SPF actual yields per hectare were higher than planned (85.0 m<sup>3</sup>/ha vs. 73.1 m<sup>3</sup>/ha). The differences in SPF volumes achieved was attributed to a higher than normal conifer forest unit composition in the harvest allocation. In the 1999 plan, the conifer and mixed conifer forest unit area accounted for 67% of the total allocation. In the 1994 plan conifer forest units accounted for 47% of the allocated area.

Harvest targets for cedar and larch forest units were significantly underachieved (1,857 m<sup>3</sup> of cedar and larch vs. planned volume of 11,182 m<sup>3</sup>). This low level of utilization was due to a lack of markets. The target for poplar harvest was also not attained (70.0% of the planned amount for pulp and approximately 83% for poplar veneer production). White birch harvests were significantly below planned levels (1,500 m<sup>3</sup> vs. a planned cut of 26,748 m<sup>3</sup>) due to a lack of markets.

The total yield per hectare achieved during the 1999 planning term was 115.m<sup>3</sup>/ha compared to 106 m<sup>3</sup>/ha in the 1994 plan term. The Plan Author indicated that future planning should consider the longer-term average yield per hectare (110 m<sup>3</sup>/ha). We concur with this assessment.

DFPL employees used conventional logging systems (fellerbuncher / grapple skidder / delimber) which resulted in the majority of slash being situated at the roadside. Slash was piled by Company loaders during the log haul and missed areas were piled by skidder during site preparation activities. Slash Pile Burn Plans were prepared as required, the LCC was involved and public notification requirements were met. We observed the results of burning during the field inspections and, in our assessment, the burn program was effective (Photograph 1).



Photograph # 1. Planting within an effectively burned slash pile.

Two significant wind events resulted in a requirement to conduct salvage operations during the audit term. These events resulted in the depletion of 2,088 ha by natural cause, compared to the SFMM estimate of 151 ha for the five-year term. Salvage harvest operations were completed on 995 ha (much of the area was inaccessible and therefore could not be treated). In accordance with FMPM requirements and salvage volumes were appropriately recorded in the Annual Reports. During the audit period 804 ha of the salvage area had been reported as regenerated (279 ha by planting and 525 ha of natural regeneration).

Harvest compliance inspections were conducted in accordance with the compliance plans; in some years the number of inspections exceeded planned targets. For the audit period, DFPL reported 2 Not in Compliance (NIC) reports related to harvest activities. OMNR conducted thirty-eight inspections of harvest activities and generated seven NIC reports. Five of these reports were for harvest inspections conducted during the first year of the audit period. Compliance is discussed further in Section 3.6.

### 3.4.3. Renewal

During the audit period we sampled 26% of the natural and 22% of the artificial renewal activities undertaken. All renewal activities were approved in the FMP and were consistent with the applicable SGRs and Forest Operation Prescriptions (FOPs). DFPL reported that 79% of the area assessed for regeneration success met stocking and height requirements. Based on our document review and the field inspections we conclude that a successful renewal program is being implemented.



Photograph # 2. Successful forest renewal on the Magpie Forest

Table 4 indicates that the total area treated in the renewal program exceeded planned levels. The artificial renewal program achieved 93% of planned levels, indicating that the softwood component of the Forest is being maintained.



TABLE 4. COMPARISON OF ACTUAL TO PLANNED RENEWAL 1999-2004 (AREA IN HA)

<b>Treatment</b>	<b>Planned (Ha)</b>	<b>Actual (Ha)</b>	<b>Actual as a % of Planned</b>
<b>Artificial Regeneration</b>			
<i>Planting</i>	8,082	7,584	94%
<i>Seeding</i>	570	501	88%
<b>Subtotal Artificial Regeneration:</b>	8,652	8,085	93%
<b>Natural Regeneration</b>	5,205	6,811	131%
<b>Total Regeneration:</b>	<b>13,857</b>	<b>14,896</b>	<b>107%</b>

Artificial regeneration accounted for 54% of the total regeneration effort for the 1999-2004 period and 55% for the 2004-2009 planning term. Company experience has determined that seeding alone does not normally produce fully stocked stands of jack pine but it does contribute to the development of mixedwood stands. The Forest's rugged topography, exposed bedrock, and shallow soils limit the number of spots that can be planted. Planting densities of 1,200 to 1,600 trees per hectare are not uncommon (rather than the typical 2,100 trees per hectare). Sites planted with lower stocking densities are monitored and are frequently treated with supplemental planting or seeding treatments to ensure adequate conifer stocking levels. Our site inspections verified that this strategy was effective, as most plantations met stocking guidelines.

Natural regeneration strategies are principally applied to renew mixedwood and hardwood forest units (e.g. poplar, birch) (Photograph #3). Natural regeneration and the protection of advanced growth provided acceptable stocking levels on lowland sites of spruce, larch, and cedar. Our inspection of areas left for natural regeneration indicated they were adequately stocked.



Photograph # 3. Poplar natural regeneration on harvest cut block.

There is a large depleted backlog (48,372 ha.) that requires Free-to-Grow (FTG) assessments. We noted that regeneration assessments of recently harvested areas were generally up-to-date, but the assessment of depleted backlog areas had not occurred. In general, the rate of survey should be equal to the rate of harvesting (plus some areas requiring re-treatment and/or resurvey) plus the area of natural depletions. The 1999 FMP planned the assessment of 23,151 ha. Only 53% (12,326 ha) of the target area was assessed; however, 89% of this area (10,949 ha of 12,326 ha) was deemed to have been successfully regenerated.

The previous IFA also noted that FTG assessments were below planned targets. It is important that harvested and naturally depleted areas be assessed, particularly in the context of wood supply modelling and the predicted future supply shortfalls. Many areas contained successful regeneration but had not been formally assessed. As well, some information related to 2005 assessments had not been compiled at the time of this audit. We provide the following recommendation;

**Recommendation # 4:**

DFPL must increase the amount of area annually surveyed for free-to-grow status.

During the 1999-2004 term approximately 78% of the area assessed met silvicultural objectives (i.e. free to grow, met the minimum stocking standard and met species composition requirements). However, as shown in Table 5 the silvicultural effectiveness of renewal efforts in cedar, spruce and larch forest units was low and the Plan Author

indicated that this circumstance required further investigation through silvicultural effectiveness monitoring.

TABLE 5. SILVICULTURAL SUCCESS RATES BY FOREST UNIT (SURVEYS CONDUCTED BETWEEN 1999 AND 2003).

Forest Unit	Area Assessed (Ha)	Area Meeting Silvicultural Objectives	%
White Birch	1,818	1,528	84
Cedar	97	13	13
Larch	8	0	0
Jack Pine	4,534	3,896	86
Poplar	3,656	3,015	82
Spruce	2,213	1,202	54
<b>Total:</b>	12,326	9,654	78

During the audit period DFPL accomplished 57% of planned site preparation activities (Table 6) as harvest levels were lower than planned. Approximately 53% of the actual area depleted was site prepared during the audit term reflecting the fact that many of the logged sites did not require site preparation due to adequate site disturbance (i.e. mineral soil exposure) during logging, a lack of slash following logging and/or favourable site characteristics for renewal such as the presence of a thin duff layer. The majority of site preparation work was conducted by Disc Trencher (98%). Limited chemical site preparation was undertaken. There was only one NIC report relative to renewal (2002-2003) where a site preparation contractor inappropriately crossed a stream to access another scheduled block.

TABLE 6. PLANNED VS. ACTUAL SITE PREPARATION 1999-2005

Period	Site Preparation*	
	Planned*	Actual*
1999 - 2004	8,652	4,345
2004 & 2005	1,562	1,513
<b>Total:</b>	10,241	5,858

\* Includes both mechanical and chemical site preparation

Our site investigations revealed little evidence of environmental damage; there was no evidence of chemical drift into riparian buffers. Mechanical treatments sufficiently exposed mineral soil and chemical site preparation adequately controlled competing vegetation. It is our opinion that the site preparation program was effective.



### 3.4.4. Tending and Protection

During the audit we sampled 18% of the chemical tending activities and 62% of the thinning activities undertaken during the audit period. All activities observed in the field were approved in the FMP and complied with the applicable Silviculture Ground Rules (SGRs). Tending activities were consistent with the Forest Operation Prescriptions (FOPs).

The tending program was delivered mainly through the aerial application of herbicides. To treat small harvest blocks DFPL utilized helicopters for aerial applications and backpacks for ground treatments. Ground applications (388 ha) enabled the broadcast cleaning of very small treatment areas and the release of individual trees where mixedwood management was an objective. DFPL had made a management decision to minimize the use of herbicides in order to retain the naturally regenerating hardwood component on sites where planting densities were low, and to promote mixedwood forest units. Our field investigations indicated this strategy was producing good results.

During the 1999-2004 term, DFPL achieved 87% of planned chemical tending targets (Table 7). Our field inspections determined that the majority of sites were effectively treated. No compliance issues related to chemical tending occurred during the audit period.

TABLE 7. PLANNED VS. ACTUAL CHEMICAL TENDING 1999-2005

Period	Tending	
	Planned	Actual
1999 - 2004	6,842	5,999
2004 - 2005	841	827
<b>Total:</b>	7,683	7,189

The 1999 FMP had anticipated a requirement to pre-commercial thin approximately 200 ha per year. Work was completed on 82 ha of jack pine plantation; however, it was then determined that planting operations did not produce stand densities that required treatment. In response to this finding, the 2004 FMP did not include any pre-commercial thinning. Our inspection of sites supported this strategy.

No protection activities were required during the audit term.

### 3.4.5. Renewal Support

Renewal support activities included tree seed collection, planting stock production and tree improvement operations. During the audit period, DFPL purchased approximately 12 million seedlings and collected 566 hectolitres of cones to support the planting program. We concluded that renewal support initiatives were sufficient to support the seeding and planting program.

DFPL participated in a Black Spruce Tree Improvement initiative during the audit period through its participation in the Lastheels Township seed orchard as a member of the Northeast Seed Management Association. DFPL maintained sufficient funding in their Silviculture Trust Account to support its full silviculture program.

#### **3.4.6. Access**

Road construction, various types of water crossings, road maintenance and any other access activities must be conducted in accordance with the FMP, AWS and current applicable laws and regulations.

We traveled hundreds of kilometers of roads on the MF, examined 26 water crossings, and reviewed all related documentation. The planning documents were complete and roads had generally been constructed with minimal environmental damage. However, the installation of culverts and bridges and the maintenance of the roads did not fully meet standards outlined in the “Environmental Guidelines for Access Roads and Water Crossings” (Photographs #4 and #5). We observed culverts that were too short, not set properly, and did not have appropriate rip rap. We observed bridges that were not installed properly and did not have proper signage and rails. In one location, a culvert had washed out causing serious damage when the company had known for some time that a beaver dam had blocked the flow. This washout occurred despite company assertions that all roads were patrolled, and that problems were corrected when found.



Photograph # 4. Poor culvert installation. Note short pipe and erosion.



Photograph # 5. Improper Bridge Installation (Old structure was not removed).

A review of the FOIRs (See Table 9) indicated that of the 11 NIC reports in the audit period, eight (73%) were related to access and these were all for water crossings. Based on our field inspections, we concluded that the number of NIC reports related to water crossings would have been considerably higher if there had of been more OMNR compliance inspections (Section 3.6.1.).

In a number of locations we observed roads with grading that created berms (double ditching) leading to washouts on hills and slopes, with the washout usually occurring at the lowest point (i.e. water crossing). We determined that roads are graded in a “two pass” system that moves all the material to one side of the road, rather than a “three or four pass” system where the surface material is brought to the centre of the road in the first two passes then spread on a third (and/or fourth) pass. The “three or four pass” system maintains a crown that allows the road to shed water.

The past IFA expressed a similar concern about roads. In our view the company has not appropriately addressed the concern. Accordingly, we provide the following recommendation;

**Recommendation # 5:**

DFPL must immediately improve water crossing installation and road grading practices.

DFPL entered into a Road Maintenance Agreement with OMNR to maintain specific primary roads (January 31<sup>st</sup>, 2006). DFPL identified and received approval for 10 roads (174 km) and subsequently invoiced OMNR for road maintenance. During the field audit we traveled and/or made aerial observations of the designated roads and verified that work had been carried out. Table 8 provides information on roads designated under the road maintenance agreement.

TABLE 8. ROADS DESIGNATED UNDER THE ROAD MAINTENANCE AGREEMENT.

Road	Work Description	Km Maintained
Park Road	Culvert replacement Gravel/ Grading Brushing Snow plowing	57
DREE Road	Grading & Snow plowing	4
Challenger Road	Grading / Gravel/ snow plowing	28
Winget Road	Grading & Snow plowing	38
Makawa Road	Grading & Snow plowing	8
Road 19	Grading & Snow plowing	4
Road 48	Grading/Brushing/Snow plowing	12
Road 160	Grading & Snow plowing	9
Road 161	Grading/Brushing/ Snow plowing	5
Road 659	Grading & Snow plowing	9

### 3.5. Systems Support

#### 3.5.1. Human Resources

There must be programs which ensure that individuals responsible for implementing any part of the sustainable forest management system understand the legal context and corporate policies and directions. There must be ongoing and effective communications and training.

OMNR and DFPL training records were comprehensive and well organized. Records were available in electronic format and tracked the training history for individual employees. A review of those records for forest management staff (foresters, technicians) in OMNR and DFPL indicated they had been provided with training directly related to their responsibilities on the Forest. Field operations training included standard workplace health and safety, first aid, forest hazards (e.g. bear awareness, survival) and equipment (e.g. defensive driving, snowmobiling). As well, appropriate



company and OMNR staff had completed a full range of training on specific FMP development, forest management manuals and guidelines and sustainable forestry objectives. In Section 3.4.6., we identified an ongoing issue with respect to culvert and bridge installation and road maintenance. We determined that DFPL had received training in these matters. The failure to employ that training appears to be a compliance issue as opposed to a lack of training. It also appears to be related to the OMNR's lack of compliance monitoring. A recommendation has been provided in Section 3.4.6.

We concluded that DFPL had appropriate staff levels to carry out its responsibilities on the Forest. OMNR had not assigned appropriate numbers of compliance staff (discussed in Section 3.6.1.) and a recommendation has been provided to address this issue.

### **3.5.2. Documentation and Quality Control**

The Company had an effective record management system. All forest management reports were stored in a dedicated area, were readily available for review, and were updated as required. The Company effectively utilized a Geographic Information System (GIS) as a decision support tool for forest management planning, record and document control, and other database functions. The GIS system also provides a tracking system for their silviculture and assessment activities.

The OMNR Wawa District documents and records were determined to be up to date. The District provided us with all of the required information in a timely and efficient manner.

## **3.6. Monitoring**

### **3.6.1. General Monitoring**

#### Compliance Monitoring:

DFPL compliance planning was consistent with guidelines, clearly outlined issues on the Forest, and provided strategies to manage them. The Five Year Strategic Plan was completed and the AWS had appropriate schedules. In the first three years of the audit term the AWS did not include a discussion of the previous year's monitoring program, and annual priorities were not established; however, those requirements were included in the AWS for the last two years of the audit period. At the time of the audit the Compliance Strategy needed to be amended to show that Company foremen had been certified and were doing Forest Operations Inspection Reports (FOIRs). Company managers were aware of the requirement and indicated the amendment would be completed.

DFPL employees had received instruction and information for acceptable forest operations (e.g. protection of riparian areas) and were instructed to report compliance problems to their supervisor. At the start of the audit period a designated DFPL employee (Compliance Monitor) completed all inspections and reporting using the

Forest Operations Compliance Information System (FOCIS) and the Forest Operations Information Program (FOIP). Later in the audit term DFPL Foremen became certified as compliance inspectors and assumed responsibility for inspections and the submission of FOIRs to the Woodlands Manager who forwarded them to the Compliance Monitor for approval. Inspection of FOIRS and interviews with Company foremen and managers indicated the system worked effectively.

We were informed that the Silviculture Forester will be certified as a compliance inspector for silviculture program activities. In our opinion, this will enhance the effectiveness of the compliance program.

The OMNR Wawa District informed us that they had completed a “Wawa District Five Year Compliance Strategy”, though they could not produce a copy. We were informed the electronic copy, as well as the 2002-2003 Annual Compliance Operations Plan (ACOP) had been lost in a computer “crash” and no paper copies were available. The OMNR now has off-site backup files to prevent this type of problem in the future.

The ACOPs for the remaining years in the audit term were reviewed and met all reporting requirements. Targets and scheduling were completed, the previous years activities were assessed and new priorities were established. Overall, we concluded that District compliance planning met all provincial requirements.

However, OMNR field delivery of the compliance program was sub-standard. Field inspections were minimal for the first three years of the audit period and non-existent for the last two years (Table 10). We determined that the reporting that was completed lacked required detail and did not meet standards. Through interviews, and a review of OMNR staffing charts we determined that the problem was related to OMNR staffing issues (e.g. employee on sick leave) and the dedication of other staff resources to other priorities. OMNR managers informed us that the decision to not afford a higher priority to compliance was based on other workloads, and the good historical compliance record of the DFPL. We understand that the “risk management” approach taken by the OMNR was based on compelling reasons and generally the DFPL compliance record was a good one. However, the 2001 IFA identified concerns about road maintenance (Sections 3.4.6. and 3.5.1) and it is our conclusion that the ongoing issue associated with road maintenance, bridges and culverts is in part related to the lack of an OMNR compliance presence.

While we were informed that OMNR is currently increasing its compliance presence on the Forest, we have nevertheless, provided a recommendation to ensure that it meets its compliance responsibilities.

**Recommendation # 6:**

The District OMNR must significantly increase its compliance presence on the Forest.

DFPL compliance was generally well done and appropriate for the level of harvesting activity. However, as discussed some chronic problems do exist (e.g. culvert

installation, bridge maintenance). Based on the compliance inspection reports (Tables 9 and 10) and Annual Reports, we determined that DFPL efforts had improved over the audit period as a result of training, and the use of GPS.

TABLE 9. INDUSTRY COMPLIANCE INSPECTIONS, MAGPIE FOREST, 2001-2006

Activity	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
Access	21 (2)	22 (2)	22 (1)	7 (2)	13 (1)
Harvest	38	61 (1)	35 (1)	17	28
Renewal	1	5 (1)	2	3	3
Maintenance	0	0	0	0	2
Protection	1	0	0	*	*
<b>Total:</b>	61 (2)	88 (4)	59 (2)	27 (2)	47 (1)
<b>% NIC:</b>	3	5	3	7	2

Source – 2001-2004 are from FOCIS and 2004-2006 are from FOIP

\* - Under FOIP there are only four main activities

( ) – Indicates number of Not In Compliance (NIC) reports

TABLE 10. OMNR COMPLIANCE INSPECTIONS, MAGPIE FOREST, 2001-2006

Activity	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
Access	13 (2)	2	11 (3)	0	0
Harvest	20 (5)	15 (1)	3 (1)	0	0
Renewal	1	1 (1)	0	0	0
Maintenance	0	0	0	0	0
Protection	1	0	0	*	*
<b>Total:</b>	36 (7)	18 (2)	14 (4)	0	0
<b>% NIC:</b>	19	11	29	NA	NA

Source – 2001-2004 are from FOCIS and 2004-2006 are from FOIP

\* Under FOIP there are only four main activities

( ) Indicates number of Not In Compliance (NIC) reports

The overall level of monitoring by DFPL was appropriate and in accordance with the approved FMP and AWS. All blocks were inspected at least once with a FOIR being submitted. Suspended blocks were inspected several times, and blocks were also inspected for other activities such as renewal or maintenance.

There were delays in reporting by both DFPL and OMNR. Delays were caused by the approval process (i.e. staff absence) and workload. Both OMNR and DFPL acknowledged the delays in reporting and are taking corrective measures to ensure timely reporting. We are satisfied that corrective action is occurring on this matter.

### Silvicultural Monitoring:

The FMP had a detailed discussion of the monitoring and assessment program for the Forest. This included the monitoring program for Areas of Concern (AOCs) and forest assessment (regeneration success and the effectiveness of silvicultural treatments). Targets for regeneration success were detailed in the FMP and a plan was in place to assess the backlog in Free to Grow assessments.

There were no exceptions to the silvicultural guides or to prescriptions for AOCs in the FMP; therefore, no monitoring program was developed. Based on our field audit, employee interviews, and review of records we confirmed that action was taken to assess silvicultural effectiveness (e.g. field surveys).

### **3.6.2. Annual Report**

A report must be prepared annually to summarize the management activities that were carried out on the Forest during the preceding year. Standards for reporting are set out in the FMPM, the FIM and the Annual Report Preparation and Review Protocol. Reports were required in the spring and fall until 2003-2004. Beginning in 2004-2005, only one report is required on November 15<sup>th</sup> (i.e. the report for the operational year April 1<sup>st</sup>, 2004 to March 31<sup>st</sup>, 2005 is due on November 15<sup>th</sup>, 2005.)

Annual Reports were on time and generally complete and accurate. Shortcomings included the Company and OMNR did not fully complying with compliance reporting requirements for some years and lack of sufficient detail with respect to NIC issues, the action taken, and the plans to prevent future occurrences.

#### **Recommendation # 7:**

OMNR and DFPL must review their responsibilities relative to compliance reporting in the Annual Reports and comply with FMPM and FIM requirements.

### **3.6.3. Report of Past Forest Operations**

The Report of Past Forest Operations examined the planned and actual forest management activities that occurred during the 1994-1999 period. Planning requirements have changed considerably since the 1994 TMP was prepared and as such many elements of the RPFO either could not be completed, or could not be completed in the required format.

The RPFO tables included the required analysis of revenues and expenditures to achieve plan objectives. An evaluation of operations and an assessment of the achievement of management objectives were included as per FMPM requirements. However, it was not possible to complete an assessment of forest sustainability for the 1994-1999 term as the 1994 TMP did not provide any predictive indicators of forest sustainability (as is required in current forest management plans) and no values for the measurable indicators.



The management objectives described in the 1994 TMP differ somewhat from the objectives that are now required under the CFSA. The objectives of the 1994 TMP related to harvest, regeneration, environmental protection and integrated resource management. Numerical targets were set for harvesting, road construction and renewal and maintenance; levels of achievement with respect to FMP targets were summarized. It is our opinion that the explanations for identified shortfalls in the achievement of planning targets were reasonable. The document also detailed the actions taken to address the recommendations of a Forest Management Agreement (FMA) Review completed for the 1989-1994 term. We concluded that the RPFO met FMPM requirements.

In accordance with the new 10 year planning approach of the 2004 FMPM, a Year 10 Annual Report is to serve as the RPFO for the 1999-2004 term. This document is required in two parts: the 2003/2004 report component by November 15<sup>th</sup>, 2004 and the additional year-ten report component by February 15<sup>th</sup>, 2005. This report was available at the time of the field audit, and we found it met, to the extent possible, 1996 and 2004 FMPM requirements for its preparation. Tables associated with the document were accurate and complete. A discussion of the Ten Year AR assessment/determination of sustainability is provided in Section 3.7.

### **3.7. Achievement of Management Objectives and Forest Sustainability**

#### **Achievement of Management Objectives**

Tables 11a and 11b provide a summary of the 1999 – 2004 and the 2004 – 2009 FMP objectives; auditor comments with respect to the accomplishment of those objectives are included.

TABLE 11(A). SUMMARY OF THE STATUS OF THE 1999 MAGPIE FMP OBJECTIVES

<b>1999 – 2004 FMP Objectives</b>	<b>Assessment of Achievement</b>
<b><i>Forest Diversity</i></b>	
Objective 1 - Forest Diversity  To provide a forest which through time has all the attributes of a natural, fire driven, boreal forest ecosystem at both the stand and landscape level.	With the exception of achieving all targets relative to disturbance size class, and some variability in application of snag guidelines, this objective was met.
To improve the age class distribution.	SFMM established targets for harvest and regeneration that would move toward a more even aged forest. The target for regeneration of the new forest has been achieved which contributes to the improvement of the Forest's overall age class distribution.

To maintain forest ecosystems.	The objective was to ensure that the area in each forest unit was maintained through time at a level above an established minimum target. The areas had been maintained above the target minimum in all forest units. (Table 2 - 10 Year Report).
To emulate natural patterns of disturbance at the landscape level.	<p>The objective was to move to a more natural pattern of disturbance. Four targets were set related to:</p> <ul style="list-style-type: none"> <li>• Disturbance size class distribution.</li> <li>• The amount of residual area within disturbances.</li> <li>• Residual size class distribution.</li> <li>• The forest type composition of residuals.</li> </ul> <p>Planned targets are being achieved in all target areas except for two size classes (2,501-5000 ha and 261-520 ha) in the disturbance size class distribution target.</p>
To mimic natural patterns of disturbance at the stand level.	Snag guidelines were applied during this period, however snag retention was variable. Overall the target was achieved and FOIRs did not identify snag retention as an issue.
<b><i>Social and Economic Benefits</i></b>	
<p>Objective 2 – Social and Economic Benefits</p> <p>To derive sustainable economic, social, recreational and cultural benefits from the forest.</p>	<p>Social and economic benefits were produced according to objectives and planned targets. However, local recreational users are not satisfied with their level of access to surrounding resources. OMNR met Condition 34 requirements to the extent that First Nations took advantage of opportunities presented to them. Remote tourism operators made use of issue resolution and EA bump-up provisions.</p> <p>Aspects of the objective that were within OMNR and DFPL control were substantially met.</p>

<p><i>Wood Supply</i></p> <p>To provide a sustainable supply of timber to the forest industry.</p>	<p>The target was to maximize the amount of wood harvested. In the conifer working groups 99% of the planned harvest was cut. In the poplar working group 70% of the planned harvest was cut. Any underachievement of target harvest was based on limited market demand.</p>
<p><i>Future Forest Condition</i></p> <p>To provide a suitable environment for remote tourism.</p>	<p>A number of techniques such as harvest restrictions, protection of specific areas and sites, road closures and restrictions, etc. have all been used to maintain the remote character of the forest in areas used for remote tourism.</p> <p>In our view, this objective has been fully achieved.</p>
<p>To provide a suitable environment for road based tourism.</p>	<p>Techniques such as timing of certain forest operations, roadside aesthetics, protection of specific sites, operating per DLUG guidelines, etc. have all been used to minimize impact on road based tourism. Our view is that this objective has only been partially achieved as the LCC expressed concern about the loss of road based tourism opportunities. DFPL and the OMNR do not agree that there was a net loss of opportunities as areas previously unavailable were opened.</p>
<p>To provide a suitable environment for road based recreation and other road based commercial activity.</p>	<p>The objective was to provide opportunities for the use of the Forest by other commercial uses such as bait harvesting, mining exploration and local recreational use.</p> <p>Within the framework of commitments to commercial tourism this target has substantially been met. However, many concerns remained, and the LCC did not support the 2004 FMP for access reasons.</p> <p>Our view is that this objective has only been partially achieved.</p>
<p>To protect cultural and heritage values.</p>	<p>All known cultural and heritage values were protected.</p>

<b>Forest Cover Objectives</b>	
Objective 3 – Forest Cover Objectives  To provide forest cover for those values that depends on forest cover.	This objective was met. There was no change in the area of forest units during the plan term.
To maintain the amount of potential preferred habitat for regionally featured species within the range of natural variation.	<p>Only 4% of the total area in forest cover was harvested. Regeneration targets were significantly achieved. With the implementation of the NDPE guidelines at the end of this FMP it is expected that forest disturbance through harvesting will better emulate natural disturbance.</p> <p>Potential habitats for regionally featured species, including marten are predicted to fall within the bounds of natural variation.</p> <p>In our view this objective, with the exception of marten habitat, has been met.</p>
To provide suitable habitat for marten.	The objective was only partially achieved since past forest fragmentation made it impossible to meet current guidelines.
To provide suitable habitat for rare, threatened and vulnerable species (eagles, ospreys, and herons).	All known sites were protected by the use of the guidelines.
To protect water quality.	<p>Guidelines were implemented to protect lakes and streams during forest management activities (e.g. guidelines for fish habitat, riparian areas, roads and water crossings).</p> <p>With the exception of our concerns about water crossing and road maintenance, this objective has been met.</p>
To maintain forest cover in the vicinity of designated tourism lakes as prescribed by the District Land Use Guidelines.	Guidelines were followed. DFPL plants abandoned roads to hasten the “green-up” process.
To maintain habitat units within the range of natural variation.	The SMA maintains habitat units within the range of natural variation that has been established for regionally featured wildlife species.

<b>Silviculture Objectives</b>	
<p>Objective 4 - Silviculture Objectives</p> <p>The intended effect of silvicultural treatments combined across the forest as a whole, is to direct forest development through time toward the desired future forest condition.</p>	<p>Silviculture targets were met and it is our view that a high quality, cost effective silviculture program was delivered during the 1999-2004 FMP.</p>
<p>To maintain the area available for timber production.</p>	<p>The amount of managed Crown forest area available for timber production is decreasing on the Magpie Forest (e.g. it was reduced by 37,316 ha in the current plan compared to the 1999 plan). This reduction has been attributed in large part to projected increases in the area of accumulating reserves resulting from the implementation of the NDPEG.</p> <p>The apparent decline in the poplar and white birch working groups is believed to be a result of the increased amount of area in the depleted category. The forest inventory indicates that there has been a significant increase in the amount of depleted area. In reality, the apparent increase in the amount of depleted area is the result of shortfalls in the amount of area assessed for free-to-grow.</p> <p>The area harvested and renewed were generally in balance.</p> <p>This objective has been partially met.</p>
<p>To produce the desired future forest condition while minimizing silvicultural expenditures.</p>	<p>Total silviculture expenditures for the five year term were \$6,153,000. The estimated expenditure on poplar and white birch regeneration was \$222,145 with the remainder spent on conifer (\$5,930,855). Based on conifer harvest of 1,103,734 m<sup>3</sup> the cost per m<sup>3</sup> for conifer silviculture is \$5.37/m<sup>3</sup>. This cost was lower than anticipated.</p> <p>The objective has been achieved.</p>

TABLE 11(B). SUMMARY OF THE STATUS OF THE 2004 MAGPIE FMP OBJECTIVES

2004 – 2009 FMP Objectives	Assessment Towards Achievement
<b><i>Forest Diversity</i></b>	
<p>Objective 1 - Forest Diversity</p> <p>To provide a forest that through time has structural, compositional and spatial attributes of a natural, fire driven, boreal forest ecosystem at the stand and landscape level.</p>	<p>Ongoing.</p> <p>Based on our overall assessment of the objectives and targets for forest diversity at this point in the 2004 FMP, we believe the objectives are being met, and are on track to being met in the plan term.</p>
<p><i>Age Class Structure</i></p> <p>To improve the forest age class structure to a more balanced and natural distribution.</p>	<p>Ongoing.</p> <p>SFMM established targets for harvest and regeneration that are trending toward a more even aged forest through cutting and regenerating a similar amount each year. To date harvest and renewal are in balance. The target for regeneration of the new forest is expected to be achieved which will improve the overall age class distribution of the forest.</p>
<p><i>Forest Units</i></p> <p>Maintain forest ecosystems through management of the ebb and flow of area of boreal units.</p>	<p>Ongoing.</p> <p>The objective is to ensure that the area in each forest unit is maintained through time. Based on two years of harvest and renewal activities progress is being made to meet this objective.</p>
<p><i>Spatial Diversity</i></p> <p>To emulate natural disturbance patterns at a Stand and Landscape level.</p>	<p>Ongoing.</p> <p>The implementation of NDPEG is designed to meet this objective. While there are concerns with respect to size, species retention and costs, the guidelines are being implemented.</p>
<b><i>Social and Economic Matters</i></b>	
<p>Objective 2 – Social and Economic Matters</p>	<p>Ongoing.</p> <p>There are sustainable industries utilizing</p>

<p>To derive sustainable economic, social, recreational and cultural benefits from the forest.</p>	<p>the forest directly and indirectly (e.g. forest industry, tourist industry, bear outfitters, trappers, bait harvesters, etc) and our review indicates these industries have not been negatively impacted by forest operations.</p> <p>While not well defined, economic benefits from these activities provide support for a social and cultural infrastructure.</p> <p>Forest access roads provide access for recreational opportunities. Access restrictions continue to be a subject of controversy.</p>
<p><i>Wood Supply</i></p> <p>To provide a sustainable supply of timber to the forest industry.</p>	<p>Ongoing.</p> <p>The objective is to maximize wood harvest. The target in this term is to harvest 190,000 m<sup>3</sup> of conifer and 90,000 m<sup>3</sup> of poplar/birch. This is 10% below the amount harvested in 1999-2004, but is the maximum available while meeting forest management diversity objectives. To date actual harvest levels are below planned levels due to poor markets for some species and products.</p> <p>This objective is not currently being met.</p>
<p><i>Remote Tourism and Recreation</i></p> <p>To moderate the impacts of forest operations on remote tourism and recreation activities, consistent with the Wawa District Land use guidelines.</p>	<p>Ongoing.</p> <p>A number of techniques such as harvest restrictions, protection of specific areas and sites, road closures and restrictions, etc. continue to be used to maintain the remote character of the forest in areas used for remote tourism.</p> <p>In our view this objective is being met.</p>
<p><i>Road-based tourism and Recreation</i></p> <p>To moderate the impacts of forest operations on road based tourism and</p>	<p>Ongoing.</p> <p>Techniques such as timing of certain forest operations, roadside aesthetics, protection</p>

recreation activity, and other road based commercial activities, consistent with the Wawa District Land Use Guidelines.	<p>of specific sites, operating per DLUG guidelines, etc are all being used to minimize impact on road-based tourism.</p> <p>This objective continues to be met.</p>
<b>Forest Cover</b>	
<p>Objective 3 – Forest Cover</p> <p>To provide forest cover for those values which depend on forest cover.</p>	<p>Ongoing.</p> <p>Forest management activities are consistent with the FMP objectives and guidelines relative to maintaining forest cover. AOCs and timing of operations also contribute to meeting this objective. Some objectives will not be met within the timeframe of an FMP.</p>
<p><i>Wildlife Habitat</i></p> <p>To maintain the amount of potential preferred habitat for regionally featured species within the range of natural variation.</p>	<p>Ongoing.</p> <p>A small proportion of the Forest is disturbed each year by forest harvest and regeneration activities; therefore the effect on the overall forest cover is minimal in any FMP term.</p> <p>With the implementation of the NDPE guidelines and other forest practices such as AOC protection it is expected that forest disturbance through harvesting will emulate natural disturbance and should maintain the historical forest cover within the range of natural variation.</p>
<p><i>Habitat Units</i></p> <p>To maintain habitat units within the range of natural variation.</p>	<p>Ongoing.</p> <p>Based on current harvest and regeneration patterns, and the NDPE guidelines, the intention is to maintain habitat units within the range of natural variation. We have expressed concern about implementation of NDPEG, but we believe this objective is being substantially met.</p>



<b><i>Silviculture</i></b>	
<p>Objective 4 – Silviculture</p> <p>To direct forest development through time toward the desired future forest condition via the application of cost effective silviculture treatments.</p>	<p>Ongoing.</p> <p>DFPL is delivering a high quality and cost efficient silviculture program. Harvest and renewal levels are generally in balance for the first two years of the 2004 FMP.</p>
<p><b><i>Renewal and Maintenance</i></b></p> <p>To develop a realistic and affordable silvicultural program that will provide appropriate levels of forest renewal and stand maintenance to develop the desired future forest condition.</p>	<p>Ongoing.</p> <p>The Forest is being renewed in a manner that is consistent with the FMP objectives.</p>

### **Review of the RPFO/Ten Year Annual Report Assessment of Sustainability**

The RPFO was based on a plan written and approved under the Timber Management Planning Manual. It was not possible to complete an assessment of forest sustainability in the format required by the FMPM as the 1994 TMP did not provide any predictive indicators of forest sustainability (as is required in current forest management plans) and no values for the measurable indicators. However, it was the opinion of the Plan Author the process for assessing forest sustainability would evolve and improve with the development of successive forest management plans and that forest operations on the Magpie Forest were sustainable.

The Ten Year AR contained the required section related to the determination of sustainability. Sustainability assessment findings were consistent with information reported in the Comparison and Trends Analysis of Planned vs. Actual Forest Operations Report. As noted elsewhere in this audit report, the assessment of forest sustainability trends was hampered by changed FMP reporting formats and changes in forest unit descriptions. For example, a requirement of the Year 10 Annual Report is for the Plan Author to determine and assess if major changes in the desired future forest condition occurred between forest management plans. The Plan Author reported that changes to the desired future forest condition were masked by changes to forest units that have occurred in successive plans and that it was not possible to determine if the Forest was moving towards the desired future forest condition as defined in the 1999 FMP. This determination will be more readily made once several plans have been prepared using the current format for the description of forest units. We do note that the 2004 plan anticipates a reduction of 14% in the projected amount of managed Crown land available for timber production in 100 years time compared to the available area that was projected in the 1999 FMP. The Plan Author determined that this reduction in area was attributable mainly to the projected increase in accumulating reserves primarily due to the implementation of the NDPEG guideline. We concur with this assessment, and note that this trend will be monitored during the development of successive FMPs.

Sustainability indices calculated in the 2004 plan were within acceptable bounds for the management unit, however, considerable differences exist between the 1999 plan values and the 2004 plan values and in the range of acceptable values. For both plans these values were derived from the SFMM NULL scenario. A range of acceptable values for forest or landscape diversity for the eco-region was not available against which comparisons and analysis could be made. The Plan Author indicated the he could not ascertain the reasons for, or the significance of, the differences in the values between the plans other than to postulate that the 2004 SFMM model utilized for refined inputs and assumptions and therefore produced different results. It is our opinion, that this was a logical explanation for the differing results.

With respect to developing trends in habitat supply, the 1999 FMP did not predict values for 2004. Additionally, key SFMM inputs (including forest unit definitions, habitat development stages and forest unit/habitat unit relationships) changed in the 2004 plan. These changes resulted in a significant difference in the determination of the area of preferred habitat for many species between the FMPs. The Plan Author concluded that these differences were attributed to differences in inputs used in the calculation of preferred habitats between planning periods rather than real changes to forest structure over the five year period. We concur with this conclusion. The Plan Author also indicated that the given the differences in key inputs that it was meaningless to attempt to determine if the 2004 values were moving towards future values predicted in the 1999 plan. We accept this conclusion and note that if key inputs do not change in the development of the 2009 FMP it will be possible to compare changes in preferred habitat between 2004 and 2009. However, since there are no predicted values in the 2004 plan for 2009, the comparison of actual to predicted values will again not be possible.

There were no negative impacts to the economy reported in the Year Ten Annual Report. The report does however acknowledge the concern of the remote tourism operators with respect to the long-term viability of the industry. It also registers DFPL concern with respect the “spectre of diminishing allowable harvest areas” but notes that forestry companies dependent on wood from the Magpie Forest have invested in their businesses to remain economically viable and competitive.

The assessment of sustainability cannot be based solely on the analysis of one or two measurable indicators of forest sustainability criteria over a single plan term. Preferably, this analysis should consider a full range of criteria over several planning terms. Currently, there is insufficient information to make a determination as to whether the forest is moving towards the desired future forest condition. On the Magpie Forest, the desired future forest condition has changed with the development of the 2004 FMP. Differences between the actual amount and the planned amount of depletion are small and would not likely have a significant effect on the overall development of the forest. No apparent negative impacts to the economic environment arising from forest management were observed, suggesting that the SMA was sustainable in that regard. It is our opinion that the RPFO and the Ten Year AR assessments of sustainability were as complete as possible given the information available and changes to inputs which have occurred between planning periods. We note that forest operations on the Magpie Forest have occurred essentially as planned, and in our opinion are in alignment with the goal for forest sustainability.

## **Review of the Comparison and Trends Analysis of Planned vs. Actual Forest Operations Report**

A Comparison and Trends Analysis Report of Planned vs. Actual Forest Operations Report (the Trends Report) was prepared by the forest manager as a requirement of the Independent Forest Audit Process. The report was developed with information derived from the 2004 FMP, the 1999 FMP, the RPFO (1994-1999 term) and Annual Reports for the final year of the 1999-2004 planning term.

The purpose of the report is to provide an interpretation of the current state of the Forest relative to its historic state on the basis of an analysis of ten years of forest management activity. The report was prepared in accordance with the requirements of Appendix C of the IFAPP.

It identified the following significant trends:

- 1) The total area of Crown managed productive forest land remained relatively unchanged since 1987.
- 2) The area of land classified as barren and scattered or non-satisfactorily regenerated increased slightly over the reported terms.
- 3) The area classified as depleted has increased significantly since 1999. The increase in area was attributed to shortfalls in the amount of area assessed for free-to-grow status.
- 4) There was a significant decrease in the planned and actual harvest area over the planning terms. Forecasts from the 2004 plan indicate that this decline will continue for another four (ten-year) periods.
- 5) The actual harvest as a percentage of planned harvest increased from 71% to 78% from the 1994-99 to the 1999-04 planning period. At this point in the 2004 plan term actual harvest levels have achieved approximately forty percent of planned levels.
- 6) There is a distinct decline in planned harvest volumes for poplar and spruce/pine/fir. This trend is expected to persist over the next 20 years for poplar and for the next forty years for spruce/pine/fir.
- 7) The available harvest area has declined over the reported plan terms as a result of changes in analytical tools used in annual allowable harvest calculations, age class imbalances, and the application of various guidelines and modeling objectives.
- 8) The percentage of planned harvest area that has been by-passed during the past three planning terms has remained relatively constant (22% in 1989-94, 19% in 1994-99, and 19% in 1999-2004).
- 9) The area of mature forest (>80 years) has increased significantly due to existing imbalances in the age class structure of the Forest. Approximately 53% of the production forest of the Magpie Forest is greater than 80 years old.
- 10) The area regenerated is in balance with the area harvested.

- 11) Pre-commercial thinning targets on the Forest have been significantly underachieved. Manual and chemical tending targets were achieved.
- 12) Areas surveyed for regeneration success indicate that the forest is regenerating. For the terms reported, seventy-nine percent of area was assessed as free to grow.

We conclude the Trends Report was complete with a comprehensive discussion and analysis.

### **Achievement of Forest Sustainability**

To measure the achievement of sustainability we examined the FMPM requirements for forest sustainability and the performance of the licensee during the audit period. At the management unit level, the FMPM has five criteria used in the determination of sustainability. These are biodiversity, forest condition and ecosystem productivity, soil and water quality, multiple benefits to society, and accepting society's responsibility for sustainable development.

A series of measurable indicators has been developed for each of these criteria. These indicators are critical for;

- The assessment of individual Forest Management Plan alternatives.
- The assessment of trends over successive Management Plan periods.

Outlined below is our assessment of sustainability for the 1999 and 2004 FMPs.

#### **Biodiversity**

The FMPs contained the required indices to describe landscape patterns and forest diversity. These included edge, interior, fragmentation, isolation, spatial patterns and forest diversity. While index values were calculated there was insufficient data for the forest manager to assess sustainability trends over successive plan terms.

All indices calculated in the 2004 plan fall within acceptable levels for the Forest; however, for the 1999 FMP some indices fell outside of acceptable ranges. The Ten Year Annual report states,

*"...because the 2004 values for the forest diversity indices, for wildlife habitat distributions in particular, are so far off the 1999 values (differences of –15%, 21% and –14% for the Shannon-Weiner index of landscape heterogeneity, Simpson's index of landscape heterogeneity, and the Shannon index of landscape evenness respectively), it suggests that the differences are a result of changes made to the SFMM inputs." It further states that "... no reasonable conclusion can be drawn at this point as to whether the forest diversity indices*

*are moving toward the values expressed in the 1999 plan for the desired future forest condition.”*

The 1999 FMP did not provide predicted values for 2004, so it is not possible to compare predicted values to actual values. However, we note there were considerable differences between the 1999 and 2004 plan values, and in the calculated acceptable ranges. We believe that these differences are indicative of natural fluctuations and changes made to SFMM inputs. Longer term monitoring of values will be required to determine conclusively that forest diversity indices are remaining within acceptable bounds of variation.

With the implementation of the NDPE guidelines and AOC protection it is expected that forest disturbance through harvesting will emulate natural disturbance and generally approximate the historical forest cover within the range of natural variation that has been established for Northeastern Region featured wildlife species. Harvest and regeneration targets are trending toward a more even aged forest; to date, harvest and renewal achievements are in balance. The overall age class distribution of the forest is expected to improve.

Our assessment, based on having completed the 2001 IFA and now the 2006 IFA, is that biodiversity requirements are being met.

#### Forest Condition and Ecosystem Productivity

The stability of forest cover types is an indicator of forest sustainability. The forest manager is required to determine if major changes in the desired future forest are made between one plan and the next. Forest unit descriptions changed between the 1999 and 2004 FMPs, and it is not possible to compare the accuracy of FMP projections of forest area until several plans have been prepared using the current forest unit format.

Base values for net primary productivity (NPP) were calculated for the Forest and fall within the bounds of natural variation.

The amount of managed Crown forest area available for timber production is forecast in SFMM to decrease on the Magpie Forest. Current SFMM modeling shows a decrease in the available area in 100 years time of 37,316 ha compared to the 1999 plan. This reduction has been attributed in large part to projected increases in the area of accumulating reserves resulting from the implementation of the NDPEG. The benefits that accrue from forest management will be difficult to sustain if the area available for timber production continues to diminish.

Harvest activities were conducted essentially as planned. The actual area regenerated during the 1999-2004 term exceeded the planned area by approximately 14%. The representation of each working group has generally remained within the bounds of successional forest dynamics.

Our assessment is that forest condition and ecosystem productivity requirements have been met.

### Multiple Benefits to Society

While harvesting operations were conducted in all blocks allocated for harvesting in the 1999 plan, the final harvest area was approximately 79% of the allowable harvest area. All marketable wood that was possible to harvest was harvested. The SMA was therefore effective in maximizing the benefits to society that accrue from timber harvesting. A major concern is the increase in the area of accumulating reserves resulting from the implementation of the NDPEG. Benefits from forest management will not be sustainable if the area available for timber production continues to diminish. At the present time the wood supply from the Forest is insufficient to meet mill demands.

Forest management activity may be neutral or negative to the prosperity of the remote tourism industry, and normally neutral to positive for road based tourism establishments.

The continued use of existing access roads and the development of new access roads in the vicinity of designated remote lakes during the planning term were considered by remote tourism operators as detrimental to their business. The limited information we were able to obtain did not suggest a reduction in the remote tourism business during the audit term. As well, net benefits to society were difficult to assess as no data was available to compare any tourism economic losses to forest industry economic gains. Our conclusion is that there were no negative impacts to the economic environment as a result of forest management activity. This conclusion suggests that the SMA was sustainable in this regard.

### Soil and Water Conservation

Net primary productivity (NPP) and water yield are expressions of landscape processes, which are measurable indicators of forest sustainability. Base values for net primary productivity and water yield were calculated for the Forest. These values will have to be compared to future values to assess trends.

The amount of productive forest area disturbed in second-order watersheds for the ten year period ending in 2004 was 285.6 sq km. (14.6% of 1,956 km<sup>2</sup>). This statistic represents a 6% reduction in the productive forest area disturbed in second-order watersheds up to 1999. The reduction in the area of disturbance implies that a reduction in the amount of run-off and evapotranspiration in second-order watersheds has taken place. The current regional standard requires that increases in the statistic between plan terms are to be less than 10%. This indicator is therefore within acceptable limits. Additionally, our field inspections indicated that forestry operations on the Forest protected soils and water, and were conducted in accordance with the guidelines.

### Accepting Society's Responsibility for Sustainable Development

There are two First Nations with traditional connections to the Magpie Forest (the Missanabie Cree First Nation and the Michipicoten First Nation). Both communities were provided with an opportunity to participate in individual native consultation

programs in the development of both the 1999 and 2004 plans. There was a Native Background Information Report prepared for the Missanabie Cree for the 1999 plan and it was updated for the 2004 plan. The participation of the First Nations in the forest management planning process is improving and is expected to continue into the future.

DFPL has a strong commitment to forest renewal and maintenance. This commitment was evident in the field phase of this audit. Funding levels available for silviculture were sufficient to conduct all activities that were planned in the FMP.

Another measure of “accepting society’s responsibility for sustainable development” is public and LCC satisfaction with their participation in the forest management planning process. A standard self-evaluation form was provided to the LCC members who participated in the development and/or implementation of the 1999 FMP<sup>8</sup>. A rating of 5.0 is considered acceptable. Although, there was a wide range in ratings between individuals, the average effectiveness rating for the respondents was 6.2.

It is our assessment that this criterion was met.

### 3.8. Contractual Obligations

TABLE 12. SUMMARY OF CONTRACTUAL OBLIGATIONS AND AUDITOR COMMENTS ON THE LEVEL OF ATTAINMENT OF THE CONTRACTED OBLIGATIONS FOR SFL # 542003.

Contractual Obligation	Level of Attainment
1. Complied with the terms and conditions of the SFL.	DFPL substantially complied the terms and conditions of the SFL.
2. Payment of Forestry Futures and Ontario Crown Charges.	DFPL is in arrears with respect to stumpage payments. This issue is currently being discussed between OMNR and DFPL.
3. Wood Supply Commitments. The Company was to supply 81% of all Poplar harvested up to a maximum of 141,000 m <sup>3</sup> annually as chips to Kimberly – Clark Forest Products. The plan was to make available over the 5 year term 509,609 m <sup>3</sup> of Poplar chips.  The Company was to make available 6% of the veneer Poplar harvest to	The Company sold all poplar chips to Kimberly Clark (now known as Neenah Paper Company of Canada) (357,038 m <sup>3</sup> ). The delivery was 70% of planned. The shortfall was attributed the closure of the Kimberly Clark mill (2005) and poor markets.  DFPL delivered 26,850 m <sup>3</sup> (82.5% of the planned deliveries). Harvest levels of poplar were reduced due to

<sup>8</sup> There has yet to be a LCC self-evaluation for the 2004-2009 term.

<p>the Columbia Forest Products “Levesque Plywood Limited” mill in Hearst. The Licenced document states that the Company was to supply up to 12,300 m<sup>3</sup> of veneer annually. The FMP plan was to deliver approximately 32,531 m<sup>3</sup> over the term of the agreement.</p> <p>The Company was required to offer James River – Marathon Ltd. mill in Marathon the First Right to purchase all of the resulting conifer chips.</p>	<p>poor markets.</p> <p>DFPL sold all their conifer chips to the James River – Marathon Ltd. Mill (now known as Marathon Pulp Inc.)</p>
<p>4. Allowable harvest levels meet contractual obligations.</p>	<p>Levels of harvest achieved planned harvest levels in the spruce, balsam fir and jack pine forest units (99%).</p> <p>For the poplar forest unit the harvest level was 70% of planned. This shortfall can be attributed to poor markets for hardwood pulp during the audit period.</p> <p>Overall DFPL achieved 87% of the planned harvest.</p>
<p>5. Prepare FMP, AWS and reports in accordance with FMPM.</p>	<p>This requirement was met.</p>
<p>6. Conduct inventories and surveys as required in FIM.</p>	<p>The Forest Resource Inventory was updated for the preparation of the 2004 FMP. Free to Grow surveys were conducted but a significant area on the Forest requires survey. We provide a recommendation to address this issue.</p>
<p>7. Provide information as required in FIM manual.</p>	<p>The FRI inventory was completed and updated as per FIM requirements.</p> <p>There was late reporting of FOIR’s by both OMNR and industry.</p>



8. No wasteful practices.	There were 4 instances of wasteful practices reported by OMNR during the audit period.
9. Salvage conditions.	Salvage operations were appropriately planned and implemented to salvage timber damaged by wind events in 1999 and 2000. Salvage operations were appropriately planned and implemented.
10. Pest control operations must be undertaken as required.	No pest control operations were conducted during the audit term.
11. Adherence to land withdrawal procedures.	There were no land withdrawals during the audit term.
12. Prepare an Audit Action Plan within 2 months of receiving the final audit report.  Prepare a status report within 2 years of approval of the Action Plan.	The Action Plan was submitted 2.5 months late and the Status Report was submitted on time.
13. Payment of Forest Renewal Trust renewal charges.	Portions of the renewal payments have been deferred, however, the balance in account is in excess of the minimum amount required.
14. Five-year analysis of forest renewal trust Account.	The five year analysis of the forest renewal trust account was completed.
15. Minimum balance maintained in Renewal Trust Account.	The Company met their minimum annual balance requirements.
16. Maintain records of eligible silvicultural work for Renewal Trust account projects.	The auditors sampled 20% of the Renewal Trust Account projects and determined that all of the required information, maps, project records, and financial records were in place.  The field project activities matched the information in the project records assessed.

17. Silvicultural Standards must be followed.	This requirement was met.
18. Report on the achievement of regeneration including the assessment of free-to-grow and preparation of stand descriptions for entry into the inventory.	A backlog of depleted land (48,372 ha) that requires FTG surveys exists on the Forest. A recommendation is provided to address this issue.
19. Work co-operatively with aboriginal communities.	DFPL met the requirements of the FMPM and EA Conditions # 77 & # 34.
20. Prepare a forest compliance plan.	Forest Compliance plans were produced according to guidelines.
21. Deliver compliance training for staff.	Compliance training was provided to designated staff.
22. Conduct inspections of forest operations and deliver reports to OMNR in accordance with the approved plan.	<p>The compliance component of Annual Reports did not fully comply with reporting requirements outlined in the FMPM and Annual Report Preparation and Review Protocols.</p> <p>A recommendation is provided to address this issue (Section 3.6.2.).</p>
23. Assume responsibility for activities on mining leases or claims and advise claim holders.	This requirement was met.
24. Road Maintenance Agreement between OMNR and DFPL.	Requirements of the Road Maintenance Agreement were met. The field audit confirmed that the designated roads had been maintained as invoiced.

#### Progress on Recommendations from Previous Audits

DFPL and OMNR are required to develop an Action Plan to deal with each of the Independent Audit Recommendations. The Action Plan is required within two months of the receipt of the final audit report. A Status Report is required within 2 years following the approval of the Action Plan.

The Action and Status reports are to describe:

- The action required.
- The organization and individual position responsible for doing the work.
- Deadline dates.
- A method for tracking progress of the action plan.

The Action Plan and Status Report were prepared within acceptable periods of time.

The information reported in the Action and Status Plans conformed to all IFAPP requirements. Our assessment of the reported progress and completion of Action Plan items is discussed below in Table 13.

TABLE 13. STATUS OF 2001 IFA RECOMMENDATIONS AND AUDITOR OBSERVATIONS

Rec #	IFA Recommendation Magpie Forest	Status Report on Recommendation	Auditor Observation
1	The OMNR District Manager should meet with the remote tourist operators on the Magpie Forest to determine if a modification of the consultation and citizen's committee processes could result in better participation.	Ongoing.  The OMNR formally met with 18 remote tourist operators. LCC membership was discussed. A review of LCC mandates has been completed. The OMNR Regional Advisory Committee completed a report suggesting solutions for ongoing access issues.	The problem continues. MOE received 6 "bump ups" for the 2004 plan; 5 were from remote tourist operators. However, it is our conclusion that the OMNR and DFPL have done all that can be done. This issue is discussed in Section 3.2.2.
2	The OMNR should make the budget allocations compatible with seasonal survey requirements and forest management planning schedules to facilitate the timely collection and use of values information.	Completed.  Wawa OMNR secured funds to complete the wildlife values (stick nest) survey in the 2002/2003 winter season.	Completed.

3	DFPL should review its road grading techniques, specifically roadside berming that prevents water flow from the roadbed.	Ongoing.  Problem discussed with grader operators. The 2004 Compliance Plan includes enhanced road monitoring. OMNR to audit road maintenance.	Road grading problems continue to exist. The issue is discussed in Section 3.4.6.
---	--	--	---

#### 4.0. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Eight recommendations and one suggestion are made to DFPL and the OMNR to address issues identified during the audit.

##### *Commitment*

DFPL and the OMNR Wawa complied with all policies and directions associated with forest sustainability, and staff had been provided with the required training and information.

##### *Public Participation*

Public participation in the 2004 FMP planning process met the requirements of the FMPM. The LCC was properly established and was involved in the preparation of the plan. Remote tourism interests did not participate on the LCC. There was a predominant view (i.e. LCC, DFPL, and OMNR) that some remote tourism representatives used the EA “bump-up” provision as an alternative to participation in established planning process mechanisms. This created an LCC/public perception that local interests were “penalized” by following established consultation processes; while use of the “bump-up” provision after FMP approval gave tourism interests a bargaining position denied those who “followed the rules”. The OMNR spent significant time, energy and dollars attempting to enlist the participation of the remote tourism sector on the LCC with no success.

Although Wawa District was using all available options to try to resolve resource access issues, the long standing dispute between road based recreationalists and remote tourism operators has had a major impact on forest management planning and operations. These impacts included:

- Expenditure of large amounts of time and money on dispute resolution and individual environmental assessments.

- Late FMP approval and implementation with related economic and social implications.
- Inability of the LCC to fully endorse the 2004 FMP due to outstanding concerns over this issue.

There were six requests to the MOE for Individual Environmental Assessments and five formal issue resolution processes conducted in relation to the 2004 Magpie FMP.

The MF does not have any First Nations residing within its boundaries. The Missanabie Cree and the Michipicoten First Nations were provided the opportunity to participate in the FMP planning process. The OMNR also met EA Condition # 77 and EA Condition # 34.

### *Forest Management Planning*

The 2004 FMP planning process was in accordance with FMPM requirements. Access planning was well done; however, larger land use related access issues continued to confound the planning process. They were responsible for significant delays in the approval of the 2004 FMP due to “bump-ups” and dispute resolution processes.

A very significant aspect of the approved 2004 FMP was that the LCC statement did not support the plan. The essence of the objection was:

*“ Until we see changes to the land use strategies on the side of local citizens, we can not accept this plan as is. “*

Their view is that remote tourism protection (i.e. access and harvest restrictions) is detrimental to the forest industry, local resident’s use and enjoyment of the Forest, and to the attraction of new road based recreation (e.g. ATV) to their community.

Despite considerable efforts no RSAs were signed. Reasons cited for the absence of RSAs were that the Wawa District Land Use Guidelines and related tourism amendments provided direction for tourism–forest management issues. There is also a perception of the RSA process involving two private industries making deals on public lands without full public knowledge and participation.

The FRI was updated for the planning process. The full range of non-timber values on the Forest were described and protected. The SMA was within acceptable bounds for the indicators of forest sustainability and the achievement of FMP objectives.

Operational planning met all requirements.

### *Plan Implementation*

The implementation of the 1999 and 2004 FMPs during the audit period was substantially in compliance with the FMPM requirements.

- The area regenerated was in balance with the area harvested.
- AOCs were properly planned, implemented, and monitored.
- Values maps were accurate, current, and well maintained.
- Harvest and renewal efforts were approved in the AWS and prescriptions were in accordance with the SGRs.
- All tending operations were consistent with the FOPs.
- There was adequate renewal support for the seeding and planting program.

Identified shortcomings included:

- Early in the audit term snag tree retention was not always representative of the pre-harvest forest. Improvement was noted over the audit term.
- There was a large area of depleted lands that required FTG assessment.
- Company installation of water crossings and road grading practices were below standard.
- OMNR compliance monitoring on the Forest was inadequate.

On balance, the forest is well managed.

### *System Support*

DFPL and the OMNR had effective record keeping systems.

Training programs were in place. DFPL and OMNR staff were knowledgeable and professional in carrying out their responsibilities.

### *Monitoring*

Generally, the DFPL compliance record was good; however, the OMNR field presence and the delivery of the compliance program were inadequate. Issues concerning road maintenance and culvert installations have persisted through two audit periods. OMNR must increase its compliance monitoring on the Forest.

### *Achievement of the Management Objectives and Forest Sustainability*

The 1999 and 2004 FMPs substantially met management objectives and FMPPM criteria used in the determination of forest sustainability. The findings of the field audit also supported this conclusion.

### *Contractual Obligations*

Contractual obligations were substantially met. DFPL was found to be in arrears with respect to stumpage payments. This issue is under discussion between OMNR and DFPL.

## **5.0. AUDIT CONCLUSION**

Section 2.1 outlines the principles against which the performance of the forest manager is measured. During the audit period DFPL was in compliance with the legislation, regulations, and policies that were in effect at the time of the audit.

We conclude that the Magpie Forest is being managed sustainably, and DFPL met its management obligations.

### **Recommendation # 8:**

We recommend that the Minister extend Sustainable Forest Licence (SFL) # 542003 for a further 5 years.

Table 14 provides a summary of the audit recommendations and suggestions.

TABLE 14. SUMMARY OF AUDIT RECOMMENDATIONS AND SUGGESTIONS.

<b>Principle 1: Commitment</b>
No Recommendations or Suggestions.
<b>Principle 2: Public Participation</b>
<b>Recommendation # 1:</b>  Corporate OMNR should formally request that MOE review the current Individual Environmental Assessment (“bump-up”) provision of the Environmental Assessment Act with the intent of establishing criteria that require full participation in the FMP planning process as a pre-requisite to its use.
<b>Recommendation # 2:</b>  Corporate OMNR should ensure that corporate MOE fully understands the economic and social implications of delayed decisions, and request timely decisions on individual environmental assessment requests.

**Recommendation # 3:**

Corporate OMNR should encourage the Ministry of Tourism to obtain independent current economic information on the contribution of the remote tourism industry to local economies in and around the Magpie Forest.

**Principle 3: Forest Management Planning**

No Recommendations or Suggestions.

**Principle 4: Plan Implementation****Recommendation #4:**

DFPL must increase the amount of area annually surveyed for free-to-grow status.

**Recommendation #5:**

DFPL must immediately improve water crossing installation and road grading practices.

**Suggestion # 1:**

The OMNR review of NDPEG should involve planning team members and field practitioners (forest industry and OMNR) directly involved with the implementation of the guide.

**Principle 5: Systems Support**

No recommendations or suggestions.

**Principle 6: Monitoring****Recommendation # 6:**

The District OMNR must significantly increase its compliance presence on the Forest.

**Recommendation # 7:**

OMNR and DFPL must review their responsibilities relative to compliance reporting in the Annual Reports and comply with FMPM and FIM requirements.



<b>Principle 7: Achievement of Management Objectives and Forest Sustainability</b>
No Recommendations or Suggestions.
<b>Principle 8: Contractual Obligations</b>
No Recommendations or Suggestions.
<b>Summary of Conclusions and Recommendations</b>
<p><b>Recommendation # 8 / Conclusion:</b></p> <p>We recommend that the Minister extend Sustainable Forest Licence (SFL) # 542003 for a further 5 years.</p>



## **Appendix A**

### **Comparison and Trend Analysis of Planned vs. Actual Forest Operations Report.**

The Comparison and Trend Analysis of Planned vs. Actual Forest Operations is prepared by the forest manager (Dubreuil Forest Products Ltd.) responsible for forest management on the Forest. It is included in this report without modification or adjustment by the audit team.



**2006 Independent Forest Audit**

**Magpie Forest**

**Appendix C**

**Comparison and Trend Analysis of Planned vs. Actual Forest Operations Report**



Prepared by:

A handwritten signature in blue ink, appearing to read "G. MacGillivray", written over a horizontal line.

**Glenn MacGillivray, R.P.F.**

**May, 2006**



## CONTENTS

Introduction .....	1
I TREND ANALYSIS .....	1
Table 1 – Summary of Total Area Under Management (1994, 1999 and 2004) .....	6
Figure 1: Magpie Forest Area Under Management by Working Group (1994, 1999 and 2004) .....	6
Table 2: Description of Forest Units (1994) .....	7
Table 2: Description of Forest Units (1999) .....	8
Table 2: Description of Forest Units (2004) .....	9
Table 3: Summary of Planned and Actual Harvest Volumes (1994, 1999 and 2004) .....	10
Figure 2 Planned and Actual Harvest Volumes (1994, 1999 and 2004) .....	11
Table 3a: Summary of Planned and Actual Harvest Volumes Based on Planned Utilization (1994, 1999 and 2004) .....	12
Figure 3 Planned and Actual Harvest Volumes Based on Planned Utilization Only (1994, 1999 and 2004) .....	13
Table 4: Summary of Planned and Actual Depletion Area (1994, 1999 and 2004) .....	14
Figure 4: Planned and Actual Harvest Area (1999-2004) .....	15
Table 5: Summary of Managed Productive Forest by Forest Unit (1994) .....	16
Table 5: Summary of Managed Productive Forest by Forest Unit (1999) .....	18
Table 5: Summary of Managed Productive Forest by Forest Unit (2004) .....	23
Table 6: Summary Report of Renewal, Tending and Protection Operations (1994, 1999 and 2004) .....	28
Table 7: Harvested Area Successfully Regenerated (1991 – 1995) .....	29
Figure 5: Regeneration Status of Area Harvested From 1991 to 1995 .....	30
II COMPARISON OF ACTUAL & PLANNED OPERATIONS for the FIVE-YEAR TERM from April 1, 1999 to March 31, 2004	





## **Comparison and Trend Analysis of Planned vs. Actual Forest Operations Report**

### **Introduction**

The following information has been prepared in accordance with Appendix “C” of the Independent Forest Audit Protocol (January 2006).

The information contained in tables 1 to 7 and graphs has been extracted from the current (2004) FMP, the 1999 FMP, the 1994 FMP, the Report of Past Forest Operations (for the 1994-99 term), and the annual reports for the final year of the 1999-2004 planning term.

### **Trend Analysis**

#### ***Table 1 – Summary of Total Area Under Management***

The metes and bounds for the Magpie Forest have not changed since its creation in 1984. Table 1 indicates that there has been a minor increase in the amount of production forest and forested land. This variation is believed to be the result technical differences in the compilation of the inventory.

The apparent decline in the poplar and white birch working groups is believed to be a result of the increased amount of area in the depleted category. The forest inventory indicates that there has been a significant increase in the amount of depleted area. In reality, the apparent increase in the amount of depleted area is the result of shortfalls in the amount of area assessed for free-to-grow. A more aggressive assessment program is planned for the remainder of the current term. To-date this term (2004-09) approximately 10,000 ha have been assessed for free-to-grow.

#### ***Table 2 – Description of Forest Units***

Table 2 shows forest unit descriptions for the current and previous two planning periods. The number of forest units increased from four in 1989 to ten in 1989. Table 2 shows only seven forest units for this period. The other three were described as Ash (6 ha) which was incorrectly identified in the forest inventory, and the Inoperable and Reserve forest units. The Inoperable and Reserve forest units were simply a collection of areas from the other forest units that had previously been depleted as inoperable or reserve.

In 1994 site class 3 spruce and the other conifer (Ce and La) were taken out of the spruce forest unit to form their own forest units and the white birch forest unit was split based on conifer component. This was an attempt to separate the merchantable white birch stands from the unmerchantable since there was no market for white birch pulpwood.

In 1999 Ce and La were split into their own forest units and black spruce was separated into three forest units – upland, lowland and site class 3. The most significant change in 1999 was the introduction of four mixedwood forest units. Each of the spruce, pine, poplar, and birch working groups were split into “pure” (greater than or equal to 70% working group species) and mixed forest units.

In 2004 the planning team adopted the new NE region standard forest units with two modifications. The Lowland conifer FU was split based on black spruce being the predominant species or cedar and/or larch being the predominant species. The white birch forest unit was split (on the basis of marketability) to separate out stands that are more or less pure white birch. The standard forest units incorporate a number of other changes. Site class 4 spruce and larch is identified as a forest unit (for habitat purposes). Jack pine is separated into two forest units based on spruce content, the upland spruce is separated into two forest units based on site productivity and the mixedwood forest units have been reduced from four to two. The mixedwood split is based on the presence of jack pine or red pine and the absence of white spruce and balsam fir.

Work on the 2009 plan has just begun. Although there has been no detailed discussion, the prevailing thought is that unless the planning team comes up with some compelling rationale for change, the forest units in the 2009 FMP will likely remain as they were described in the 2004 plan.

### ***Table 3 – Summary of Planned and Actual Harvest Volumes***

Table 3 and Figure 2 show the planned harvest volume for the current and previous two planning periods and the actual harvest volume for the previous two planning periods. Since there has only been one depletion report completed for the current planning period, and the first year of operations was only five months long (due to late plan submission and approval) there is no actual harvest information shown for the current period.

There is a definite downtrend in the planned harvest volume. This downtrend started with the 1989 FMP and is forecast to continue for the next twenty years for poplar and the next forty years for spruce/pine/fir (SPF).

Actual harvest volume has been below the planned volume although the gap appears to be closing. Actual harvest volume is less than planned partially because there is virtually no utilization of white birch, cedar or larch. There is also a significant difference between the planned and actual utilization of poplar. This is due in part to erratic market demand for poplar, but may also be due to overestimates in the plan based on yield tables that have been produced for ever-changing forest units. The actual harvest of SPF has increased from 78% of planned for the 1994-1999 period to 99% of planned for the 1999-2004 period.

Table 3a and Figure 3 show the same actual volume, but the planned volume is the planned utilization (versus the total allocated volume that is shown in Table 3 and Figure 2). The actual harvest (all species) increased from 82% of planned utilization to 88% from the 1994-1999 planning period to the 1999 – 2004 planning period. The utilization of SPF has increased from 88% to 99% of planned utilization, whereas the utilization of poplar has remained at about 75% of planned.

***Table 4 – Summary of Planned & Actual Depletion Area.***

There has been a significant decrease in the planned and actual harvest area from the 1994 FMP to the 2004 FMP. Current planned harvest area is approximately 48% of the area planned in 1994. Changes in analytical tools (SFMM versus MADCALC), an aging forest and a plethora of additional guidelines and modeling objectives have reduced the allowable harvest area (AHA). Forecasts from the current plan indicate that the decline will continue for another four (ten-year) periods. The AHA in 2044 is forecast to be 1,855 ha per year, which is 73% of the current AHA.

The actual harvest as a percentage of planned harvest increased from 71% to 78% from the 1994-99 to the 1999-04 planning period. The figures shown for the current period are not representative of expectations for the current term as they are drawn from just one annual report and reflect harvesting for a five-month period only (due to late plan approval). The percentage of planned harvest area that was bypassed during the past three planning terms has remained relatively constant at approximately 22% in 1989-94, 19% in 1994-99 and 19% in 1999-2004.

The amount of area depleted through natural causes has remained relatively low. Approximately 5,800 ha were burned during the 1994-99 period (as a result of prescribed burns that escaped) and 2,090 ha of blow-down occurred during the 1999-2004 period. With the exception of the prescribed burns that escaped in 1995, and one fire in 1948, there have been no significant fires on the Magpie Forest since the 1920's.

***Table 5 – Summary of Managed Productive Forest by Forest Unit***

Due to changes in forest units that occurred in the current and each of the previous planning terms, it is not possible to draw any meaningful conclusions with respect to species conversions from the information provided in Table 5.

Despite the harvesting of approximately 29,000 ha of mature forest from 1994 to 2004, the amount of forest older than 80 years of age has increased from 148,329 ha in 1994 to 169,949 in 2004. 53 % of the production forest is currently over 80 years old.

***Table 6 – Summary Report of Renewal, Tending and Protection Operations***

***Renewal***

Planned forest renewal of harvest areas has declined from 18,020 ha in the 1994 FMP, to 13,857 in the 1999 FMP and to 10,680 ha in the 2004 FMP. This decline is consistent

with the decline in harvest area. Planned artificial regeneration has fluctuated from 33% to 62% to 55% of total regeneration for the 1994, 1999 and 2004 FMP's respectively. The figures for artificial regeneration (and total forest renewal) for the 1994-1999 period include renewal work conducted on areas that burned in 1995. Actual artificial regeneration for the 1999-2004 period was 54% of total regeneration. Planned artificial regeneration for the current term is 55% of total regeneration and actual (to-date) is 45 % of the total.

Seeding accounts for approximately 13% of the planned artificial regeneration in the 1994 FMP and the actual amount of area seeded during the 1994-99 planning period was approximately 15% of total artificial regeneration, although most of that was on area that burned. Planned and actual seeding during the 1999-2004 period was approximately 6% of total artificial regeneration and seeding accounts for approximately 6% of the artificial regeneration planned in the 2004 FMP.

#### *Site Preparation*

Planned site preparation has fluctuated from 8,030 ha to 8,652 ha to 3,705 ha for the 1994, 1999 and 2004 FMP's respectively. Planned site preparation has declined from 136% of planned artificial regeneration in 1994 to 100% in 1999 to 62% in the current plan. Actual site preparation was 74% of artificial regeneration during the 1994-1999 period and 52% during the 1999-2004 period. Planned and actual chemical site preparation has decreased considerably from 1994 to 2004 and there have been no prescribed burns planned or conducted since 1995.

#### *Tending*

The amount of area planned for aerial chemical tending fluctuated from 5,540 ha in 1994 to 6,842 ha in 1999 to 3,625 ha in the current plan. The amount of actual aerial chemical tending exceeded the plan in the 1994-99 period (6,787 ha actual vs. 5,540 ha planned) and in the 1999-2004 period the actual amount of area treated was 82% of planned (5,61 ha vs. 5,923 ha)

The amount of planned ground tending has increased from none in 1994 and 1999 to 500 ha in the current plan. Ground chemical tending was introduced during the 1999-2004 period with 388 ha being treated.

Thinning plans have proven to be way off the mark. In the 1994-99 planning period 500 ha were planned but only 95 ha were thinned. During the 1999-2004 period 1,000 ha were planned but only 52 ha were thinned. In the current plan only 31 ha of thinning are planned and this has been completed.

#### *Protection*

There have been no protection activities planned or actually conducted during the current or previous planning terms.

***Table 7 – Harvested Area Successfully Regenerated***

The requirement of this table is to examine the regeneration status of lands harvested during the five-year period from 1991/92 to 1995/96. Information was extracted from free-to grow assessments conducted in 1996, 1999, 2000, 2001, and 2002.

Seventy percent (13,436 ha) of the area harvested (19,106 ha) from 1991/92 to 1995/96 had been assessed for free-to-grow by 2002. Seventy-nine percent of the area assessed had reached free-to-grow status by 2002. Additional area was assessed in aerial and ground assessments in 2005 but this information has not yet been compiled.

A total of 20,394 ha were assessed for free-to-grow in the five assessments noted above. These assessments covered lands that were harvested prior to, during, and after the five harvest years noted above. Eighty percent of the assessed area was free-to-grow at the time of initial assessment.

Ninety-one percent of the free-to-grow area met silvicultural objectives.

## TABLES

2006 Independent Forest Audit

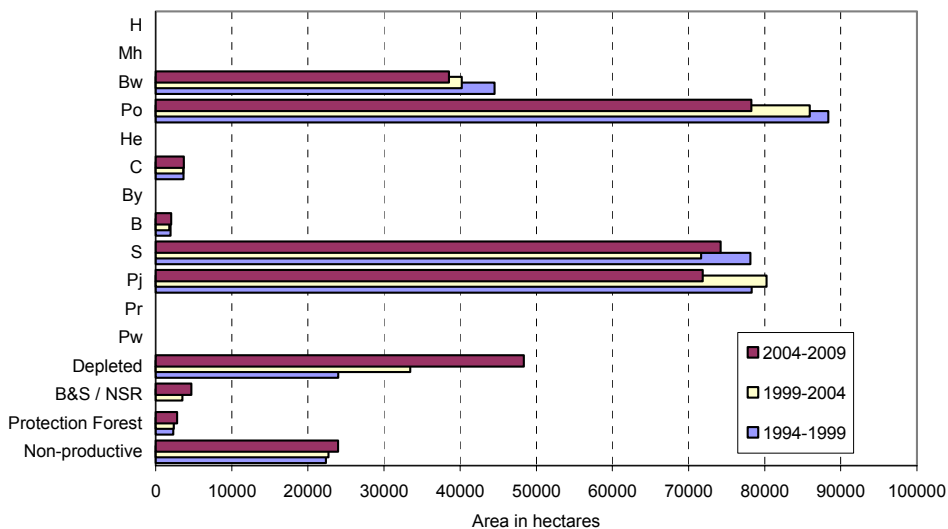
**Table 1 - Summary of Total Area Under Management**

Past and Current Plans - Crown Managed

**MU: Magpie Forest**

Land Type	Plan Term	Area in hectares		
		Past Plans		Current
		1994-1999	1999-2004	2004-2009
Non-Forested				
Other Land (Stypes 60, 61, 62, 63, 66, 80)		2,975	2,896	3,036
Forested				
Non-productive (Stypes = 50, 52, 54, 56)		22,360	22,696	23,957
Productive				
Protection (Stypes = 40, 41)		2,312	2,382	2,845
Production Forest				
Stypes 30 B&S / NSR		-	3,519	4,685
Stype 11-14 Depleted		23,992	33,449	48,372
Stype 20-28 Forest Stands by Working Group				
Pw		-	-	-
Pr		-	-	-
Pj		78,275	80,239	71,858
S		78,101	71,672	74,215
B		1,984	1,801	2,026
By		-	-	-
C		3,665	3,637	3,687
He		-	-	-
Po		88,358	85,929	78,253
Bw		44,524	40,223	38,520
Mh		-	-	-
H		-	-	-
Total Production Forest		318,899	320,469	321,616
Total Forested Land		343,571	345,547	348,418

**Figure 1 Magpie Forest Area Under Management by Working Group**



Source: 1999-2004, 2004-2009 FMPM Table FMP-1, FMP-2

## 2006 INDEPENDENT FOREST AUDIT

Management Unit Name: **MAGPIE FOREST**

1994

Plan Term: April 1, 1994 to March 31, 1999

**Table 2: Description of Forest Units**

Forest Unit		Forest Type	Main Working Group	NER FEC Site Types	Silvicultural System	FRI Parameters & Criteria	Additional Information
Code	Name						
<b>Oc</b>	Other Conifer	conifer	Ce	9, 12, 13	clear cut	Wg = Ce , La	
<b>Sp3</b>	Spruce Site Class 3	conifer	Sb	8, 11, 12, 13	clear cut	Wg =S, Sb,Sw,Bf and SC=3	
<b>Sp</b>	Spruce	conifer	Sb	1, 3a, 3b, 4, 5a, 5b, 6a, 6b, 8, 9, 11, 12	clear cut	Wg = S, Sb, Sw,Bf and SC X, 1, 2	
<b>Pj</b>	Jack Pine	conifer	Pj	1, 2a, 2b, 3a, 3b , 4, 6b	clear cut	Wg=Pj all site classes	
<b>Po</b>	Poplar	int. hardwood	Po	1, 3a, 3b, 6a, 6c, 7a, 7b, 10	clear cut	Wg=Po all site classes	
<b>Bw2</b>	White Birch	int. hardwood	Bw	1, 6c, 7b	clear cut	Sb, Sw, Pj, & Po < 0.3	Wg = Bw only
<b>Bw</b>	Mixed White Birch	mixedwood	Bw	1, 3a, 3b, 6b, 6c, 7b	clear cut	Sb, Sw, Pj, & Po >= 0.3	Wg = Bw only

Source: Table 4.13 A from the 1994-1999 FMP.

## 2006 INDEPENDENT FOREST AUDIT

Management Unit Name: **MAGPIE FOREST**

1999

Plan Term: April 1, 1999 to March 31, 2004

**Table 2: Description of Forest Units**

Forest Unit		Forest Type	Main Working Group	NER FEC Site Types	Silvicultural System	FRI Parameters & Criteria	Additional Information
Code	Name						
<b>Ce</b>	Cedar	conifer	Ce	9, 13	clear cut	all stands	
<b>La</b>	Larch	conifer	La	12, 13	clear cut	all stands	
<b>Sp3</b>	Spruce Site Class 3	conifer	Sb	8, 11, 12, 13	clear cut	Wg = Sb, Sw, Bf and SC=3	
<b>SpLow</b>	Lowland Spruce	conifer	Sb	5a, 8, 11, 12, 13	clear cut	Sb+Ce+La >=.8 and Pj+Po+Bw < .2	WG = Sb and SC X, 1, 2
<b>Sp1</b>	Upland Spruce	conifer	Sb	1, 3a, 3b, 4, 5a, 5b, 6a, 6b, 8, 9	clear cut	Po + Bw <=.3 and Sb+Ce+La <.8 and Pj+Po+Bw >=.2	Wg = Sb, Sw, Bf and SC X, 1, 2
<b>MSp</b>	Mixed Spruce	mixedwood	Sb	1, 3a, 3b, 6a, 6b	clear cut	Po + Bw >= .4 and <= .6	Wg = Sb, Sw, Bf and SC X, 1, 2
<b>Pj1</b>	Jack Pine	conifer	Pj	1, 2a, 2b, 3a, 3b, 4	clear cut	Po + Bw <=.3	
<b>MPj</b>	Mixed Jack Pine	mixedwood	Pj	1, 3a, 3b, 6b	clear cut	Po + Bw >= .4 and <= .6	
<b>Po1</b>	Poplar	int. hardwood	Po	3a, 3b, 6c, 7a, 7b, 10	clear cut	Po >= .7	
<b>MPo</b>	Mixed Poplar	mixedwood	Po	1, 3a, 3b, 6a, 6c, 7a, 7b, 10	clear cut	Po < .7	
<b>Bw1</b>	White Birch	int. hardwood	Bw	1, 6c, 7b	clear cut	Bw >= .7	
<b>MBw</b>	Mixed White Birch	mixedwood	Bw	1, 3a, 3b, 6b, 6c, 7b	clear cut	Bw < .7	

Source: Table FMP-8



**2006 INDEPENDENT FOREST AUDIT**

 Management Unit Name: **MAGPIE FOREST**

2004

 Plan Term: April 1, 2004 to March 31, 2009
**Table 2: Description of Forest Units**

Forest Unit		Forest Type	Main Working Group	NER FEC Site Types	Silvicultural System	FRI Parameters & Criteria	Additional Information Avg Species Composition
Code	Name						
BOG	Spruce Bog	Conifer	Black Spruce	14		sb+la>=0.7 and pw=0 and sc="4"	Sb 5La 5
SB1	Black Spruce Lowland	Conifer	Black Spruce	11, 8	clearcut	sb>=0.7 and mh+uh+pr=0 and pw+pj+po+bw+sw<=0.1 and bf<=0.1	Sb 8La 1Ce 1
PJ1	Jack Pine	Conifer	Jack Pine	2a, b, 4, 3	clearcut	pj>=0.7 and po+bw+uh+mh+lh<=0.2	Pj 8Sb 1Po 1
LC1OC	Lowland Conifer - Other Conifer	Conifer	Cedar/Larch	13, 12	clearcut	sb+ce+la>=0.7 and mh+uh+pr=0 and pw+pj+po+bw+sw<=0.1 and bf<=0.1 and (wg = 17 or wg = 18)	Ce 4Sb 3La 3
LC1SB	Lowland Conifer - Spruce Dominant	Conifer	Black Spruce	13, 12	clearcut	sb+ce+la>=0.7 and mh+uh+pr=0 and pw+pj+po+bw+sw<=0.1 and bf<=0.1	Sb 6Ce 2La 2
PJ2	Pine Spruce	Conifer	Jack Pine	3, 4	clearcut	pj+sb+pr>=0.7 or pj>=0.4 and pj+sb+bf+sw+he+pw+pr+ce+la>=0.7 and pj>=sb	Pj 5Sb 2Po 1Bw 1 (Bf,Sw,Ce,La) 1
SP1	Spruce Pine	Conifer	Black Spruce	6b, 9, 5a, b	clearcut	sb+sw+bf+ce+la+pw+pj+pr+he>=0.7 and sw+ce = 0 and (sb>=0.7 or (sb>=0.5 and pj>=0.2)) and (bf+ce+pw+la+sw+he<=0.2 or pj>=0.3)	Sb 6Pj 2Po 1Bw 1
SF1	Spruce Fir	Conifer	Black Spruce	9, 6	clearcut	sb+sw+bf+ce+la+pw+pj+pr+he>=0.7	Sb 4Bf 1Bw 1Pj 1Sw 1Po 1 (Ce,La,Pw) 1
PO1	Poplar	Hardwood	Poplar	10, 6, 7a, b	clearcut	po+bw+mh+uh+lh>=0.7 and po>=bw	Po 6Bw 2Sb 1Pj 1
BW1P	Pure Birch	Hardwood	White Birch	6, 10	clearcut	(po+bw+mh+uh+lh>=0.7 and bw>=0.7) or (bw*stkg>=0.4)	Bw 6Po 2Sb 1Pj 1
BW1M	Birch Poplar	Hardwood	White Birch	6, 10	clearcut	po+bw+mh+uh+lh>=0.7	Bw 5Po 3Sb 1Bf 1
MW1	Jack Pine Mixed	Mixedwood	Various	3a	clearcut	pj+pr>=0.2 and sw+ce=0 and bf<=0.1	Pj 3Po 3Bw 2Sb 2
MW2	Spruce Mixed	Mixedwood	Various	6a, b, c	clearcut	all remaining stands	Bw 3Po 2Sb 2Sw 1Bf 1Pj 1

Source: Table FMP-8

2006 Independent Forest Audit

**Table 3 - Summary of Planned & Actual Harvest Volumes**

MU: **Magpie Forest**

**Average Planned Annual Harvest Volumes**

Volumes are Annualized for the indicated 5 year period

Species	Volume in '000's cubic metres		
	Past Plans		Current
	1994-1999	1999-2004	2004-2009
Pj	130	126	68
Sb	126	68	88
Sw	-	7	12
Bf	20	5	7
Ce	-	1	5
La	-	1	3
Po	233	108	85
Bw	108	34	35
Total Planned Volumes	617	350	304

Source: Table 4.18.1 FMP-21 FMP-21  
Represents Planned utilized plus unutilized volume

**Actual Harvest Volumes**

Volumes are Annualized for the indicated 5 year period

Species	Volume in '000's cubic metres		
	Past Plans		Current
	1994-1999	1999-2004	2004-2009
Pj	135	131	
Sb	76	69	
Sw	-	-	
Bf	3	4	
Ce	-	-	
La	-	0	
Po	153	78	
Bw	1	0	
Total Actual Volumes	368	283	

Source: RPFO-4 AR-3  
salvage not included

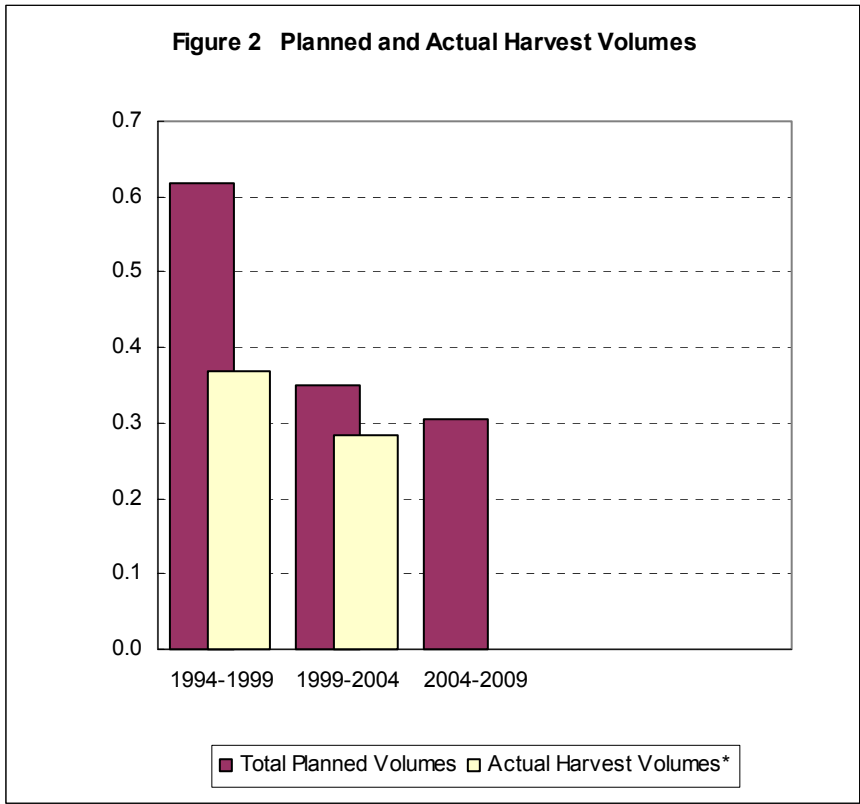


Figure 2. Planned vs. Actual Harvest Volumes

2006 Independent Forest Audit

**Table 3a - Summary of Planned & Actual Harvest Volumes**

MU: **Magpie Forest**

Average Planned Annual Harvest Volume - Planned Utilization

Volumes are Annualized for the indicated 5 year period

Species	Volume in '000's cubic metres		
	Past Plans		Current
	1994-1999	1999-2004	2004-2009
Pj	117	126	68
Sb	109	68	88
Sw	-	7	12
Bf	17	5	7
Ce	-	1	2
La	-	1	-
Po	205	108	85
Bw	2	5	35
Total Planned Volumes	450	322	298

Source: **Table 4.18.1** **FMP-23** **FMP-23**  
**Planned Utilization**

**Actual Harvest Volumes**

Volumes are Annualized for the indicated 5 year period

Species	Volume in '000's cubic metres		
	Past Plans		Current
	1994-1999	1999-2004	2004-2009
Pj	135	131	
Sb	76	69	
Sw	-	-	
Bf	3	4	
Ce	-	-	
La	-	0	
Po	153	78	
Bw	1	0	
Total Actual Volumes	368	283	

Source: **RPFO-4** **AR-3**  
salvage not included

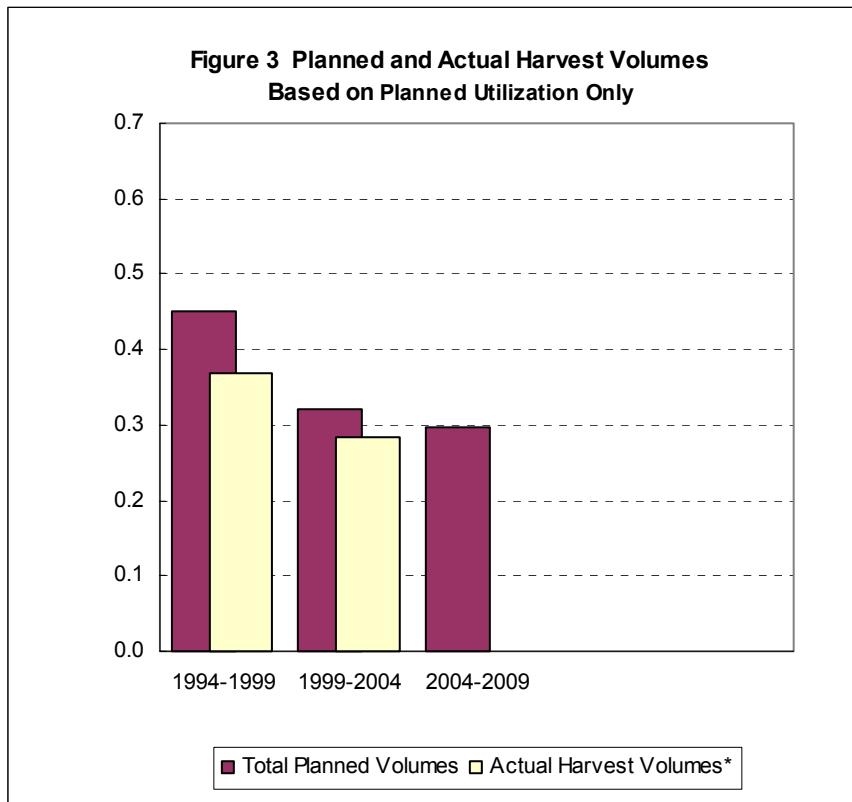


Figure 3. Planned vs Actual Harvest Volumes Based on Planned Utilization Only

2006 Independent Forest Audit

**Table 4 - Summary of Planned & Actual Depletion Area**

Past and Current Plans

**MU: Magpie Forest**

Area is Annualized for the indicated 5 year period

Forecast of Harvest Area						Actual Depletion Area								
Area in hectares						Area in hectares								
Past Plans				Current Plan		Past Plans						Current Plan		
1994-1999		1999-2004		2004-2009		1994-1999			1999-2004			2004-2009		
Forest Unit	Forecast Harv	Forest Unit	Forecast Harv	Forest Unit	Forecast Harv	Forest Unit	Harvest	Natural	Forest Unit	Harvest	Natural	Forest Unit	Harvest	Natural
Sp	1,122	Sp1	267	Sp1	141	Sp	789	211	Sp1	220	46	Sp1	167	
		SpL	129	Sb1	211				SpL	99	15	Sb1	3	
Sp3		Sp3	9	LC1SB	85	Sp3			Sp3	9	0	LC1SB		
		MSp	100	SF1	379				MSp	53	4	SF1	113	
Oc		Ce1	10	LC1OC	50	Oc	3	5	Ce1	2	0	LC1OC		
		La1	3						La1	2	-			
Pj	1,309	Pj1	1,161	PJ1	110	Pj	1,042	470	Pj1	962	138	PJ1	84	
		MPj	199	PJ2	344				MPj	146	12	PJ2	508	
				MW1	273					-	-	MW1	183	
Po	1,903	Po1	100	PO1	292	Po	1,387	277	Po1	91	67	PO1	105	
		MPo	703	MW2	350				MPo	545	113	MW2	209	
Bw	773	Bw1	0	BW1P	164	Bw	389	170	Bw1	5	1	BW1P	27	
Bw1		MBw	138	BW1M	39	Bw1	2	27	MBw	77	20	BW1M	3	
Total Area:	5,107		2,818		2,440		3,612	1,160		2,212	418	-	1,402	

Source: Table 4.15 FMP-18 FMP-18 RPFO-1 RPFO-1 AR-1 AR-1 AR-1 2004/05 only

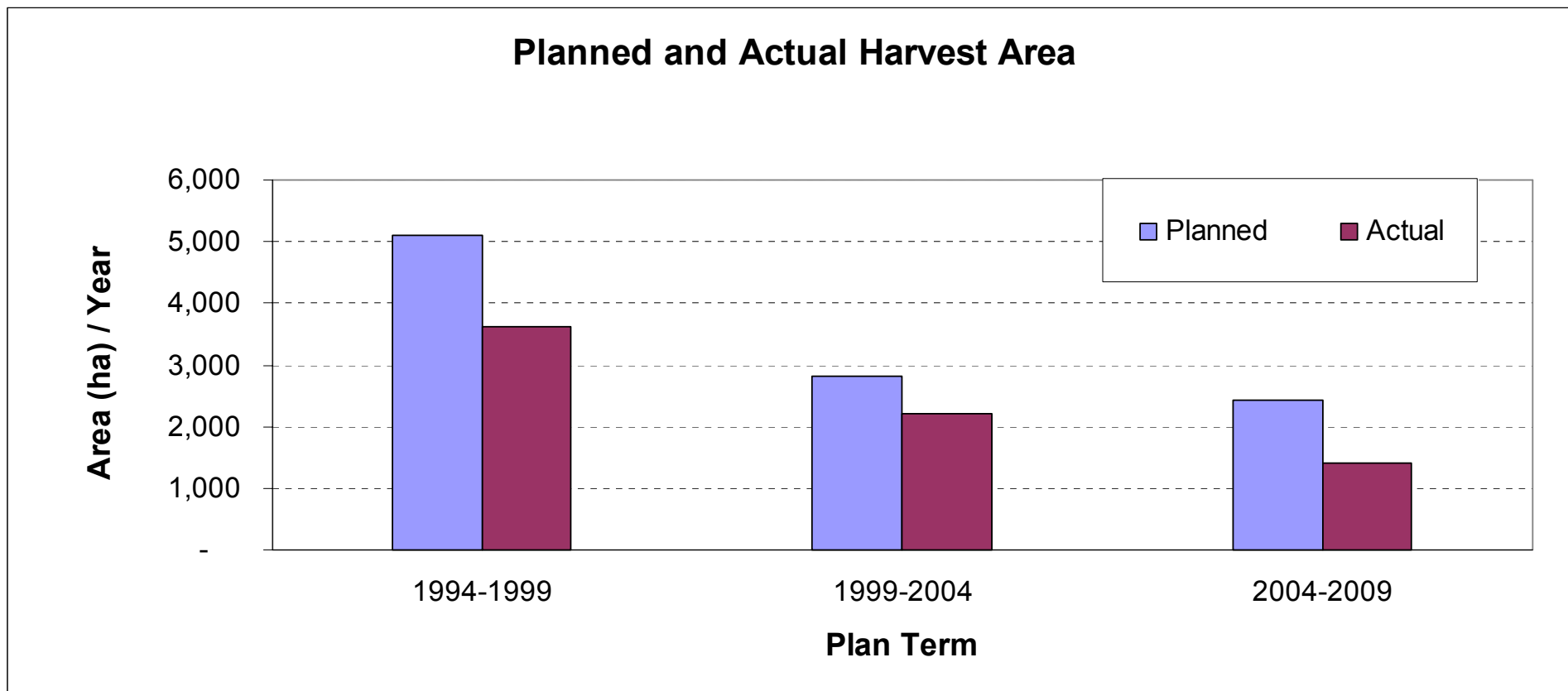


Figure 4. Planned vs. Actual Harvest Area

2006 Independent Forest Audit

**Table 5 - SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT - 1994**

**MU: Magpie Forest**

Source: TPM Table 4.8.2, 4.9

Forest Unit	Age Class	Protection Forest		Production Forest			
		(ha)	(m <sup>3</sup> )	(ha)	(m <sup>3</sup> )	Stage of Management	(ha) (m <sup>3</sup> )
Sp1	B+S			7,273			
	1-20			3,838			
	21-40			2,611			
	41-60			2,124			
	61-80			13,292			
	81-100			33,810			
	101-120			15,964			
	121-140			5,525			
	141+			570			
Forest Unit Subtotal				85,007			

Forest Unit	Age Class	Protection Forest		Production Forest			
		(ha)	(m <sup>3</sup> )	(ha)	(m <sup>3</sup> )	Stage of Management	(ha) (m <sup>3</sup> )
Pj	B+S			9,781			
	1-20			13,088			
	21-40			3,041			
	41-60			1,970			
	61-80			36,521			
	81-100			22,623			
	101-120			808			
	121-140			206			
	141+			18			
Forest Unit Subtotal				88,056			

Forest Unit	Age Class	Protection Forest		Production Forest			
		(ha)	(m <sup>3</sup> )	(ha)	(m <sup>3</sup> )	Stage of Management	(ha) (m <sup>3</sup> )
Po	B+S			4,183			
	1-20			4,083			
	21-40			1,645			
	41-60			1,817			
	61-80			39,625			
	81-100			32,709			
	101-120			7,426			
	121-140			822			
	141+			231			
Forest Unit Subtotal				92,541			

Forest Unit	Age Class	Protection Forest		Production Forest			
		(ha)	(m <sup>3</sup> )	(ha)	(m <sup>3</sup> )	Stage of Management	(ha) (m <sup>3</sup> )
Bw1	B+S			1,950			
	1-20			2,080			
	21-40			2,628			
	41-60			1,921			
	61-80			13,844			
	81-100			16,090			
	101-120			3,112			
	121-140			380			
	141+			98			
Forest Unit Subtotal				42,103			



Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m <sup>3</sup> )	(ha)	(m <sup>3</sup> )	Stage of Management	(ha)	(m <sup>3</sup> )
Sp3	B+S			296				
	1-20							
	21-40			11				
	41-60			5				
	61-80			166				
	81-100			486				
	101-120			325				
	121-140			1,310				
	141+			48				
Forest Unit Subtotal				2,647				

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m <sup>3</sup> )	(ha)	(m <sup>3</sup> )	Stage of Management	(ha)	(m <sup>3</sup> )
Bw2	B+S			318				
	1-20							
	21-40			283				
	41-60			327				
	61-80			1,314				
	81-100			1,899				
	101-120			460				
	121-140			17				
	141+			71				
Forest Unit Subtotal				4,689				

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m <sup>3</sup> )	(ha)	(m <sup>3</sup> )	Stage of Management	(ha)	(m <sup>3</sup> )
OC	B+S			191				
	1-20			66				
	21-40			35				
	41-60							
	61-80			252				
	81-100			1,922				
	101-120			829				
	121-140			429				
	141+			132				
Forest Unit Subtotal				3,856				
Total		2,312		318,899				

**2006 Independent Forest Audit**

**Table 5 SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT ( FMP- 9 ) - 1999**

**MU: Magpie Forest**

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(.000 m3)	Unavailable		Stage of Management	Available	
				(ha)	(.000 m3)		(ha)	(.000 m3)
<b>Bw1</b>	B&S						5,048	
	1-20			184	0		1,007	
	21-40			1	0		30	
	41-60						0	
	61-80			105	9		1,254	103
	81-100			166	15		1,982	177
	101-120	20	2	67	6		597	51
	121-140			2			85	6
	141-160			7			82	2
	161+							
	Subtotal	20	2	532	30		10,085	339

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(.000 m3)	Unavailable		Stage of Management	Available	
				(ha)	(.000 m3)		(ha)	(.000 m3)
<b>Ce1</b>	B&S						56	
	1-20			7			0	
	21-40			2			0	
	41-60						7	
	61-80	11	1	11	1		17	1
	81-100	22	1	107	7		591	40
	101-120			134	10		887	68
	121-140	48	3	53	4		452	31
	141-160	13	1	11	1		73	4
	161+			10			68	3
	Subtotal	94	6	335	23		2,151	147

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(.000 m3)	Unavailable		Stage of Management	Available	
				(ha)	(.000 m3)		(ha)	(.000 m3)
<b>La1</b>	B&S						106	
	1-20			14			0	
	21-40			6			87	
	41-60						0	
	61-80			2			8	
	81-100	550	36	68	5		452	33
	101-120	182	15	33	3		439	36
	121-140	58	5	23	2		42	3
	141-160	9	1				33	2
	161+						0	
	Subtotal	799	57	146	10		1,167	74

**Table 5 SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT ( FMP- 9 ) - 1999**

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(.000 m3)	Unavailable		Stage of Management	Available	
				(ha)	(.000 m3)		(ha)	(.000 m3)
<b>MBw</b>	B&S							
	1-20			79			1,576	
	21-40	21		142	2		2,574	39
	41-60			116	5		1,653	75
	61-80	235	18	627	47		5,040	382
	81-100	62	5	2,516	217		12,482	1,073
	101-120			828	66		5,484	432
	121-140			120	6		1,272	64
	141-160			2			143	4
	161+						0	
Subtotal		318	23	4,430	343		30,224	2,069

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(.000 m3)	Unavailable		Stage of Management	Available	
				(ha)	(.000 m3)		(ha)	(.000 m3)
<b>MPj</b>	B&S							
	1-20			59			922	
	21-40			227	5		1,514	30
	41-60						0	
	61-80			453	63		2,712	371
	81-100	13	2	1,843	264		4,688	678
	101-120			316	36		516	60
	121-140			14	1		55	3
	141-160						0	
	161+						0	
Subtotal		13	2	2,912	369		10,407	1,142

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(.000 m3)	Unavailable		Stage of Management	Available	
				(ha)	(.000 m3)		(ha)	(.000 m3)
<b>MPo</b>	B&S						143	
	1-20			236			3,913	
	21-40	78	1	246	6		2,525	50
	41-60			87	7		726	51
	61-80	64	8	1,275	158		10,520	1,310
	81-100	241	31	5,004	647		25,831	3,353
	101-120	29	3	1,598	160		6,552	641
	121-140			296	14		2,173	99
	141-160			27	0		89	2
	161+						44	
Subtotal		412	43	8,769	992		52,516	5,506

**Table 5 SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT ( FMP- 9 ) - 1999**

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(.000 m3)	Unavailable		Stage of Management	Available	
				(ha)	(.000 m3)		(ha)	(.000 m3)
<b>MSp</b>	B&S							
	1-20			50			636	
	21-40			94	1		1,378	18
	41-60			43	2		465	23
	61-80			216	20		958	87
	81-100	29	3	599	63		3,548	373
	101-120			617	61		3,706	364
	121-140	5		105	7		1,120	83
	141-160			11	1		183	10
	161+						0	
Subtotal		34	3	1,735	155		11,994	958

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(.000 m3)	Unavailable		Stage of Management	Available	
				(ha)	(.000 m3)		(ha)	(.000 m3)
<b>Pj1</b>	B&S						10,385	
	1-20			1,311			16,783	
	21-40			576	12		4,209	73
	41-60			41	3		399	28
	61-80			2,264	310		13,691	1,906
	81-100	40	6	6,129	899		18,042	2,658
	101-120			838	100		2,367	284
	121-140			22	1		248	12
	141-160						0	
	161+						0	
Subtotal		40	6	11,181	1,325		66,124	4,961

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(.000 m3)	Unavailable		Stage of Management	Available	
				(ha)	(.000 m3)		(ha)	(.000 m3)
<b>Po1</b>	B&S						10,047	
	1-20	3		391			6,548	
	21-40			38	1		225	5
	41-60						0	
	61-80			269	36		3,170	424
	81-100			1,456	191		10,512	1,392
	101-120			229	24		1,766	179
	121-140			13			167	6
	141-160			1			2	
	161+							
Subtotal		3	0	2,397	252		32,437	2,006

**Table 5 SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT ( FMP- 9 ) - 1999**

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(.000 m3)	Unavailable		Stage of Management	Available	
				(ha)	(.000 m3)		(ha)	(.000 m3)
Sp1	B&S						757	
	1-20			114			1,570	
	21-40			168	1		1,945	14
	41-60			97	5		1,071	48
	61-80			1,003	88		4,322	382
	81-100	60	6	2,713	275		10,415	1,056
	101-120			1,621	160		7,138	701
	121-140			501	38		3,029	233
	141-160			33	2		265	16
	161+			3			48	2
Subtotal		60	6	6,253	569		30,560	2,452

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(.000 m3)	Unavailable		Stage of Management	Available	
				(ha)	(.000 m3)		(ha)	(.000 m3)
SpLow	B&S						10,190	
	1-20			658			768	
	21-40			20			223	
	41-60			13			157	4
	61-80	7		107	7		726	44
	81-100	719	54	921	71		5,836	451
	101-120	89	7	1,002	84		6,092	510
	121-140	206	16	509	39		3,701	286
	141-160	14	1	90	6		622	44
	161+							
Subtotal		1,035	78	3,320	207		28,315	1,339

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(.000 m3)	Unavailable		Stage of Management	Available	
				(ha)	(.000 m3)		(ha)	(.000 m3)
Sp3	B&S						236	
	1-20			19			8	
	21-40						0	
	41-60						15	
	61-80			8			40	
	81-100			38	1		384	14
	101-120			39	2		359	17
	121-140			144	6		1,057	47
	141-160			15	1		108	4
	161+			5			4	
Subtotal		0	0	268	10		2,211	82

**Table 5 SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT ( FMP- 9 ) - 1999**

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(.000 m3)	Unavailable		Stage of Management	Available	
				(ha)	(.000 m3)		(ha)	(.000 m3)
All FU	B&S	0	0	0	0		36,968	0
	1-20	7	0	3,122	0		33,731	0
	21-40	99	1	1,520	28		14,710	229
	41-60	0	0	397	22		4,493	229
	61-80	317	27	6,340	739		42,458	5,010
	81-100	1,736	144	21,560	2,655		94,763	11,284
	101-120	320	27	7,322	712		35,903	3,326
	121-140	317	24	1,802	118		13,401	826
	141-160	36	3	197	11		1,600	84
	161+	0	0	18	0		164	5
	Subtotal	2,832	226	42,278	4,285		278,191	20,993

2006 Independent Forest Audit

Table 5 SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT ( FMP-9 ) - 2004

MU: Magpie Forest

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m <sup>3</sup> )	Unavailable		Stage of Management	Available	
				(ha)	(m <sup>3</sup> )		(ha)	(m <sup>3</sup> )
BOG	1-20							
	21-40							
	41-60							
	61-80							
	81-100	1,210						
	101-120	235						
	121-140	375						
	141-160	75						
	161-180							
	181-200							
	201-220							
	221-240							
Forest Unit Subtotal		1,895						

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m <sup>3</sup> )	Unavailable		Stage of Management	Available	
				(ha)	(m <sup>3</sup> )		(ha)	(m <sup>3</sup> )
BW1M	1-20			11			1,611	
	21-40			29			482	11,580
	41-60			17			363	17,376
	61-80			32			374	33,258
	81-100	18		291			2,352	224,139
	101-120			146			2,467	195,109
	121-140			51			204	7,609
	141-160			1			145	3,767
	161-180							
	181-200							
	201-220							
	221-240							
Forest Unit Subtotal		18		578			7,998	492,839

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m <sup>3</sup> )	Unavailable		Stage of Management	Available	
				(ha)	(m <sup>3</sup> )		(ha)	(m <sup>3</sup> )
BW1P	1-20	9		930			1,107	
	21-40			3			112	4,153
	41-60			32			357	23,468
	61-80			299			2,529	302,123
	81-100			1,263			6,845	885,365
	101-120	21		227			1,511	150,972
	121-140	5		17			159	9,041
	141-160			8			79	1,313
	161-180							
	181-200							
	201-220							
	221-240							
Forest Unit Subtotal		35		2,779			12,699	1,376,436

**Table 5 SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT ( FMP-9 ) - 2004**

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m <sup>3</sup> )	Unavailable		Stage of Management	Available	
				(ha)	(m <sup>3</sup> )		(ha)	(m <sup>3</sup> )
LC1OC	1-20			33			343	
	21-40			3			63	438
	41-60			2			7	380
	61-80						17	1,507
	81-100	34		115			842	92,437
	101-120	21		113			1,088	97,321
	121-140	48		45			427	26,993
	141-160	10		11			97	3,538
	161-180			5			6	295
	181-200			2			22	1,096
	201-220							
	221-240							
Forest Unit Subtotal		113		329			2,912	224,005

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m <sup>3</sup> )	Unavailable		Stage of Management	Available	
				(ha)	(m <sup>3</sup> )		(ha)	(m <sup>3</sup> )
LC1SB	1-20			6			571	30
	21-40			4			81	915
	41-60			2			55	2,034
	61-80			20			228	23,615
	81-100	7		136			1,164	118,792
	101-120			214			1,623	141,465
	121-140			213			1,495	104,820
	141-160			25			288	18,294
	161-180			4			8	353
	181-200							
	201-220							
	221-240							
Forest Unit Subtotal		7		624			5,513	410,317

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m <sup>3</sup> )	Unavailable		Stage of Management	Available	
				(ha)	(m <sup>3</sup> )		(ha)	(m <sup>3</sup> )
MW1	1-20	2		61			4,367	3,533
	21-40			312			3,848	123,013
	41-60			47			373	32,374
	61-80	11		702			5,468	772,993
	81-100	30		3,798			11,610	1,724,770
	101-120	29		612			1,559	202,078
	121-140			20			155	10,041
	141-160						4	218
	161-180							
	181-200							
	201-220							
	221-240							
Forest Unit Subtotal		72		5,552			27,384	2,869,019



**Table 5 SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT ( FMP-9 ) - 2004**

Forest Unit	Age Class	Protection Forest		Production Forest					
		(ha)	(m³)	Unavailable		Stage of Management	Available		
				(ha)	(m³)		(ha)	(m³)	
MW2	1-20	9		132			7,928	11,716	
	21-40			264			5,307	124,524	
	41-60			116			1,889	82,787	
	61-80			319			2,669	252,695	
	81-100	312		1,817			9,169	1,060,786	
	101-120			1,779			9,596	983,298	
	121-140			383			3,223	211,148	
	141-160			54			492	22,719	
	161-180	80							
	181-200						44	131	
	201-220								
	221-240								
Forest Unit Subtotal		401		4,864			40,317	2,749,803	

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m³)	Unavailable		Stage of Management	Available	
				(ha)	(m³)		(ha)	(m³)
PJ1	1-20	12		860			14,529	11,349
	21-40			331			5,088	168,056
	41-60			27			388	49,656
	61-80			412			4,469	748,858
	81-100			1,395			4,096	798,989
	101-120			89			294	53,991
	121-140			5			24	1,684
	141-160							
	161-180							
	181-200							
	201-220							
	221-240							
Forest Unit Subtotal		12		3,119			28,888	1,832,582

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m³)	Unavailable		Stage of Management	Available	
				(ha)	(m³)		(ha)	(m³)
PJ2	1-20	14		158			11,827	22,875
	21-40			439			4,731	128,774
	41-60			36			187	13,624
	61-80			1,128			9,149	1,471,136
	81-100			4,264			10,160	1,666,610
	101-120			876			1,545	259,868
	121-140			20			25	1,254
	141-160							
	161-180			2				
	181-200							
	201-220							
	221-240							
Forest Unit Subtotal		15		6,923			37,624	3,564,141

**Table 5 SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT ( FMP-9 ) - 2004**

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m³)	Unavailable		Stage of Management	Available	
				(ha)	(m³)		(ha)	(m³)
PO1	1-20	91	103	1,081			15,209	8,223
	21-40			113			1,665	44,393
	41-60			84			411	29,130
	61-80			840			10,790	1,679,350
	81-100			3,870			25,951	4,390,197
	101-120			1,089			5,835	696,500
	121-140			278			1,277	60,069
	141-160			25			52	1,190
	161-180			49			62	1,241
	181-200							
	201-220							
	221-240							
Forest Unit Subtotal		212		7,429			61,252	6,910,293

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m³)	Unavailable		Stage of Management	Available	
				(ha)	(m³)		(ha)	(m³)
SB1	1-20			3,578			3,770	
	21-40			3			15	704
	41-60			2			68	1,158
	61-80			54			603	77,609
	81-100			446			4,727	597,322
	101-120			656			4,870	538,244
	121-140			291			2,977	245,131
	141-160			49			486	42,506
	161-180							
	181-200							
	201-220							
	221-240							
Forest Unit Subtotal				5,079			17,516	1,502,674

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m³)	Unavailable		Stage of Management	Available	
				(ha)	(m³)		(ha)	(m³)
SF1	1-20	55		90			3,160	931
	21-40			144			2,443	60,192
	41-60			39			935	60,740
	61-80			146			1,033	138,416
	81-100			1,210			6,063	829,519
	101-120			1,180			6,664	796,267
	121-140			515			2,507	206,201
	141-160			62			188	9,153
	161-180			5			88	6,285
	181-200							
	201-220							
	221-240							
Forest Unit Subtotal		55		3,391			23,081	2,107,704

**Table 5 SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT ( FMP-9 ) - 2004**

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m³)	Unavailable		Stage of Management	Available	
				(ha)	(m³)		(ha)	(m³)
SP1	1-20	8		26			3,668	349
	21-40			34			526	10,674
	41-60			11			160	13,471
	61-80			460			3,220	552,176
	81-100			817			3,859	647,383
	101-120			347			1,589	220,770
	121-140			82			770	63,021
	141-160			5			192	11,002
	161-180							
	181-200							
	201-220							
	221-240							
Forest Unit Subtotal		8		1,782			13,984	1,518,846
Total		2,843		42,449			279,168	25,558,657

**Note:** Unavailable area represent the Protection Forest Reserve (Stype 25), plus reserves, bypass, exclusions and Barren and Scattered are Reserves represents the area included in the BFPL generated slope based Riparian Reserves. Stands are NOT tagged in the FRI Bypass represent the area included in a separate coverage and includes bypass declared in past Annual Reports.  
Bypass stands are NOT tagged in the FRI  
Exclusions are areas excluded from the original FMA and are coded in the FRI as WC 2.  
Barren and Scattered are all areas identified in the FRI as Stype 30. A small area (16 ha) is included in the Exclusion Category.  
The area associated with B&S plus the 16 ha in the exclusion category matches the B&S total in FMP 1.  
B&S lands are defined as "true" Barren and Scattered lands in the Magpie Planning Inventory, are classified as "Unavailable", and do not succeed from a non-forest to a forested condition.

2006 Independent Forest Audit

Table 6 - SUMMARY REPORT OF RENEWAL, TENDING AND PROTECTION OPERATIONS (RPFO-7)

MU: Magpie Forest

	Area Summary of all Forest Units (ha)						
	1994-1999		1999-2004			2004-2009	
	Planned	Actual on Harvest and Natural Depletions	Planned	Actual on Harvest and Natural Depletions	Actual on Harvest Depletions Only	Planned	Actual on Harvest Depletions Only 2004 & 2005
<b>Renewal</b>							
<b>Regeneration</b>							
<b>Uneven-Aged Management</b>							
Selection Cut - Harvest							
<b>Total Uneven-Aged Management</b>							
<b>Even-Aged Management</b>							
<i>Natural</i> Regeneration							
Clearcut	11,940	9,260	5,205	7,336	6,811	4,755	1,873
Strip Cut							
Seed Tree Cut	200	19					
Uniform Shelterwood Seed Cut							
<i>Subtotal Natural</i>	12,140	9,279	5,205	7,336	6,811	4,755	1,873
<i>Artificial</i> Regeneration							
Planting	5,130	7,305	8,082	7,862	7,584	5,040	1,529
Seeding      direct	750	1,256	570	501	501	335	17
with site preparation							
Scarification						550	
<i>Subtotal Artificial</i>	5,880	8,561	8,652	8,363	8,085	5,925	1,546
<b>Total Even-Aged Management</b>	18,020	17,840	13,857	15,699	14,896	10,680	3,419
<b>Total Regeneration</b>	18,020	17,840	13,857	15,699	14,896	10,680	3,419
<b>Site Preparation</b>							
Mechanical	3,880	4,336	8,252	4,282	4,106	3,505	1,376
Chemical	2,150	1,544	400	63	63	200	137
Prescribed Burn	2,000	428					
<b>Total Site Preparation</b>	8,030	6,308	8,652	4,345	4,169	3,705	1,513
<b>Tending</b>							
<b>Cleaning</b>							
manual							
chemical - ground				388	388	500	111
- aerial	5,540	6,787	6,842	5,923	5,611	3,675	685
mechanical							
prescribed burn							
<b>Spacing, pre-commercial thinning, improvement cutting</b>							
even-aged	500	95	1,000	51	52	31	31
uneven-aged							
<b>Cultivation</b>							
<b>Total Tending</b>	6,040	6,882	7,842	6,362	6,051	4,206	827
<b>Protection (Insect Pest Control)</b>							
accelerated harvest							
salvage							
manual protection							
ground insecticide							
aerial insecticide							
<b>Total Protection</b>							

Source:

Table 4.19

RPFO-7

FMP-25

AR-6

AR-6

FMP-25

AR-7

**2006 Independent Forest Audit**

**Table 7 - Harvested Area Successfully Regenerated - Summary of All Forest Units**

**MU: Magpie Forest**

**For Area Harvested from April 1, 1991 to March 31, 1996**

	AREA IN HECTARES (All Forest Units Combined)	AREA IN HECTARES (All Forest Units Combined)
	Even-aged Management	Uneven-aged Management
<i>Total Area Harvested</i>	19,106	-
<i>Total Area Surveyed for Regeneration Success</i>	13,436	-
<i>Total Unsurveyed Area</i>	5,670	-
<i>Total Area Declared Successfully Regenerated</i>	10,621	-
<b><i>Total Area Surveyed Not Successfully Regenerated</i></b>	2,815	-
<i>NSR</i>	0	-
<i>B&amp;S</i>	0	-
<i>Not Available for Regen. (eg. Roads &amp; landings)</i>	0	-
<i>Other</i>	0	-
<b><i>Percent of Area Surveyed Declared Successfully Regenerated</i></b>	79	

**Source:**

total area harvested: AR tables 6.1 and AR-2

survey results: Free-toGrow Assessment records.

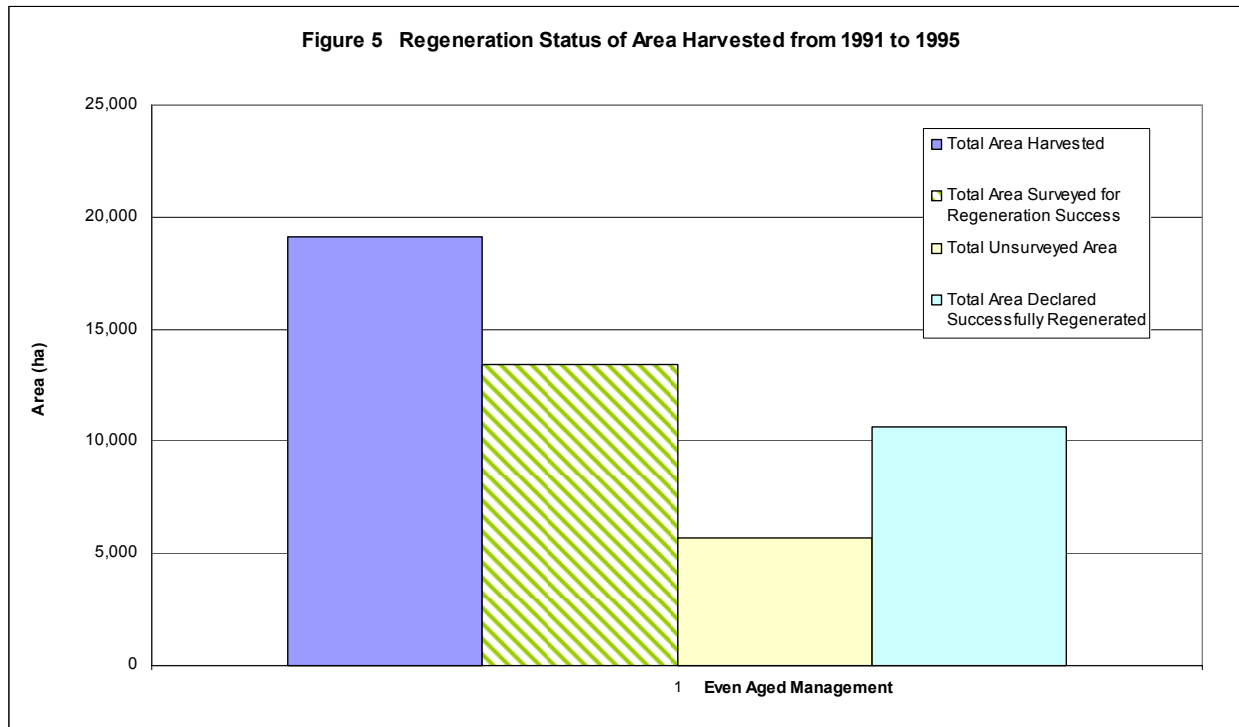


Figure 5. Regeneration Status of Area Harvested from 1991 – 1995.

## **Appendix B**

### **Audit Team Members and Qualifications**





<b>Name</b>	<b>Role</b>	<b>Responsibilities</b>	<b>Credentials</b>
<b>Mr. Bruce Byford</b> R.P.F. Arbex Forest Resource Consultants Ltd.	Lead Auditor Forest Management & Silviculture Auditor	Audit Management & coordination Liaison with OMNR & Auditee Review documentation related to forest management planning and review and inspect silviculture practices Determination of the sustainability component.	B.Sc.F. ISO 14001 Lead Auditor Training. FSC assessor training. 27 years of consulting experience in Ontario in forest management planning and resource inventory. Previous work experience on 9 IFA audits and FSC certification assessments.
<b>Mr. Al Stewart</b> Arbex Senior Associate	Wildlife/First Nations/Fisher ies Auditor	Review & inspect AOC documentation & practices First Nations consultation Determination of the sustainability component.	B.Sc. (Agr) ISO 14001 Lead Auditor Training. FSC assessor training. 38 years experience in natural resource management planning, field operations, policy development, auditing and working with First Nation communities. Previous work experience on 9 IFA audits.

<b>Mr. David Watton</b> Arbex Senior Associate	Forest Management Planning & Public Participation Auditor	Review documentation and practices related to forest management planning & public participation Determination of the sustainability component.	B.Sc., M.Sc. ISO 14001 Lead Auditor Training. 38 years experience in natural resource management planning, land use planning, field operations, and policy development. Previous work experience on 8 IFA audits.
<b>Mr. Guy Winterton</b> Arbex Senior Associate	Forest Compliance Auditor	Review FMP and related documents to ensure compliance with FMPM and other regulations Review field operations for compliance with regulations and guidelines and other documents.	B.Sc., M.Sc. ISO 14001 Lead Auditor Training. FSC assessor training. Previous work experience on 4 IFA audits. 38 years experience in all aspects of fisheries and wildlife planning, policy development, field operations and natural resource law enforcement. Previous work on 8 IFA audits.

<b>Mr. Trevor Isherwood</b> R.P.F. Trilac Forestry Services Arbex Associate	Silvicultural, Forest Management and Contractual Compliance Auditor	Review and inspect silvicultural practices and related documentation Review and inspect documents related to contractual compliance and socio-economics Determination of the sustainability component.	B.Sc.F. Former General Manager of SFL 38 years experience in forest management and operations. Previous work experience on 5 IFA audits.
<b>Mr. Mark Fleming</b> R.P.F. Fleming Professional Forestry	Technical Advisor – SFMM	Analysis of SFMM model outputs and decision criteria and the determination of the sustainability component.	B.Sc.F. R.P.F. Previous work experience on IFA audits and FSC certification assessments Experience as OMNR Planning Forester & Unit Forest.



## **Appendix C**

### **Independent Forest Audit Guiding Principles**



There are eight guiding principles in the 2006 Draft Independent Forest Audit Process and Protocol, which guide the audit.

**Commitment**

Commitment is reflected in vision, mission, and policy statements of the Company. Vision and mission statements are intended to provide long-term guidance for the organization. Policy statements reflect how the organization's vision and mission will be achieved. These statements must be reflected in the day-to-day operations of the organization.

**Public Participation**

The process of sustainable forest planning, implementation, and monitoring is conducted in an open consultative fashion, with input from all members of the planning team, Local Citizen's Committee, native groups and other parties with an interest in the operations of the forest Unit.

**Forest Management Planning**

The forest management planning process involves the input of a number of individuals and groups to describe the current condition of the forest, the values and benefits to be obtained from the forest, the desired condition of the forest in the future, and the best methods to achieve the goal. Certain minimum standards and procedures have been established upon which all management Units are evaluated.

**Plan Implementation**

Verification of the actual results of operations in the field compared to the planned operations is required to be able to assess achievements of the plan objectives and compliance with laws and regulations. In conjunction with the review of operations, the reporting tables are tested to ensure accurate results are reported.

**Support System**

System support concerns resources and activities needed to support plan implementation so as to achieve the desired objectives. Appropriate control, documentation and reporting procedures must be in place and operational. Planned action should occur at planned times, in planned places and to the planned degree.

**Monitoring**

The activities and the effects of these activities in achieving management objectives must be regularly measured and assessed. In particular, the indicators of achievement must be assessed and their effectiveness reviewed.

**Achievement of Management – Objectives & Forest Sustainability**

Periodic assessments of the management of the forest Unit operations and the forest Unit must be made in order to determine whether forest sustainability and other management objectives are being achieved. This includes comparing the actual values of the predetermined indicators against the planned values and assessing the reasons for any significant deviations.

**Contractual Compliance**

The licensee must comply with the specific licence requirements.



## **Appendix D**

### **Glossary for List of Acronyms Used**



## List of Acronyms

ACOP	Annual Compliance Operations Plan
AHA	Available Harvest Area
AOC	Area of Concern
AR	Annual Report
ATV	All Terrain Vehicle
AWS	Annual Work Schedule
B&S	Barren and Scattered
CAS	Compliance Activity Schedule
CFMP	Contingency Forest Management Plan
CFSA	Crown Forest Sustainability Act
DFPL	Dubreuil Forest Products Limited
DLUG	District Land Use Guidelines
DM	District Manager
EA	Environmental Assessment
EMS	Environmental Management System
FIM	Forest Information Manual
FMA	Forest Management Agreement
FMP	Forest Management Plan
FMPM	Forest Management Planning Manual
FMNCP	Forest Management Native Consultation Program
FOCIS	Forest Operations Compliance Information System
FOIP	Forest Operations Information Program
FOIR	Forest Operations Inspection Reports
FRI	Forest Resource Inventory
FOP	Forest Operations Prescription
FTG	Free-to-Grow
FU	Forest Unit
GIS	Geographic Information System
GPS	Global Positioning System
HA	Hectares
IEA	Individual Environmental Assessment
IFA	Independent Forest Audit
IFAPP	Independent Forest Audit Process and Protocol
ISO	International Standards Organization
LCC	Local Citizens Committee
m <sup>3</sup>	Cubic Metres
MF	Magpie Forest
MFMP	Magpie Forest Management Plan
MOE	Ministry of Environment
NDPEG	Natural Disturbance Pattern Emulation Guideline
NIC	Not in Compliance
NRVIS	Natural Resource Values Information System
NSR	Not Satisfactorily Regenerated

OMNR	Ontario Ministry of Natural Resources
RAC	Region Advisory Committee
R.P.F.	Registered Professional Forester
RPFO	Report of Past Forest Operations
RSA	Resource Stewardship Agreement
SEIM	Socio-Economic Impact Modeling
SEV	Statement of Environmental Value
SFI	Sustainable Forestry Initiative
SFL	Sustainable Forest Licence
SFMM	Sustainable Forest Management Model
SGR	Silvicultural Ground Rule
SMA	Selected Management Alternative
SPA	Special Purpose Account
STP	Silvicultural Treatment Package
TMP	Timber Management Plan
TOR	Terms of Reference
WHMIS	Workplace Hazardous Materials Information System

## **Appendix E**

### **Summary of Input to Audit Process**



The following briefly summarizes the contacts and the any issues that emerged from audit investigations. Complete discussions of the issues, audit findings, assessments and any associated recommendations or suggestions are discussed throughout the body of the report.

### **General Public /Other Stakeholders**

A bilingual notice soliciting input from the public was placed on the local cable television station (Radio Television Dubreuilville) and a notice was placed in the Algoma News. Letters inviting comment and containing a bilingual questionnaire were distributed to a random selection of thirty-five percent of the individuals on the Magpie Forest Management Plan (MFMP) mailing list.

First Nations adjacent to the MF were contacted by telephone, email, and regular mail.

Two members of the audit team attended a regularly scheduled meeting of the Magpie LCC.

Separate interviews were held with the Wawa District Manager and the Plan Author (no longer with DFPL).

Three tourism operations were interviewed in individual sessions.

Principal issues that were identified included:

#### General Public

- Remote tourism protection (i.e. access and harvest restrictions) is detrimental to the community's forest industry economy, to resident's enjoyment of the forest, and to the attraction of new road based recreation (e.g. ATV) to their community.

#### The LCC

- The complexity of the forest management planning process and LCC training needs.
- Closures of large areas to protect remote tourism concerns, at the expense of local residents use of the forest, and the attraction of Dubreuilville to road based recreationalists (e.g. snowmobiles, ATV's).
- The use of last minute "bump-ups" of remote tourism operators to delay/prevent forest access and harvesting.
- Concerns that the OMNR may disband the Magpie LCC in favor of a regional LCC that incorporated several local LCC's.

- The need to separate FMP decisions from land use decisions.

#### Native Communities

- The requirement for enhanced economic opportunities for First Nations in forestry.
- The lack of financial and technical capacity to participate effectively in forest management planning.

#### Dubreuil Forest Products Ltd. (including Plan Author)

- The cost, time and complexity of the FMP process.
- The perception that many aspects of planning and reporting demanded by the FMPM had limited or no value.
- Use of last minute “bump-ups” by remote tourism operators to delay/prevent forest access and harvesting.
- Continuing decrease in harvest area due to the NDPEG and other guidelines.
- LCC was very focused on a few specific issues and had difficulty dealing with the more technical aspects of FM planning.
- In the Magpie situation, the intensive amount of land use planning has made the RSA process largely redundant. The RSA process is viewed by some with suspicion.

#### Ontario Ministry of Natural Resources (including District Manager)

- The use of last minute “bump-ups” by remote tourism operators to delay/prevent forest access and harvesting.
- Staffing issues that prevented OMNR from having a regular field presence on the Magpie Forest.
- The cost, time, and complexity of the FMP process.
- In the Magpie situation, the intensive amount of land use planning and related issue resolution over the years has made the RSA process largely redundant.



### Remote Tourism Operators

- All tourism operators interviewed indicated that access was the main issue on the Magpie Forest.
- There is need for a broader geographic based recreational access planning process to provide a diversity of recreational use.
- Remote tourism operators elected not to participate on the LCC.
- One operator expressed concern about herbicide use near lakes and encouraged the principle of increased use of fire for forest management.