# **Magpie Forest**

# Independent Forest Audit 2011 – 2016

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Final Report



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# **1** EXECUTIVE SUMMARY

All Crown forests in Ontario undergo a regular independent audit, which usually occurs every five years but may be extended up to seven years. The requirement for independent audits stems from the Ministry of Natural Resources and Forestry Class Environmental Assessment Approval for Forest Management on Crown Lands in Ontario (2003). Regulation 160/04 of the Crown Forest Sustainability Act (S.O. 1994, c. 25) sets out the specific requirements for conducting the audits.

This report summarizes the results of the Magpie Forest Independent Audit conducted by KBM Resources Group. The audit covers forest management planning and implementation activities carried out during the five-year period April 1, 2011 through March 31, 2016. Two forest management plans are included in the scope of this audit – the 2009-2019 Phase I Forest Management Plan (implementation only) and the 2014-2019 Phase II Forest Management Plan (plan development and implementation).

Management of the Magpie Forest changed just prior to and during the term of the audit. Initially, the Forest was managed by Dubreuil Forest Products Ltd. until January, 2011 when the company declared bankruptcy. BDO Canada Ltd. was then appointed as trustee in bankruptcy for Dubreuil Forest Products Ltd. During the 2012-2013 fiscal year, the Forest was managed, on behalf of BDO, by Dubreuil Lumber Inc. In May 2013, the licence was surrendered to the Ministry of Natural Resources and Forestry. Since then, the Wawa District Ministry of Natural Resources and Forestry office has managed the Magpie Forest as a Crown unit.

To advise the public of the upcoming audit and solicit input to the process, KBM placed an advertisement in the Sault Star prior to the field component of the audit. KBM also contacted two local Aboriginal communities, Michipicoten First Nation and Missanabie Cree First Nation, and interviewed identified representatives. Four Local Citizens Committee members for the Magpie Forest were also interviewed.

The audit included a review of all documentation and records associated with management of the Magpie Forest during the audit term. The audit team also selected a stratified random sample of sites consisting of a representative cross section of all activities conducted on the Forest during the audit period. These sites were accessed by either helicopter or road for inspection. The procedures used during this audit were in accordance with the Independent Forest Audit Process and Protocol.

The audit results are presented in this report. The audit team has made recommendations to address instances of non-conformance to a law and/or policy, or an identified lack of effectiveness in forest management activities. Recommendations in this audit are directed at the forest manager and must be addressed in an action plan developed by appropriate District Ministry representatives. Corporate and Regional



Ministry representatives will develop an action plan to address the recommendations directed at the Corporate Ministry of Natural Resources and Forestry.

The audit team found that depressed wood markets have continued from the last audit term into this audit term. Local market issues have persisted as mills have struggled to re-open or continue to exist. This has significantly affected the level of operations. During the audit term, few harvest operations, no silviculture treatments and not all required surveys were completed. Harvest operations that were viewed had utilization issues and/or had been abandoned with most of the cut wood left on site. The 2006-2011 Independent Forest Audit of the Magpie Forest included recommendations for addressing outstanding silviculture liabilities as a condition for licence extension. The silviculture liabilities were not fully addressed during this recent audit term, and additional liability was added as no silviculture treatments occurred on the blocks harvested in the last five-year period.

The SFL was surrendered to the Ministry of Natural Resources and Forestry in May 2013. The Ministry had difficulty meeting management commitments during the audit term. The audit team found that Wawa District could not meet demands for a few reasons: bankruptcies in the forest industry led to surrender of licence of three forest management units in Wawa District between 2010 and 2013, high staff turnover, change in responsibilities and staffing limitations that resulted from planned forest unit amalgamations and "transformation" within the Ministry (a provincial initiative aimed at modernizing the Ministry to make it more efficient). Specific staff limitations noted were insufficient forest managers for the number of management units in the Wawa District, and shortfalls in compliance staff available for the Magpie Forest during most of the audit term.

Seventeen recommendations are made in this audit report to improve forest management on the Magpie Forest. The recommendations, by guiding principle, are:

- Commitment Recommendation 1
- Public Consultation and Aboriginal Involvement Recommendation 2
- Forest Management Planning Recommendation 3
- Plan Implementation Recommendations 4 through 11
- Monitoring Recommendations 12 through 15
- Achievement of Management Objectives and Sustainability Recommendation 16
- Contractual Obligations Recommendation 17

A best practice was also identified – Wawa MNRF supported Michipicoten First Nation in the creation of a forestry corporation and contracted forest management planning duties to this company.



The audit team concludes that management of the Magpie Forest Management Unit was not in compliance with the legislation, regulations and policies that were in effect during the term covered by the audit, and the Ministry of Natural Resources and Forestry did not fully meet its legal obligations. Forest sustainability is not being achieved, as assessed through the Independent Forest Audit Process and Protocol. The audit team identifies the following reason for this assessment: the lack of Corporate Ministry of Natural Resources and Forestry support for the Wawa District in meeting its management obligations on the Magpie Forest.

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Co-lead auditors on behalf of the audit team



## **2** TABLE OF RECOMMENDATIONS

#### Table 1. Table of Recommendations

#### **Recommendation on License Extension**

The audit team concludes that management of the Magpie Forest Management Unit was not in compliance with the legislation, regulations and policies that were in effect during the term covered by the audit, and the MNRF did not fully meet its legal obligations. Forest sustainability is not being achieved, as assessed through the Independent Forest Audit Process and Protocol. The audit team identifies the following reason for this assessment: **The lack of Corporate MNRF support for the Wawa District MNRF in meeting its** 

management obligations on the Magpie Forest.

**Recommendations Directed to District MNRF** 

Recommendation 3: During the preparation of the next FMP, only approved Forestry Futures Trust projects shall be included in the planned renewal expenditure.

Recommendation 4: The forest manager shall ensure that operators abide by wood utilization direction found in the Scaling Manual.

Recommendation 5: The forest manager shall ensure that operators abide by the FMP tree retention direction.

Recommendation 6: The forest manager shall classify as two-pass harvest systems all stands not fully harvested during the audit term. Following this, FMPM requirements for two-pass harvest systems must be followed on these stands.

Recommendation 7: The forest manager shall ensure that all harvested wood is made available to other users at the earliest available date.

**Recommendation 8:** 

- Before licencing new areas for harvest, the forest manager shall ensure that the existing silviculture liability on the Magpie Forest is being addressed through completion of the planned renewal treatments in accordance with the schedule.
- To ensure that new silviculture liability is not created, the forest manager shall develop and implement a renewal plan for each new harvest area, which favours preferred silviculture treatments. These treatments should occur as planned and should not be delayed

Recommendation 9: The forest manager shall ensure that the backlog of natural renewal area be declared in accordance with FMPM direction.

Recommendation 10: Operational direction in the Phase II FMP needs to be amended to restrict the use of larch trees as residual wildlife stems. Operational practices must follow this direction.



Recommendation 11: The forest manager shall ensure that all slash management activities be implemented on backlog areas recently declared naturally regenerating.

Recommendation 12: The District MNRF shall ensure that, when issues are being missed, complicit compliance inspectors are involved in joint meetings aimed at improving their skills.

Recommendation 13: The forest manager shall ensure that the FTG survey backlog is addressed expediently.

Recommendation 14: The forest manager shall ensure that areas deemed to be naturally renewing during the audit term are monitored prior to FTG assessment to identify the need for possible remedial treatments.

Recommendation 15: Wawa District MNRF shall ensure that a Silviculture Effectiveness Monitoring program of adequate size is implemented.

Recommendation 16: The Trends Analysis Report shall be revised to remove any discussion regarding the ongoing lack of Forest Renewal Trust funds beyond the surrender of the SFL in May 2013.

**Recommendations Directed to Corporate or Regional MNRF** 

Recommendation 1: Corporate MNRF shall provide Wawa District MNRF the resources needed to meet all management obligations on the Magpie Forest.

Recommendation 2: Corporate MNRF shall consider a means to reflect progress on a community-by-community basis for each of the six points included in the negotiations targets of Declaration Order MNR-75 condition 56.

Recommendation 17: For time-sensitive recommendations, Corporate MNRF shall act as soon as possible to ensure compliance with applicable timelines.

# **3** INTRODUCTION

## 3.1 AUDIT PROCESS

Independent Forest Audits (IFA) are a requirement of the Crown Forest Sustainability Act (S.O. 1994, c. 25) (CFSA). Every publicly-owned forest management unit in Ontario must be audited by an independent audit team at least once every five to seven years.

KBM Resources Group (KBM) conducted an IFA on the Magpie Forest (also identified as 'the Forest' in this report) for the five-year term April 1, 2011 to March 31, 2016<sup>1</sup>. The 2011-2016 audit assessed implementation of four years of the Phase I, 2009-2019 Forest Management Plan (FMP). This consisted of three regular years (2011-2012 through 2013-2014) and one extra year of implementation (2014-2015) added because of delay in completion of the Phase II FMP. The audit also assessed the planning and approval of the Phase II 2014-19 FMP and its

<sup>&</sup>lt;sup>1</sup> KBM also conducted the 2006-2011 IFA of the Magpie Forest.



first year of implementation (2015/16). The on-site portion of the audit occurred from June 13-17, 2016 inclusive, with document examination and interviews taking place prior to, during, and subsequent to the on-site period.

Following years of stable management by Dubreuil Forest Products Ltd. (DFPL), management of the Magpie Forest changed just prior to and during the term of the audit. The Forest was managed by DFPL until January, 2011 when it declared bankruptcy. Soon thereafter, BDO Canada Ltd. was appointed as trustee in bankruptcy for DFPL. During the 2012-2013 fiscal year the Forest was managed by Dubreuil Lumber Inc. on behalf of BDO. In May 2013, the licence was surrendered to the Ontario Ministry of Natural Resources and Forestry (MNRF). Since then, the Wawa District MNRF office has managed the Magpie Forest as a Crown unit. The MNRF was therefore the forest manager and principle auditee during this audit. Note that the term 'forest manager' has been used in many recommendations in this report. Considering the plans and interest in amalgamating the Magpie Forest with adjacent forest(s) to create an SFL, the audit team felt that this generic term was fitting.

IFAs are governed by eight guiding principles as described in the Independent Forest Audit Process and Protocol (IFAPP). Recommendations arise from audit team observations of material non-conformances and the identification of situations in which there is a significant lack of effectiveness in forest management activities. All recommendations made in this report are summarized in Table 1 in Section 2 and are detailed in full in Appendix 1. Reviews of the achievement of objectives and contractual obligations are summarized in Appendices 2 and 3, respectively.

More detailed information on the audit process, including the sampling intensity, is provided in Appendix 4. A list of acronyms is presented in Appendix 5. Audit team members and their qualifications are presented in Appendix 6. The Trend Analysis Report produced by MNRF for this audit is included in Appendix 7.

## **3.2 MANAGEMENT UNIT DESCRIPTION**

The following description of the Forest is based primarily on the material included in the Phase I, 2009-2019 FMP for the Magpie Forest. This information has been paraphrased as needed for this audit report.

The Magpie Forest is located in Ontario in an area northeast of Lake Superior approximately 250 km north of Sault Ste. Marie. The Magpie Forest lies, for the most part, in the Wawa District of the Northeast Region and is administered from the MNRF District Office in Wawa. A small portion in the southeast corner of the Forest is within the Chapleau District but this area is also administered by Wawa District.

The Magpie Forest is located entirely within the boundary of the old Franz Crown Management Unit, which was redefined on June 26, 1983 to include a few additional townships. The boundaries of the Forest are unchanged from those established in 1984, at the onset of the Forest Management Agreement between the MNRF and DFPL (formally Dubreuil Brother Limited).



The Forest is bounded on the west by the White River Forest and on the north by the Nagagami Forest, as well as two patented townships. The eastern edge the Forest abuts the Gorden Cosens Forest and Missinaibi Provincial Park; it is bounded on the south by the Martel Forest and four patent townships.

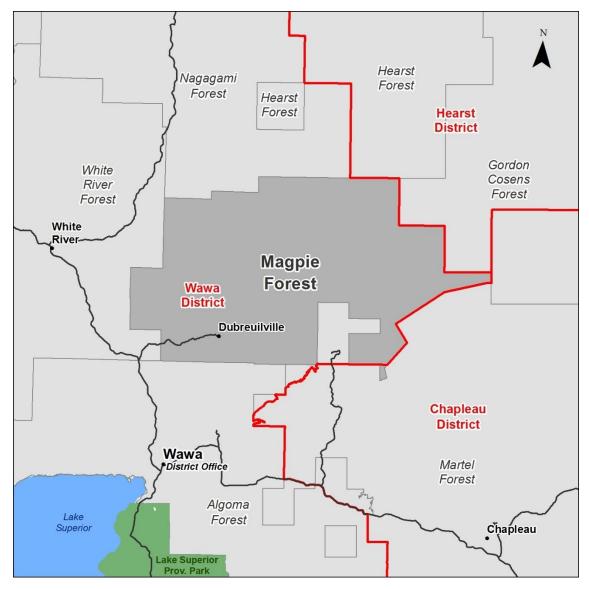


Figure 1. Magpie Forest Location

The only organized community within the boundary of the Forest is the Corporation of the Township of Dubreuilville. The towns of Wawa and White River are adjacent to the Forest.

A network of logging roads were originally maintained by DFPL but now MNRF provides access within the area. Secondary Highway 519 connects this network to Trans-Canada Highway 17. The southeast portion of the Forest is also accessible via Secondary Highway 651 to the community of Missanabie and the Renabie Road. Railway lines (Canadian Pacific Railway and



Algoma Central Railway, now owned by Canadian National) cross the Forest and intersect at Franz.

The lands within the Magpie Forest are primarily Crown lands; however, there are two patent (private) townships along the northern boundary of the Forest and several small holdings of patent land scattered throughout the Forest. The total managed Crown land is 390,152 ha of which 43,083 ha is not forested, 23, 903 ha is non-productive forest and 2,442 ha is protection forest. Of the Crown land 320,167 ha is production forest.

The topographic relief of the Forest is generally hilly with a gradation to a more gently rolling topography towards the eastern and northern portions of the Forest. Localized outwash deposits in the upper northern and furthest eastern extent of the Forest display relatively flat topography. Excessive slopes restrict harvesting and reforestation methods in localized areas.

The Magpie Forest falls within three major drainage systems - southern portions drain into the Superior basin of the Great Lakes watershed, while most of the northeastern and northwestern portions drain into the artic watershed via the Moose River basin and the Albany River basin, respectively.

There are approximately 41,983 ha of water on the Magpie Forest; this represents less than 10% of the total management unit area. There are approximately 3,305 lakes and ponds and uncounted miles of river habitat. There are 19 lakes partially or completely within the Magpie Forest designated as remote tourism lakes in the Crown Land Use Policy Atlas (CLUPA). These lakes cover 15,506 ha or 39% of the total area covered by lakes and ponds. The primary purpose of the designation is to reduce the impacts of access on fish and game populations and to preserve the remote character of these lakes. This is achieved through the adherence to the principles and operational prescriptions for forest operations including road location and road use restrictions prescribed in the CLUPA policy reports for specific land use areas.

About 50% of the Forest is within the Chapleau Crown Game Preserve. Non-traditional hunting and trapping have not been permitted in the Preserve since 1925. The area serves as a field laboratory for studies of wildlife habitat management and may provide a reserve supply of some species, such as black bear, for hunting and viewing opportunities beyond its boundary.

The Magpie Forest lies within the Boreal Forest Region of Canada, which is characterized by spruce, jack pine, trembling aspen, white birch and balsam fir trees and sporadically, cedar and larch in the lowlands. Occasionally, mainly along the southern extents, there are also Great Lakes-St. Lawrence tree species such as red maple and red and white pine mixed in with the boreal species.

There is a significant age-class imbalance in the current forest with a preponderance of mature and over-mature area and a significant lack of area in several other age classes, particularly the 41-60 year age class. The age class imbalance will create gaps in structural and functional forest condition with respect to specific forest structures, habitats, and wood supply in the future.



There are two Indigneous communities whose interests or traditional uses may be affected by forest management activities on the Mapgie Forest: Michipicoten First Nation and Missanabie Cree.

Michipicoten First Nation is a signatory of the 1850 Robinson-Superior Treaty and is a member of the Union of Ontario Indians, Lake Superior Region. Michipicoten First Nation has a reserve and a small community at Gros Cap Indian Reserve, located on the shore of Lake Superior approximately five kilometres southwest of Wawa on the Algoma Forest.

The ancestors of the Missanabie Cree settled in several areas within and adjacent to the Mapgie Forest including the areas currently known as Missanabie, Localsh, Franz, Peterbell, Matice, Oba, and Dalton. Missanabie Cree First Nation is part of the Treaty #9 area of Northern Ontario and is currently without a reserve; however, it is actively involved in a land claim process with both the federal and provincial governments. Part of its land entitlement claim falls on the Magpie Forest.

Up until the severe market downturn of 2007-08, the sawmills in Dubreuilville received most of the logs from the Magpie Forest. Chips from the sawmills were used in Marathon and Terrace Bay and a veneer mill in Hearst received poplar veneer logs. In 2006, Weyerhaeuser in Wawa also started to receive poplar from the Magpie Forest as a result of the closing of Neenah Paper in Terrace Bay but in 2007 Weyerhaeuser suspended the Wawa operations indefinitely.

Following the 2007-08 downturn, the wood fibre situation improved somewhat. The Terrace Bay mill re-opened as Terrace Bay Pulp Inc. (later re-named AV Terrace Bay) and is now using a limited amount of poplar. In addition, Olav Haavaldsrud Timber Company Ltd. (OHTCL), as a result of the Wood Supply Competition Process of 2011, was awarded a conditional wood supply offer for all of the annual spruce, pine and fir rights on the Magpie Forest. OHTCL was issued a Forest Resource Licence and conducted harvest operations on the Forest during 2013 and 2015. As of June 2016, OHTCL is in receivership and there are hopes for new ownership by August 2016.

Wawa District MNRF also issued a Forest Resource Licence (FRL) to Rentech (RTK WP Canada, ULC) in 2014-2015 but no harvesting has taken place. Rentech has had equipment challenges during its start-up but plans to be fully operational by the second half of 2016.

## **3.3 CURRENT ISSUES**

The IFAPP requires a review of high priority aspects (HPAs) of the auditees' systems/activities. The main aspect affecting the Magpie Forest during the audit term was the continued difficulty in marketing wood products. Although this subject is outside of the scope of this audit, its affects are discussed throughout this report, as applicable.

Through document review and interviews with MNRF staff the following were identified as HPAs and received specific focus during the audit:

• The 2006-2011 IFA had one critical recommendation – to make available funding to expediently address silviculture liabilities on the Magpie Forest.



- The Wawa Area LCC expressed general agreement with the Phase II FMP but was unable to unanimously support its Road Use Management section.
- Because road funding is linked to harvest levels, the extremely low level of harvest on the Magpie Forest resulted in reduced road funding and road conditions in varying states of disrepair.
- The Missanabie Cree First Nation made a land request during the audit term.

Findings related to these topics are discussed as appropriate throughout the audit report.

## **3.4 SUMMARY OF CONSULTATION AND INPUT TO AUDIT**

KBM used several different strategies to obtain input from the public during the audit process. The requirement to send out paper copies of letters and surveys has been eliminated from the 2016 IFAPP. KBM used email, newspaper advertisements and social media to advise stakeholders of the audit and to obtain input. KBM also prepared a presentation that was delivered to the LCC at their May 2016 meeting, about one month before the audit team on-site visit. A summary of the methods and input is provided in Appendix 4.

## **4 AUDIT FINDINGS**

## 4.1 COMMITMENT

The Magpie Forest SFL was surrendered in May 2013. It then reverted to a Crown forest management unit and as such, is managed and administered by the MNRF. The Magpie Forest is not certified by a third party (e.g. SFI, FSC); so a review of the organization (MNRF) policy statements (vision, mission, guiding principles and codes of management) was carried out. These statements are in place and have been approved by the Premier of Ontario.

The Province of Ontario has documented its commitment to sustainable forestry principally through the Crown Forest Sustainability Act (CFSA). MNRF, in turn, has documented policies and other guidance that establish its commitment to sustainable forestry and resource management, consistent with the requirements of the Act. These are communicated throughout MNRF and are promoted with resource users and the general public. Various posters throughout the MNRF Wawa District office display these values. MNRF maintains a public website where these commitments are available <a href="https://www.ontario.ca/page/forestry">https://www.ontario.ca/page/forestry</a> MNRF has indicated their commitment through these various documents, etc. Action toward meeting these commitments during the audit term by Corporate MNRF to support Wawa District was found lacking.

The audit team determined that, as a result of a number of factors, the Magpie Forest was not adequately staffed during the audit term. There was also a heavy workload during the audit term. Specific issues found during the audit term that were due to under-staffing and the lack of continuity caused by changing of responsibilities, etc. are listed below and are discussed as appropriate throughout this report.



- The silviculture liability identified in the 2006-2011 Magpie Forest IFA was not addressed and new liability was created during the audit term see Plan Implementation and Monitoring sections.
- Lack of compliance staff during most of audit term and compliance planning not completed see Monitoring section.
- The District Silviculture Effectiveness Monitoring program was inadequate see Monitoring section.

The main factors that contributed to the heavy District workload and under-staffing were:

- Wawa District MNRF was burdened with the surrender of three FMUs. The Big Pic, Black River and Magpie Forests became Crown units in July 2010, February 2013 and May 2013, respectively. In addition, the Pic River Ojibway Forest (previously managed by Nipigon District) and Black River Forest were amalgamated in April 2013 to form the Pic River Forest. In the Northeast Region only one other Crown Unit exists, the Temagami Forest in North Bay District. According to MNRF, these surrenders were unexpected and unprecedented and created significant workload for Wawa District. Management of Crown units is discussed in more detail later in this section.
- 2. During the audit period there were efforts by MNRF to amalgamate the Magpie Forest with one or more adjacent Forests to create an enhanced SFL (eSFL). Amalgamation of other management units within Wawa District was also planned. Regional MNRF staff noted that staffing levels were set with amalgamations and new tenure models in mind.
- 3. In September 2012, the Ontario Government announced that the MNRF would move forward with a plan to modernize its business and operate more efficiently; this process was termed 'Transformation'. Transformation lasted until early 2015 and affected many MNRF positions. Transformation also shifted the lead responsibility for forest management planning duties from the District level to the Regional level. In order to reorganize according to the new structure, applicable staff was put through a Provincial hiring process that lasted approximately one year, that resulted in most positions being filled by April, 2015. A business process improvement process was carried out as part of Transformation, which identified changes in roles and responsibilities between staff and various MNRF offices. These changes lead to much uncertainly between MNRF staff, which was still apparent during the conduct of the audit.

In addition, through Transformation, templates were developed that indicated staffing positions and levels for the various branches at MNRF. This resulted in a change to the number of staff positions allocated to the various MNRF offices and little allowance for staff variation based on District workload. The templated approach to allocate staff to Wawa District, without a refinement after implementation to reflect the heavy workload, has made this situation that much more challenging.

The audit team found that these factors affected the workload and the ability to hire and maintain adequate staff to effectively manage the Magpie Forest during the audit term. The contingent of permanent foresters at Wawa District decreased from four to two during the audit



term and the workload increased during this same time period as forests were surrendered and efforts were focussed on amalgamating forests.

Corporate MNRF did attempt to address the Wawa District staffing needs through several initiatives. A forester from Chapleau District was provided to aid with the development of the Phase II Magpie FMP. Support funding was provided on an annual basis for contract staff for the three Crown units that Wawa managed. Due to the issues that arose trying to recruit skilled temporary staff, Corporate MNRF created a new forester job description that allowed for the conditional under-filling of forester positions and they also provided a fixed-term contract forester intern position, which was recruited and filled by the District for approximately nine months. Unfortunately, these efforts did not result in securing the level of staff needed on the Magpie Forest.

As evidenced by the large burden of work in Wawa District, the failure to plan for the impending surrender of forests or to refine staffing once surrenders occurred, the planning to amalgamate forests in Wawa District, and the re-organization that occurred under Transformation, the Magpie Forest was under-staffed during the audit term and there was a failure to meet some important management requirements

# Recommendation 1: Corporate MNRF shall provide Wawa District MNRF the resources needed to meet all management obligations on the Magpie Forest.

As noted above, three FMUs were surrendered in the Wawa District between 2010 and 2013. Several other units have also been surrendered across Ontario since the forest sector downturn in 2008. Since market downturns are cyclical and the forest economy seems more volatile than ever, the audit team believes that the surrender of forest licences to the Crown is likely to continue.

The CFSA and related manuals, guides, etc. were developed as a model for the forest industry to hold the licences and for MNRF to oversee the operations. Although modifications have been made to try to make the CFSA process work for Crown management of units, the process is not well suited to this purpose.

The auditors have noted examples of this through carrying out several audits (including this audit of the Magpie Forest) and other forestry work in the province. Issues noted include: the difficulties MNRF has in procuring silviculture contracts through Shared Services, problems due to MNRF staff not having operational experience, and inertia due to ongoing higher-level initiatives such as planned amalgamations, etc.

The IFA process itself is not well suited to Crown units as there is no Sustainable Forest Licence (SFL) to hold the Crown accountable to. Again, based on the experiences of the auditors, most Crown units are managed with a short-term outlook. This is largely because MNRF spends much time developing enhanced SFLs, amalgamating forests, etc. in an effort, in part, to make sure units are not surrendered or those that have already surrendered, become part of a SFL.

Although not within the scope to create a recommendation in this individual audit, the auditors believe MNRF should look to create a process specifically designed to guide longer-term management, and audit the performance of, Crown forest management units in Ontario.



## 4.2 PUBLIC CONSULTATION AND ABORIGINAL INVOLVEMENT

#### 4.2.1 Public Consultation

The public consultation process for the plan and amendments were effective and met the requirements of the 2009 Forest Management Planning Manual (FMPM). Notices were posted by MNRF in a timely manner in area newspapers, informing the public of all three stages of the Phase II FMP planning process.

The Phase II FMP planning process included several opportunities for all stakeholders to consult with MNRF. A review of the public input table in Supplementary Documentation indicated that there were representatives from remote tourism, road access tourism, cottagers, fur industry, municipalities, anglers, hunters, ATV groups, snowmobilers, recreationalists, trappers, economic development committees, Provincial stakeholders, and Aboriginal groups. The majority of comments received by MNRF arrived via email or mailed letter.

Many comments were directed at road closure signs and other access management direction in the FMP – many of these people were Local Citizens Committee (LCC) members. These concerns related to access management triggered the Issue Resolution process (see next paragraph). The remaining comments were dealt with by MNRF on a case-by-case basis via email or phone call or through personal conversations. All comments were responded to in a timely manner and were summarized in the Supplementary Documentation for the Phase II FMP.

As a result of about 30 comments regarding a wide range of access planning direction in the draft Phase II FMP, an Issue Resolution meeting occurred in February, 2015. This was attended by representatives of the complainants, the District Manager and other MNRF staff. The District Manager released a decision letter in March 2015 that clarified the access planning direction to be used in the Phase II FMP. This decision was not satisfactory to the whole group so a request was made for Regional Director review of the issue. In May, 2015 the Regional Director provided a decision letter that upheld the District Manager decision with one exception – new access restriction signs were only to be installed on a case-by-case basis if there was a documented issue of unauthorized road use. Some members were still not pleased with the Regional Director decision as they believed there were too many road restriction signs on the Forest. They also wanted to be consulted when MNRF received information that sign absence was causing an issue. Specific LCC concerns are discussed in Section 4.2.2.

Issue Resolution did not result in an individual environmental assessment request (bump-up request) to the Phase II FMP. The audit team is satisfied that the Issue Resolution process as undertaken met requirements and resulted in a workable compromise to the access concerns brought forward by the public.

There were no amendments to the Phase II FMP during the term of the audit.

#### 4.2.2 LCC

The Wawa Area Local Citizens Committee (WALCC or LCC in this report) oversees both the Magpie and Algoma Forests. The LCC was formed in 2013 and its establishment met the 2009 FMPM requirements. Membership represented a range and balance of interests and was



regularly reviewed by MNRF who, when vacancies existed, made several attempts to recruit new members. The purposes of the LCC were incorporated into the LCC Terms of Reference. There were vacancies that were not filled, but based on discussions with some auditees, this was mainly due to lack of available persons. LCC membership has increased in the past year, up to 19 persons. In all, the meeting minutes provided to the audit team indicate a quorum (50%+1 of members) was reached in 16 of 19 meetings. Meetings were still held when quorum was not reached; the audit team felt this was an appropriate strategy to try to meet the planning schedule.

Through interviews with MNRF representatives, it was determined that the Wawa Area LCC effectively met its purpose during the audit term. However, the LCC was primarily focused on recreational and other specific values aspects of the Magpie Forest. The MNRF LCC representative made efforts to discuss forest management (AWS and AR feedback) on a more frequent basis.

It was observed that the LCC may lack balance with respect to both road-based and remoteaccess tourism operators. One reason given is that it is difficult for the remote tourism operators to meet with the LCC due to the constraints of location, busy tourist seasons and travel. There are also more user groups for road-based than remote tourism on the forest.

Interviews exposed significant tension between remote tourism camp operators and road-based tourism interests. This has caused conflict within the LCC due to dissenting opinions on land and road use. One result was that the LCC did not fully endorse the Phase II FMP, due to the inability to come to a consensus on the Road Use Management section of the plan (specifically the road signage issue). As a result of this disagreement, MNRF established a roads committee with LCC representation for the Phase II FMP, which re-evaluates road signage and is also consulted when a new road requires signage. This appears to be an effective plan for dealing with the dichotomy of roads-based interests on the Magpie Forest.

In an interview with one LCC member, it was pointed out that MNRF could have asked the LCC members to advise their various community connections to improve open house attendance. The audit team concurs with this worthwhile suggestion and encourages MNRF to act on it for future open houses.

#### 4.2.3 Aboriginal Involvement

Notifications for the Phase II FMP were sent by the District Manager to Chief and Councils of both Missanabie Cree First Nation and Michipichoten First Nation. The notifications included a description of the opportunities for their direct involvement in the forest management planning process and invited the communities to participate in development of the Phase II FMP for the Magpie Forest. In each case, the letter included explanation of the opportunity to develop an approach to consultation that would be effective for the community, to have a community representative sit as part of the planning team, involvement in the review and update of the Aboriginal Background Information Report, and the identification of Aboriginal values.

Both communities chose to have information centres and both communities were represented on the Phase II FMP planning team: Chief Jason Gauthier for Missanabie Cree First Nation and



Bill Swanson for Michipichoten First Nation. Michipicoten was also represented on the Local Citizens Committee.

Annual District Condition 34 (now Condition 56) Reports were found to be lacking in detail and many of the questions were left unanswered. Condition 56 reporting is now done through an online survey provider, giving a consistent approach to the reporting that provides opportunity for reporting on each of the six components of Condition 56 of Declaration Order MNR-75: Environmental Assessment Requirements for Forest Management on Crown Lands in Ontario (August 18, 2015). The reports were found to be general in nature, lacking sufficient detail about each individual Indigenous community for every question in the survey. The detail is considered important when reporting on Indigenous participation on a District basis. Completed surveys that were examined raised questions about what efforts were made to engage with and provide opportunities to the Indigenous communities that had not been included adequately in the survey.

The reports were found to be lacking in detail with significant gaps in providing information regarding negotiations with Aboriginal communities. These reports provide the base of a five-year reporting requirement to the MOECC and the public.

# Recommendation 2: Corporate MNRF shall consider a means to reflect progress on a community-by-community basis for each of the six points included in the negotiations targets of Declaration Order MNR-75 condition 56.

Declaration Order MNR-75 Condition 56 requires the MNRF District Manager to "...conduct negotiations at the local level with Aboriginal peoples whose communities are situated in a Management Unit, in order to identify and implement ways of achieving a more equal participation by Aboriginal peoples in the benefits provided through forest management planning." With the minimal forest operations that occurred on the Magpie Forest during the period under audit, opportunities typically associated with these activities were correspondingly low. During the audit term, the Planning of Operations for the Second Five-Year Term (i.e. Phase II FMP) was to be prepared for the Magpie Forest; this was seen by MNRF as an opportunity to explore potential benefits to Michipicoten First Nation.

MNRF worked with Michipicoten First Nation in the review and development of a business plan to create a company under the ownership of Michipicoten First Nation that could carry out forest management planning duties on the Magpie Forest. The result of this effort was a) the creation of Michipicoten First Nation Economic Development Corporation (MFNEDC) and b) an agreement between the Crown and MFNEDC for the performance of non-consulting services for 2 <sup>1</sup>/<sub>2</sub> years that included preparation of the Phase II FMP as per the FMPM; other forest management requirements as provided in the FMPM; and, Geographic Information System (GIS) services.

While a mutual interest to build forest management capacity within the First Nation was somewhat achieved, the relationship between Wawa District MNRF and Michipicoten First Nation has been strengthened as a result of this effort. In light of the lack of opportunities normally associated with forest operations and with insufficient human resource capacity within



the Wawa District MNRF to perform these duties, this effort is seen by the audit team as one that warrants a best practice.

Best Practice: Wawa District MNRF District Manager and staff are commended for supporting Michipicoten First Nation in the development of Michipicoten First Nation Economic Development Corporation and for contracting the company to perform forest management duties on the Magpie Forest.

## 4.3 FOREST MANAGEMENT PLANNING

#### 4.3.1 Planning Team

The planning team that developed the Phase II FMP consisted of 13 members, including: Regional and District MNRF staff, former Dubreuil Forest Products Inc. staff, a representative of Rentech, one LCC member and representatives of Michipicoten and Missanabie Cree First Nations. This was a sufficient representation of professionals/skills to address FMPM requirements.

#### 4.3.2 2014-19 Phase II FMP Development and Content

The Terms of Reference for the development of the Phase II FMP indicated several issues to be dealt with: a compressed plan production schedule and the consultation/training limitations this might pose, implementation of the Stand and Site Guide, possible reluctance by local First Nation communities to operations in the Chapleau Crown Game Preserve and Manitou Mountain area, and accessing non-traditional mills through linking roads in areas of remote tourism interest.

The Terms of Reference noted a delay of one year of the preparation of the Phase II FMP. This delay was mainly due to the MNRF efforts to help the Michipicoten First Nation gain capacity in forest management planning and related skills and development of a legal entity that could be hired under a sole source contract to complete some of the planning work (see section 4.2.3). The Purchase Order for the sole source contract was issued in early 2014 and plan development began in the summer of 2014.

The delay in plan preparation led to the Phase II FMP not being approved until June 9, 2015 – about 14 months late. This necessitated the development of the 2014-2015 Annual Work Schedule (AWS) according to direction and operating areas from the 2009-2019 FMP. The extra year extended the five-year operating term of the 2009-2019 FMP term to six years – 2009-2010 through 2014-2015.

The Phase II FMP was well written and includes direction to meet new guidelines in place since the 2009-19 FMP was developed such as the *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* (i.e Stand and Site Guide). Very detailed information was provided in the many Conditions on Regular Operations, the Silviculture Ground Rules (SGR) were updated based on findings from the 2011 Magpie Forest IFA and areas selected for operations took into account many new values and direction including First Nation and remote tourism outfitter concerns, nests, reserve sizes, view-shed analysis, etc.



Due to market conditions and shut-down of many local mills, most area from the 2009-2014 term had not been cut. Much of this uncut area was brought forward into the Phase II FMP. Great effort was expended to meet residual stand-level and planned clearcut requirements and to balance harvest by term, age class and forest unit. Due to surrender of the SFL and reclassification as a Crown unit, a new monitoring plan was also developed for the Phase II FMP, which designated MNRF as mainly responsible for monitoring operations with FRL operations needing to be monitored by their own certified inspectors.

#### 4.3.3 Silviculture

The plan text provides excellent rational for the total area to be renewed and the sequencing of treatments throughout the term. The Phase II FMP planned renewal intensity profile is nearly identical to the 2009-2019 Phase I FMP long-term management direction (LTMD), which has a planned renewal intensity profile of 50% Extensive (i.e. natural renewal), 5% Basic and 44% Intensive (active renewal). Of the total area planned for renewal during the Phase II term, 50% is Extensive, 3% Basic and 47% is Intensive.

The level of planned renewal operations in the Phase II FMP - 12,573 ha – is significantly lower than planned harvest area during the plan period – 21,982 ha. Harvest areas planned for active renewal take up to three years' post-harvest to fully implement all the silvicultural treatments prescribed in the Silviculture Ground Rules (SGRs). As such, the forecast Phase II renewal activities do not include all the the silvicultural treatments which are to occur for the last three years of planned harvest during the Phase II term.

The Phase II FMP renewal program also includes renewal treatments that have not yet occurred but were planned for areas harvested during the 2004-2009 planning term, along with details and timelines for conducting the treatments. This backlog of planned renewal treatments is deemed a 'silviculture liability' and this issue is discussed in the Commitment, Plan Implementation and other sections of this report.

A total of about 9.4M seedlings are forecast to be planted ( $\sim$ 1,596 seedlings/ha) during the Phase II term, which is consistent with the density targets in the SGRs. The plan text provides a summary of forecast seed requirements along with a summary of the current inventory. The current seed inventory for jack pine and white spruce (25M and 4.5M respectively) is sufficient to meet the renewal needs of the entire Phase II renewal program, while the current inventory of black spruce seed ( $\sim$ 3M) is sufficient to support three years of planned renewal. The plan text includes appropriate target cone collection volumes for jack pine and black spruce.

Renewal support and planned revenues and expenditures were found to be sufficient to meet planned levels of renewal and tending for the Phase II operations and were consistent with the renewal cost assumptions from the Phase I FMP modelling. The Phase II FMP also included a total of \$69,000 in forecasted funding from the Forestry Futures Trust (FFT) fund for the undertaking of renewal operations on areas of natural depletion. These forecasts were carried forward from the Phase I FMP; however, these expenditures have yet to be formally proposed to the Forestry Futures committee or approved. The FMPM stipulates that only approved FFT projects are to be included in FMP-20 Planned Expenditures.



#### Recommendation 3: During the preparation of the next FMP, only approved Forestry Futures Trust projects shall be included in the planned renewal expenditure.

The Phase II FMP SGRs had a few modifications when compared to the Phase I FMP:

- Tending is no longer permitted on hardwood leading forest units with Extensive intensity.
- SGRs now include a succession rate based on the modelled renewal intensity profiles and successional pathways used in SFMM.

These changes are deemed to be appropriate.

#### 4.3.4 Areas of Concern

The release of the *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* (i.e. the Stand and Site Guide) in 2010 resulted in a number of required changes to AOC prescriptions in the Phase II Magpie Forest FMP. The AOCs from the 2009 Phase I FMP were reviewed and updated where necessary to comply with the Stand and Site Guide.

#### 4.3.5 Annual Work Schedules

Annual Work Schedules (AWS) were prepared for each year of the audit term and met FMPM requirements. The AWSs were consistent with the 2009-2019 and 2014-2019 FMPs. Due to delay in development of the Phase II FMP the 2014-2015 AWS incorporated operations and direction from the 2009-2019 FMP.

### 4.4 PLAN ASSESSMENT AND IMPLEMENTATION

#### 4.4.1 Forest Resource Inventory

The current Magpie Forest Resource Inventory (FRI) is based on 1:20,000 scale, black and white aerial imagery from 1989. During the on-site review it was noted that some harvested areas, originally deemed to be poplar stands, were actually mixed conifer stands. This is a large discrepancy in forest type. A new enhanced FRI, based on multi-spectral digital imagery should be available for the Magpie Forest by the second half of 2016. This new inventory will be a significant upgrade to the current FRI, so no recommendation is made.

#### 4.4.2 Areas of Concern

AOCs were developed during the planning process to protect known values on the Magpie Forest. Examples of AOC implementation for forest operations were examined during the field audit. AOCs were marked on operational planning maps and on the ground by using flagging tape. AOCs examined by the audit team were consistent with the FMP/AWS and were effective in protecting the associated values.

#### 4.4.3 Harvest

Due to the continuing poor fibre markets and closure of many local fibre processing plants in the past ten years, there were few harvest operations during the audit term. About 600 ha was harvested through Forest Resource Licence (FRL) and fuelwood permits; this represents about 5% of the planned harvest.



OHTCL was the main FRL holder during the audit term. Under this licence about 380 ha were harvested in 2013 and another 200 ha in 2015. Four of these harvest sites were viewed during the on-site visit. Harvest boundaries were viewed to be intact, in-block roads were well constructed and unwanted soil disturbance was minimized on all sites. There was also no damage noted to residual trees.

There were high stumps noted at three of the four sites. This was also noted through MNRF compliance reporting. As these blocks were harvested mainly in November 2015 and there were no discernable environmental reasons or pattern to the high stumps, this was likely a result of operator haste or inexperience.

# Recommendation 4: The forest manager shall ensure that operators abide by wood utilization direction found in the Scaling Manual.

Wildlife tree retention prescription as described in the FMP were not followed on one of the cut blocks. A 27 ha cut had few trees retained for wildlife use: a large portion of the block had none. This did not follow Phase II FMP direction that a minimum of 25 trees per ha be retained.

# Recommendation 5: The forest manager shall ensure that operators abide by the FMP tree retention direction.

One site harvested in 2013 was viewed. The utilization of conifer trees was good but most hardwood trees had not been harvested. At the time of licencing there was a plan to utilize the hardwood but this did not materialize. In an effort to utilize the remaining hardwood, the FRL holder was re-issued these blocks with new areas in 2015. There was still no market for the hardwood at that time. In order to try to remove some of the hardwood, MNRF identified it in the 2015-2016 AWS and subsequent AWS for public fuelwood use along with another ~300ha on the Magpie Forest. There is little evidence that the large amount of hardwood standing on this site will be used as fuelwood.

The audit team believes this site and others like it should be deemed two-pass harvest. This would allow a defined period between the first removal – usually the conifer – and the second – the hardwood. If the second removal does not occur within the allowed time period, it must be dropped in bush or cut and brought to roadside or otherwise treated so that renewal of the stand can occur (usually chemical tending). Expediting regeneration on these stands is imperative.

#### Recommendation 6: The forest manager shall classify as two-pass harvest systems all stands not fully harvested during the audit term. Following this, FMPM requirements for two-pass harvest systems need to be followed on these stands.

The three blocks viewed that were harvested in November 2015 had high stumps as noted but otherwise had good utilization. Unfortunately, the operator in these blocks pulled out in December 2015 and most of the harvested wood was left at roadside and along skid trails. Stumpage and renewal fees have not been paid on this wood but the wood will be available for other users at the end of the AWS term.



# Recommendation 7: The forest manager shall make sure that all harvested wood is made available to other users at the earliest available date.

The curtailment of operations and eventual bankruptcy of DFPL in the previous audit term led to a silviculture liabilities on the Magpie Forest (as discussed throughout this report). This was deemed a critical recommendation in the 2011 Magpie Forest IFA. Due to the partial harvest of some stands and abandonment of operations that occurred during the 2011-2016 audit term, new silviculture liability was created on the Magpie. This is a concerning trend that cannot continue. The audit team feel that no further harvesting of new blocks should occur on the Magpie Forest until it can be demonstrated that the current silviculture liability is being dealt with through timely completion of planned treatments, and that renewal of each new block occurs within the normal timeframes, and that silviculture treatments are mainly those listed as preferred in the FMP.

#### **Recommendation 8:**

- Before licencing new areas for harvest, the forest manager shall ensure that the existing silviculture liability on the Magpie Forest is being addressed through completion of the planned renewal treatments in accordance with the schedule.
- To ensure that new silviculture liability is not created, the forest manager shall develop and implement a renewal plan for each new harvest area, which favours preferred silviculture treatments. These treatments should occur as planned and should not be delayed.

Note that this recommendation is closely tied to five other recommendations in this report that relate to the silviculture liability – Recommendation 1 in the Commitment section, Recommendations 9 and 11 in the Silviculture section below and Recommendations 13 and 14 in the Monitoring section.

#### 4.4.4 Silviculture

The implementation of renewal activities during the 2011-2016 audit period was assessed through on-site visits and document review to confirm compliance with the CFSA and the approved FMPs. During the audit term no active renewal operations were completed (i.e. site preparation, planting, seeding or tending). The lack of active renewal activities on the Forest during the 2011-2016 period was primarily due to lack of newly harvested area to treat since the curtailment of most harvesting operations in 2008. Renewal activities have also not occurred due to management difficulties that occurred when the SFL was surrendered to MNRF (this subject was discussed in the Commitment section and is further discussed below).

As noted in the Commitment and Forest Management Planning sections, silviculture liabilities exist on the Magpie Forest. The liabilities consist of areas that were harvested in the 2004-09 period that still require site preparation, planting/seeding and tending treatments. These areas were not treated during the previous IFA audit term due to a lack of accessible funds in the Forest Renewal Trust (FRT) fund (the Magpie Forest was still an SFL at the time and the FRT minimum balance of \$1.8M had to be maintained); this led to a critical recommendation in the 2011 IFA.



Since the surrender of the Magpie Forest SFL in May 2013, the mandatory FRT minimum balance (~\$1.8M) was no longer required; this opened up the fund for use by MNRF. As of March 31<sup>st</sup>, 2016 the FRT had an account total of over \$2.4M available for eligible silviculture work.

Despite the availability of renewal funding, limited renewal activities were completed during the audit term – only assessments occurred. MNRF cited several reasons for the lack of implemented renewal operations on the Forest. A lack of available staff was a key contributor to the underachievement of silviculture targets (this is discussed with a recommendation in the Commitment section). MNRF also noted that they were hopeful of signing a renewal agreement with an FRL holder. The tenuous FRL position during the audit term did not allow this to occur. MNRF also found the current service procurement process stipulated by Ontario Shared Services to be rather onerous, which hindered getting a contract in place to complete the outstanding work. Lastly, since the SFL was relinquished to the Crown there have been ongoing tenure discussions for the Magpie Forest with the preferred outcome of creating an eSFL in amalgamating with adjacent areas.

The Phase II FMP outlined planned treatments for the outstanding silviculture backlog areas, starting with 660 ha of chemical and mechanical site preparation in 2015, 525 ha of planting in 2016 and 111 ha of tending in 2017. These did not occur. In addition, new silviculture liability was created during the audit term - areas cut in 2013 and 2015 have not received active renewal treatments nor have they been declared naturally-renewing.

The silviculture liability was only partially addressed during the audit term through assessments and re-categorizing renewal intensity from Intensive to Extensive. In 2014, MNRF hired a former DFPL forester to reassess the 2004-2009 silviculture liability blocks and to assess the new 2013 harvest areas (a Forest Operation Prescription (FOP) was provided for these blocks). In total, 401ha of the 2004-2009 silviculture liability area was declared to be naturally-renewing. This consisted of reclassifying 350 ha that was originally destined to be actively renewed according to an Intensive treatment package to a natural (Extensive) prescription and an additional 51ha, which was originally prescribed an Extensive renewal and was now declared as naturally-renewing. The balance of the silviculture liability area ~618 ha, was not assessed due to a lack of field resources and access issues.

About 443 ha of the silviculture liability area was originally prescribed for natural renewal and is now up to almost ten years old. According to the Forest Information Manual (FIM), the declaration of natural renewal areas should be completed within one year of harvest depletions (with an allowance of up to two additional years should salvage harvest be considered – this was not the case).

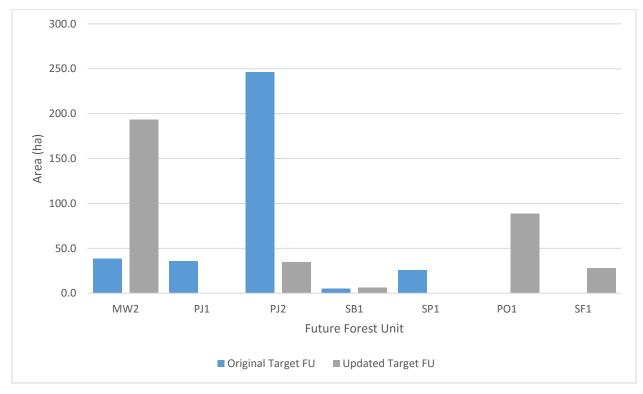
# Recommendation 9: The forest manager shall ensure that the backlog of natural renewal area be declared in accordance with FMPM direction.

Some of the blocks declared naturally-regenerating during the audit term were viewed during the on-site portion of the audit. All of these areas had been harvested during the 2004-2009 term. Regeneration was found to be sufficient to meet the minimum stocking standards of the Extensive SGRs. Two of the blocks viewed (blocks 04-46 & 565) were found to have patchy



conifer regeneration while hardwood stems had been heavily browsed by moose. These stands were originally conifer dominated and had been prescribed active renewal treatments to bring back this condition. With the change in designation to natural renewal, they are now tracking on an Extensive yield curve.

The long-term outlook for these stands is to a condition with less conifer than had been harvested and possibly poor quality hardwoods. Figure 2 indicates the change in projected future forest units. The significant drop in PJ1 and Pj2 and a marked increase in MW2, PO1 and SF1 future forest units is apparent.



#### Figure 2. Change in projected Forest Units in hectares

These developing stands are now predominantly hardwood-leading mixedwoods growing on site types which are ideally suited for conifer species, particularly jack pine. Hardwood leading stands are now largely comprised of 'off-site' poplar and birch which is typified by poor growth, form and high susceptibility to disease and decay. Although these areas currently may meet the minimum FTG stocking standard, continued monitoring of these areas is needed in order to flag any future need for silvicultural intervention. Recommendation 14 in section 4.6.2 addresses this concern.

Prolific natural seeding of larch was observed on some of the natural blocks and one FTG block viewed (e.g. block 04-101). It was noted on both upland and low land regenerating sites, where it was obvious from adjacent mature forest, that spruce and other species had once dominated but that larch had now fully taken over. This phenomenon has been termed 'larch creep' as a result of the seemingly steady increase of this species on the landscape and it has been noted by the audit team on several other management units, particularly in the Northeast



Region. This regional trend appears to be based on the relatively new requirement to leave mature trees standing in cutover areas for wildlife and other uses. Operators have been selecting less desirable trees to leave standing, such as larch. The Trend Analysis Report completed for this audit also identified the increase of larch presence on the Forest. This is discussed in the Achievement of Management Objectives and Sustainability section.

'Larch creep' is primarily due to large residual trees being left standing and acting as a ready seed source. Larch is an aggressive seeder and a few mature trees can convert a lowland black spruce site (SB1) into another conifer (OC1) site. In order to meet FMP objectives and targets, operational practices must be implemented to reduce the regeneration of larch where appropriate. Changes need to be made to the operational direction in the Phase II FMP and corresponding operational practices in order to alter this trend.

#### Recommendation 10: Operational direction in the Phase II FMP needs to be amended to restrict the use of larch trees as residual wildlife stems. Operational practices must follow this direction.

Unmanaged or partially-managed roadside slash was observed in all of the natural renewal areas viewed during the field audit. This was in the form of slash that had been piled but not burned and slash that had not been piled. These areas are identified in the silviculture liabilities summary; however, none of the planned slash management was implemented during the audit term. The addressing of these liabilities was a mandatory requirement of the previous IFA and a core element of the conditional license extension. Recommendation 8 is aimed at making sure the silviculture liability is dealt with and not increased. The audit team is concerned that slash management (piling or piling/burning) will be missed on these sites due to re-classification as natural renewal. Loss of productive land to slash should be minimized, so the following recommendation is made.

# Recommendation 11: The forest manager shall ensure that all slash management activities be implemented on backlog areas recently declared naturally regenerating.

## 4.5 SYSTEM SUPPORT

MNRF has a robust information management system in place that is current with legislation and regulations. These systems have evolved as computing, particularly use of the internet, has become mainstream and digital storage has increased. Cloud-based back-up is now also common.

Many of the components of this system, including awareness, training and education have been standardized through Regional or Provincial MNRF and are now stored electronically versus hard copy. Submitting Forest Information Manual (FIM) compliant information used to be difficult due to the technical nature and variety of the information requirements. As a result of years of practice, FIM requirements are now being met consistently for all digital submissions.



## 4.6 MONITORING

#### 4.6.1 Compliance

Compliance staffing and field monitoring has been a recurring issue on the Magpie Forest. The audit team for the 2001-2006 IFA found the MNRF field delivery of the compliance program to be sub-standard and recommended that the MNRF increase its compliance presence on the Forest. That led to dedicating a District compliance technician to the Magpie Forest and north portion of the Algoma Forest. The 2006-2011 Magpie IFA noted continued lack of field presence by MNRF and other compliance issues and made a recommendation to develop a proactive compliance monitoring system. Actions for this recommendation included setting out annually a compliance work plan, holding regular compliance meetings, inspecting operations based on a risk basis, and meeting reporting requirements and timelines.

There were still compliance staffing issues during this audit term. This was largely due to the staffing issue in Wawa District. Specific issues are discussed below.

Prior to the surrender of the SFL in May, 2013, compliance monitoring planning was completed by DFPL (as an agent of BDO under bankruptcy protection). The Compliance Plan in the 2009-2019 FMP and the annual plans in the AWSs outline compliance monitoring responsibilities, objectives and targets. Following SFL surrender, MNRF took on the responsibility of compliance planning. This consisted of describing the planned monitoring in each Magpie AWS, development of a Compliance Plan for the Phase II FMP and a District Compliance Plan for 2016-2017. Wawa MNRF also completed annual compliance work plans for the District forests. These documents meet requirements and outline MNRF compliance objectives. The plans also outline the requirement that certified inspectors complete Forest Operations Inspection Program (FOIP) reporting of FRL operations.

As discussed in the Commitment section, MNRF underwent a process called Transformation and Wawa District was heavily burdened with three surrendered SFLs during the audit term. This led to a period of flux earlier in the audit term when there was a shortage in compliance staffing through downsizing, staff leaving for other jobs and a hiring freeze. Completion of the template, which allowed two Integrated Resource Management Technicians and five Resource Management Technicians for each District, eventually led to having an adequate complement of Wawa District MNRF compliance staff in the final year or so of the audit term. Hiring occurred in 2014 (both IRM techs), in 2015 (two RMT positions) and 2016 (one RMT position) and there is still one RMT vacancy. In addition, the Forestry Technical Specialist position was filled in April 2015.

Due to the MNRF compliance staffing shortages during most of the audit term, some of the compliance reporting needs were not met. There were no District Compliance plans in effect during the audit term (one was developed for 2016-2017) and, other than some brief required text in the 2012-2013 and subsequent Annual Work Schedules, there was no Compliance Plan in force between the surrender of the SFL in May 2013 (the 10-year Compliance Plan from the 2009-2019 FMP became null and void at that time) and the approval of the Phase II FMP in June 2015.



In this audit it was found that, due to very few operations conducted during the audit term, MNRF were able to keep up with FOIP inspections on the Magpie Forest. Had a full complement of operations occurred, this would not have been the case and MNRF would not have been able to meet the bare minimum frequency of inspections. The surrender of three SFLs and the Transformation process are seen as the main reasons for the compliance staffing shortfall during the audit term. A recommendation is made in the Commitment section regarding ensuring adequate staffing on the Forest.

As noted above, there is still one vacancy for a RMT in the Wawa District. It is believed that once this position is filled, field staffing levels will be adequate to meet District requirements under full load.

Compliance inspections during the audit term were completed by MNRF staff and, for FRL holders, contract staff. The inspectors were certified and the FOIP reports completed were thorough and timely. MNRF completed 15 FOIP reports during the audit term and industry, 13. Eight of the 13 industry FOIPs were from a 2011-2012 review of crossings blocked by beavers on the Magpie Forest.

It was noted that MNRF found many operational issues that were not reported by the FRL inspectors. In 2013, MNRF found butting, leaving wood, unauthorized movement of wood and garbage on site. None of these issues were identified by the industry inspectors. In 2015, MNRF found wood piled on the road, high stumps, equipment and old culverts left on site. Industry inspectors did note the old culverts left on site. As discussed earlier in this report, in December 2015 operators abandoned the sites. As a result, the blocks were not closed and follow-up inspections were not conducted by the contracted inspectors. Therefore, there was no opportunity to review the operations and see the issues found by MNRF. Since the abandonment of the work, MNRF has emailed the FRL holder to get these issues addressed but as of the on-site visit by the audit team, there had been no replies.

# Recommendation 12: The District MNRF shall ensure that, when issues are being missed, complicit compliance inspectors are involved in joint meetings aimed at improving their skills.

Due mainly to the surrender of the SFL in 2013 and continued local mill issues that caused deferral of harvest of select tree species and abandonment of some operations, there were many pending operational issues on the Forest during the term of the audit. The majority of these issues related to the lack of upkeep of the roads and water crossing infrastructure as well as the abandonment of operations. In the winter and spring of 2016, MNRF dealt with many of these items. As of June 2016 there were still 12 pending issues on the Forest and MNRF was working diligently towards getting these resolved with so no recommendation is made.

One recommendation made in the 2006-2011 Magpie Forest IFA has not been addressed. Operators have not been made aware of the need to use unmerchantable trees as stringers (Recommendation 5). As there were few opportunities to harvest during the audit term and therefore few opportunities to increase awareness of this requirement, there is no new recommendation made in this audit. However, MNRF is reminded of the need to meet the action plan for this recommendation.



#### 4.6.2 Silviculture

In 2012 a total of 5,333 ha of older cutover areas were surveyed for free growing status using the aerial ocular method (i.e. visual assessment from a helicopter). The survey was completed by a former Dubreuil silviculture forester; MNRF did not participate. Approximately 3,988 ha of FTG survey area remains to be assessed. This backlog of survey area was identified in the silviculture liabilities summary.

# Recommendation 13: The forest manager shall ensure that the FTG survey backlog is addressed expediently.

FTG assessments completed during the audit period were found to be well done and completed in accordance with the Silvicultural Effectiveness Monitoring Manual for Ontario and FIM. Only a small portion of the area surveyed (164.8 ha) did not meet standards – mainly for height growth. These areas will be reassessed at a later date. Reported regeneration successmeeting minimum stocking, height and species requirements but not the intended forest unit - comprised 97% of the areas surveyed (5,099.5 ha). Reported silviculture success, a sub-set of regeneration success where minimum stocking and species requirements as well as the desired forest unit are met - comprised 30% of the areas surveyed (1,553.1 ha).

Forest	Forest Unit	FTG Results 2011-2016			Percent		
Forest Unit	Description	Silviculture Success	Regeneration Success	NSR	Silviculture Success	Regeneration Success	NSR
BW1M	Birch Poplar	29.4	33.4	25.0	50%	57%	43%
LC10C	Lowland Conifer- Other Conifer	0.0	5.0		0%	100%	0%
LC1SB	Lowland Conifer - Spruce Dominant	0.0	76.5	9.2	0%	89%	11%
MW1	Jack Pine Mixed	435.8	789.4		55%	100%	0%
MW2	Spruce Mixed	99.7	173.8	4.3	56%	98%	2%
PJ1	Jack Pine	266.3	419.1	18.2	61%	96%	4%
PJ2	Pine Spruce	92.3	1,407.6	13.6	6%	99%	1%
PO1	Poplar	192.5	503.9	43.0	35%	92%	8%
SB1	Black Spruce Lowland	210.4	829.2	10.9	25%	99%	1%
SF1	Spruce Fir	119.2	560.9	31.4	20%	95%	5%
SP1	Spruce Pine	107.5	300.8	9.3	35%	97%	3%
		1,553.1	5,099.5	164.8	30%	97%	3%

Table 2. Magpie Forest 2011-2016 FTG summary table.

While a reported Silviculture Success rate of 30% is low, this statistic is based on a single static stand meeting a specific forest unit target. This reporting metric does not properly align with the forest modelling constraints which will account for several potential FU outcomes based on the post renewal succession rules. Additionally, several of the reported silviculture failures are for stands which have overachieved the targeted FU or have missed reaching the target FU by a small stand component percentage. A better assessment of renewal performance can be



achieved by looking at FU area totals for the disturbance FU, target FU and the reported FTG FU. Figure 3 provides a visual representation of the FU transitions that have occurred on the FTG areas surveyed.

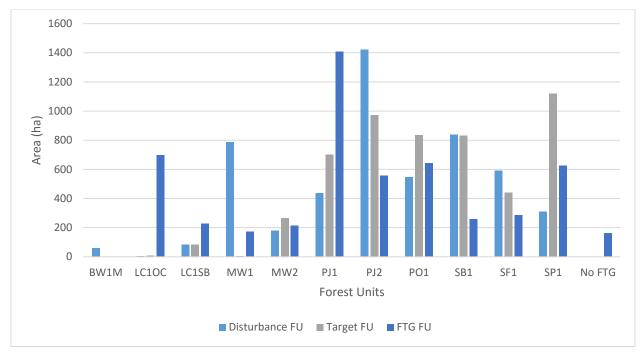


Figure 3. Forest Unit transitions on the FTG area surveyed

Key trends include:

- Pj1 FU targets were overachieved while Pj2 targets were underachieved. Nearly all of the Pj2 areas deemed as not being a silviculture success had actually moved to a Pj1 FU.
- Sp1 FU targets were underachieved by 44%. These areas are primarily moving towards jack pine and other upland conifer FUs.
- LC1OC & LC1Sb FTG FUs are overachieving targeted area by 10,688%. These are largely comprised of black spruce lowland stands becoming other conifer stands through the increase in abundance of larch. 'Larch creep' is discussed with a recommendation in the Plan Implementation section.
- SF1 silviculture failures are mostly linked to extensive SGRs of which 67% are moving towards larch-leading upland stands. This issue was also discussed in the Plan Implementation section.
- Some PO1 stands are moving to MW1 and MW2 FUs. Pre-harvest, many of these stands were mixed so they are reverting to this condition.

Overall FU transitional trends are showing that intensively-treated stands are moving towards desirable conifer leading stands, whereas extensively-treated areas are more variable. With the exception of the increase of larch in some regenerating stands, the FTG results submitted during the audit period are consistent with modelling assumptions in the Phase I FMP. A



recommendation addressing operational practices which contribute to 'larch creep' on the forest is found in the Plan Implementation section.

As discussed in Section 4.4.4, the audit team believes that some of the area declared to be naturally renewing may not meet minimum SGR targets and should be monitored prior to FTG surveys.

# Recommendation 14: The forest manager shall ensure that areas deemed to be naturally renewing during the audit term are monitored prior to FTG assessment to identify the need for possible remedial treatments.

During the audit period the MNRF implemented a partial SEM program on the Magpie Forest in 2012, 2014 and 2015. Silviculture monitoring activities were solely focused on Core task 1 which involves a requisite 10% intensive ground sampling of company AR FTG submissions. During the audit term a total of 332 ha were surveyed by MNRF staff which represents a 2.7% audit sample of the 11,994 ha of FTG area submitted by the company.

A formal spreadsheet was compiled in 2012 and 2014 comparing the AR submissions and the results of the MNRF ground surveys. A formal summary district SEM report was completed for the 2014 program. The 2015 SEM program was significantly underachieved with only 5% (26 ha) of the targeted areas surveyed during the season. None of the 2015 District SEM data was compiled into a summary spreadsheet nor was a formal SEM report completed for the 2015 SEM program.

The summarized survey data for 2012 revealed limited variance between company and MNRF FTG calls. The 2014 report did identify some discrepancies, however, given the minimal sample size (61 ha) these observation bear little weight. The report does highlight a need to meet the Core 1 Task data collection targets.

# Recommendation 15: Wawa District MNRF shall ensure that a Silviculture Effectiveness Monitoring program of adequate size is implemented.

#### 4.6.3 Annual Reporting

Annual reporting, including the electronic shape files received to determine sample sites, reflected field operations viewed by the audit team during the on-site visit. MNRF reviewed annual report submissions and provided written comments. The reports were well written and met requirements.

As noted throughout this report, there were very few operations during the audit term and this was clearly identified in the annual reports. Progress towards and deviation from FMP targets was discussed as appropriate. Continuing poor markets are forecasted to have implications on meeting those objectives/targets related to area harvested.



### 4.7 ACHIEVEMENT OF MANAGEMENT OBJECTIVES AND SUSTAINABILITY

#### 4.7.1 Achievement of Management Objectives – Year-Ten Annual Report

A Year-Ten Annual Report is not due on the Magpie Forest until 2018-2019. As a result, a Trend Analysis Report (TAR) was developed to support the audit. The TAR covers two five-year terms: 1999-2004 and 2004-2009, a six-year term - 2009-2015 (one year added due to the delay in development and approval of the Phase II FMP) – and, when applicable and information was available, the first operational year of the Phase II FMP – 2015-2016. Note that the 2015-2016 Annual Report is not due until the fall of 2016, so some information was not available for the TAR.

The TAR was well written and notes that the significant trends over time are mainly all due to the deep, protracted industry downturn. Information presented in the TAR meets most IFAPP and FMPM requirements and is consistent with the majority of the findings of the audit.

Three specific issues in the TAR were noted:

- There was just over a month delay in receipt of the final TAR it was due by the preaudit meeting of May 2<sup>nd</sup>, 2016 and a draft version was sent on June 8<sup>th</sup> (final on June 10<sup>th</sup>).
- The final version did not include a discussion of the progress made in implementing the actions taken as a result of the 2011 IFA.
- The report often cited a lack of Forest Renewal Trust funds as a reason for not completing needed silviculture or regeneration assessments.

The delay in receipt of the TAR did not cause undo hardship to the audit team and the TAR was later amended to include the missing information, so no recommendation is made for these issues. However, the discussions related to lack of Forest Renewal Trust Funding in the final version were not correct. There is currently about \$2.4M available for applicable silviculture treatments in the Magpie Forest Renewal Trust account and most of this has been available since the surrender of the SFL in May 2013.

# Recommendation 16: The Trends Analysis Report shall be revised to remove any discussion regarding the ongoing lack of Forest Renewal Trust funds beyond the surrender of the SFL in May 2013.

It should be noted that the final version was revised in advance of completion of this audit report to remove the references to lack of FRT funds. This revised version has been appended to this report (see Appendix 7).

When compared to the available individual annual report submissions that it summarizes, the TAR is accurate and complete. There are good discussions of the forest industry downturn, changes in responsibility on the Magpie Forest, and forest unit description changes through time.

The issue of very limited operations during the recent terms is a recurring theme of the TAR, as it should be. The planned annual harvest area varied from about 2,800ha (1999-2004) to about 2,400ha (2004-2009) and over 2,500ha in the 2009-2014 term (a 16% maximum variance).



This is compared to an actual annual harvest area of about 2,100ha (1999-04), under 1,000ha (2004-2009) and less than 100ha in the 2009-2014 term. Similar deep, downward trends are shown for planned harvest volume and silviculture treatments.

The severe under-achievement of planned operations effects many of the planned objectives for the Forest such as forest disturbance patch sizes, planned harvest area/volume, planned silviculture, wildlife habitat for species that prefer young/disturbed forest, etc. In short, with little harvest, there is little movement towards those objectives/targets linked to young forest.

Over a term of five to ten years it is felt that this trend should not have a lasting effect on the long-term ability to achieve planned objectives or sustainability. However, if this trend drags on, there will likely be significant consequences:

- some stands will become decadent and will not be economically operable;
- decadent areas may become prone to large, uncontrollable forest fire;
- there may be a decrease in wildlife that prefer young forest conditions;
- there will likely be further erosion of the skilled forest workforce; and
- there will be an inability to meet patch size targets and other modeling targets, etc.

These items are further discussed in the Forest Sustainability section below.

Area regenerated is shown to be far above area harvested over the 1999-2015 term – about 44k ha versus 17k ha, respectively. The overage is due to much of the regeneration area surveyed being harvested prior to 1999 and the severe, persistent market downturn that started around 2008. Regeneration surveys completed are shown to keep pace with planned until the most recent years. Lack of Forest Renewal trust funding was originally cited, but as noted earlier, this was incorrect and the TAR was revised accordingly. The Monitoring section includes a recommendation that outstanding FTG surveys be completed.

Table AR-13 in the TAR provides a summary of regeneration and silviculture success for FTG survey areas from 2009-2015. A total of 10,315 ha were surveyed of which 98% were found to meet the minimum regeneration standard. Of the areas found to be FTG, 32% achieved the targeted forest unit while the remainder transitioned to other forest units. Transitional trends described in the TAR are very similar to those explained in Section 4.6.2 of the audit report. The TAR shows that targeted conifer forest units are meeting overall area targets with the exception of lowland forest units, which are showing a significant trend from black spruce (SB1) to larch (LC1). This is correctly attributed in the TAR to larch creep (discussed in the Plan Implementation section of the audit report). Hardwood forest units are underachieving overall area targets by ~44% with a primary shift to mixedwood forest units.

The Phase II FMP did not require an adjustment to modeling assumptions but some suggestions are provided for the next FMP. Most of these are considered to be good suggestions but one is not. The suggestion that modeling be updated to reflect the increase of larch on the Forest should not occur. Instead, a recommendation is made in this audit report in the Plan Implementation section that larch is dealt with operationally to assure existing FMP objectives/targets can be met.



Appendix 2 provides a table that summarizes the audit team assessment of progress towards achievement of the 2009-2019 FMP objectives. This assessment took into account the TAR (text and Table AR-14), FMPM requirements, and other evidence gained during conduct of the audit. In general, most objectives have been partially achieved due to the very low level of operations during the past eight or so years as well as the delay in dealing with the silviculture liability and selection of less intensive treatments on some of these stands.

Table AR-14 in the TAR provides an assessment of achievement of the 2009-2019 FMP objectives up to the end of the audit term. The TAR assessments of achievement objective in AR-14 are well thought out. The current forest condition is not limiting objective achievement. Rather, the lack of mills/markets is the main issue. If/when markets exist, the Magpie Forest is available to meet demands. Balancing of multiple varying objectives has been a major consideration in all FMPs developed in Ontario under the CFSA. This balancing of objectives/finding compromises, places limits on how quickly or completely some plan objectives can be met. The 2009-2019 Magpie FMP found a compromise position for many objectives so that over the long-term, they can be met.

The audit team concurs with the interim TAR assessment of achievement of the 2009-2019 FMP objectives but two key considerations have been missed:

- The continued silviculture liability on the Forest may have an effect on the full achievement of some plan objectives. The delay in treatments and selection of less intensive silviculture treatments on some of the silviculture liability stands may delay or not allow for the full achievement of forest composition and abundance, healthy forest ecosystems and forest renewal objectives. It should be noted that the size of the area is relatively small and that sustainability will not be compromised (discussed in the Sustainability section).
- The notable increase in abundance of larch on some forest types may also make it difficult to meet components of the forest composition objective if this trend continues. If larch is allowed to keep increasing on the landscape over a long period, spruce wood supply may also be affected.

The preceding being identified in this IFA Report is felt to be sufficient coverage for these issues so no recommendation is made to further revise the TAR.

As a result of audit review comments of the first version of the TAR, it was updated for July 2016 to include a good discussion of the implementation of the 2006-2011 IFA Action Plan. This included information from the Status Report for each Recommendation as well as an update of the status for 2016. For the main recommendation (#10) in the 2006-2011 IFA - Corporate MNRF must work with the Wawa District and Dubreuil Forest Products Ltd. (DFPL) to find a way to fund the outstanding silviculture treatments. Once funding is made available, DFPL must expediently address the silviculture liabilities on the Magpie Forest – the following update was provided:

"The MNRF Wawa District reviewed the Silvicultural Obligation Report and conducted field assessments on road accessible silviculture liability areas during the 2014-2015 fiscal year. As a



result, 401 hectares of natural regeneration was reported in the 2014-2015 Magpie Forest Annual Report and further area was identified as requiring free to grow assessment.

To-date, limited harvest operations have occurred on the forest and a Renewal and Maintenance Agreement with an FRL holder has not been arranged. The MNRF is currently pursuing other means of obtaining a Service Provider to procure and oversee renewal and maintenance activities on the outstanding silviculture liabilities on the Forest."

The audit team concurs with this update. In addition, the delay in fully dealing with the silviculture liability from the 2006-2011 audit term, the change in silviculture intensity for some of the area and the addition to the silviculture liability in the 2011-2016 term was fully discussed in the Commitment, Plan Implementation and Monitoring sections of this audit report

#### 4.7.2 Forest Sustainability

The audit team considered a wide range of documentation (key was the Trend Analysis Report), interviews with many personnel and on-site field observations of a sample of operations conducted during the audit term. The on-site visit also included helicopter surveillance that covered a large portion of the Forest (Appendix 4 provides a thorough review of the audit process).

This audit covered the development of the Phase II Magpie FMP. The next FMP for the Magpie Forest is scheduled to commence on April 1st, 2019. The findings in the TAR and this IFA will be available for the development of that FMP for the Magpie Forest or, should it happen, the amalgamated forest.

The TAR provides appropriate conclusions/recommendations and a fair assessment of sustainability. As discussed throughout the TAR, the main issue on the Magpie Forest during the term of the audit was the continued under-harvest and the ramifications of that situation. This issue is exclusively a market-based issue that cannot be controlled by forest managers.

Another issue identified in the TAR and fleshed out in this IFA report is the carrying forward of silviculture liabilities on the Forest. This issue was identified in the 2006-2011 Magpie Forest IFA with a conditional recommendation of licence extension based on completing the planned silviculture activities by September 15, 2014. The licence extension portion of this recommendation became pointless when the SFL was surrendered in May 2013 but the responsibility to complete the actions developed for this recommendation was then transferred to the Crown (MNRF). This recommendation was only partially met by MNRF through survey of a portion of the areas and re-classification of most of these areas to less intensive yield curves (i.e. from active renewal treatments to natural renewal – this is discussed in the Plan Implementation – Silviculture section).

The audit team found that Corporate MNRF did not adequately support the Wawa District office during the audit term. As discussed in the Commitment and other applicable sections of this audit report, this was the main reason for not fulfilling the main component of this recommendation – completion of the actual silviculture treatments. In addition, new silviculture liability was created during the audit term as no silviculture occurred on the areas harvested.



As stated in the Achievement of Management Objectives section, the relative lack of harvest operations, the significant increase of larch, the delay in silviculture treatments and selection of less intensive silviculture treatments may delay or not allow for the full achievement of forest composition and abundance, healthy forest ecosystems and forest renewal objectives. Specifically, some stands may become inoperable, some may become more prone to large-scale natural replacement events (i.e. insect, blowdown, fire), spruce fibre may become more scarce, there will be a decline in young forest and possibly wildlife species that prefer young forest condition, there will be an inability to meet patch size and some other modeling targets and there may be further reduction of the local skilled forest workforce. If these trends continue, the significance of their impact will increase. This should be a consideration in the development of the next 10-Year FMP for the Magpie or amalgamated forest.

The audit team believes that, because the silviculture liability area is currently limited in size, forest sustainability, as assessed through the IFAPP, will not be compromised. However, the current silviculture liability does need to be dealt with and not increased so that management objectives can be fully met. A few recommendations made in this audit have this objective in mind (Recommendations 8, 11 and 13).

Sustainability encompasses more than just the environment. In this case, the management team available for the Magpie Forest could not meet its management obligations during the audit term and was therefore not sustainable. This is further discussed in the Conclusions and Final Recommendation section.

## 4.8 CONTRACTUAL OBLIGATIONS

Although not a SFL holder, MNRF still has legal obligations for forest management on the Magpie Forest. Once the SFL was surrendered in May 2013, MNRF assumed all management responsibilities. As discussed, based on the heavy workload during the audit term from three surrendered SFLs and limits imposed due to planned amalgamations and the District template, the audit team believes that Wawa District was not adequately staffed in order to meet its forest management obligations on the Magpie Forest.

Other specific obligations include timely production of the Action Plan and Status Report for the 2006-2011 IFA. The final audit report was received on May 20, 2012 and the Action Plan was developed by late July, 2012 - within the two-month allowance. The Status Report was over two months late – the Action plan was approved on November 2, 2012 and Status Report due two years later but was approved in January, 2015. This is not considered a material delay in reporting and no recommendation is made.

Regional/Corporate level recommendations in IFAs are now dealt with annually in one Provincial Action Plan (PAP) and one Provincial Status Report (PSR). These reports deal with the recommendations directed at Regional/Corporate MNRF in all the IFAs from a single year. Timing for these reports is based on approval of the final IFA report for the calendar year. In the case of the 2006-2011 IFAs, the Lac Seul IFA was approved on November 12, 2012 (about six months after the Magpie IFA). The Provincial Action Plan and Status Report met submission



timelines – the PAP was submitted within two months of the Lac Seul IFA and approved in April, 2013 while the PSR was submitted in March, 2015 and approved in July, 2015.

The audit team agrees that the PAP and PSR documents provide a concise package for the annual IFAs completed but find the process to be inflexible and the actions not as timely as they should be for time-sensitive recommendations. For example, the key recommendation from the 2006-2011 Magpie IFA (#10) was directed mainly at Corporate MNRF with a deadline and the actions developed should have been available for implementation as soon as possible or at least with the other actions developed for that IFA. Delaying this response by almost one-half year while waiting on another IFA almost ensured that the timelines associated with the recommendation could not be met. Another example is Recommendation #1 in this report. The actions for this recommendation should be developed as soon as possible so that staffing for the Magpie Forest can be addressed. Waiting to deliver actions to Corporate recommendations seems counter-intuitive and raises some questions: why should all IFAs be delayed by one? What happens if one is delayed by even longer? What happens if deadlines set for a recommendations aimed at Corporate MNRF need to be developed as soon as possible and be responsive to applicable timelines.

# Recommendation 17: For time-sensitive recommendations, Corporate MNRF shall act as soon as possible to ensure compliance with applicable timelines.

The audit team determined that most of the recommendations from the previous audit had been effectively implemented. The 2009-2019 FMP was amended to reflect several of the recommendations made in the 2006-2011 IFA and work is ongoing or was not needed on several other fronts due to the minimal operations that have occurred. There are a few exceptions:

- operators have not been made aware of the need to use unmerchantable trees as stringers (Recommendation 5).
- the silviculture liability was not dealt with (Recommendation 10).
- MNRF missed the Status Report deadline by about two months. This was also a finding in the 2006-2011 IFA (Recommendation 11).

These items have been identified as appropriate in the audit report and a new recommendation(s) made when necessary.

### 4.9 CONCLUSIONS AND FINAL RECOMMENDATION

Depressed markets have continued from the last audit term into this audit term. Local market issues have persisted as mills have struggled to re-open or continue to exist. During the audit term few harvest operations, no silviculture treatments and not all required surveys were completed. The Magpie Forest SFL was surrendered to MNRF in May 2013 and they had difficulty meeting management commitments.

Seventeen recommendations are made in this audit report to improve forest management on the Magpie Forest. The recommendations, by guiding principle, are:



- Commitment Recommendation 1
- Public Consultation and Aboriginal Involvement Recommendation 2
- Forest Management Planning Recommendation 3
- Plan Implementation Recommendations 4 through 11
- Monitoring Recommendations 12 through 15
- Achievement of Management Objectives and Sustainability Recommendation 16
- Contractual Obligations Recommendation 17

The MNRF management team available for the Magpie Forest could not meet the management obligations during the audit term and this situation is not sustainable. Specifically, there were not enough forest managers for the number of management units in the Wawa District and there were shortfalls in compliance staff during most of the audit term.

Thus, the audit team concludes that management of the Magpie Forest Management Unit was not in compliance with the legislation, regulations and policies that were in effect during the term covered by the audit, and the MNRF did not fully meet its legal obligations. Forest sustainability is not being achieved, as assessed through the Independent Forest Audit Process and Protocol. The audit team identifies the following reason for this assessment:

## The lack of Corporate MNRF support for the Wawa District MNRF in meeting its management obligations on the Magpie Forest.



### **APPENDIX 1 – RECOMMENDATIONS/BEST PRACTICE**

#### Independent Forest Audit – Record of Finding

Recommendation # 1

#### Principle: PRINCIPLE 1 – COMMITMENT

**Criterion:** To determine whether the organization is committed to sustainable forest management as evidenced by its adherence to applicable legislation and policies and whether the commitment to SFM has been articulated in its corporate policy.

**Procedure(s)**: Review the organization's policy statements, including whether it is reflected in the daily operations of the unit and its employees

#### Background Information and Summary of Evidence:

The audit team found that MNRF indicated their commitment to sustainable forest management though the CFSA, various policy documents, etc. Actual commitment during the audit term by Corporate MNRF to the Wawa District was found wanting.

The audit team determined that, as a result of a number of factors, the Magpie Forest was not adequately staffed during the audit term. In addition, the District had a very large workload.

The main factors that contributed to the District workload and under-staffing were:

- 1. Wawa District MNRF was burdened with the surrender of three FMUs. The Big Pic, Black River and Magpie Forests became Crown units in July 2010, February 2013 and May 2013, respectively. In addition, the Pic River Ojibway Forest (previously managed by Nipigon District) and Black River Forest were amalgamated in April 2013 to form the Pic River Forest.
- 2. During the audit period there were efforts by MNRF to amalgamate the Magpie Forest with one or more adjacent Forests to create an enhanced SFL (eSFL). Amalgamation of other management units within Wawa District was also planned. Regional MNRF staff noted that staffing levels were set with amalgamations and new tenure models in mind.
- In September 2012, the Ontario Government announced that the MNRF would move forward with a plan to modernize its business and operate more efficiently; this process was termed 'Transformation'. Transformation lasted until early 2015, it affected many MNRF positions and set District staffing levels.

Specific issues found during the audit term that were due to under-staffing and the lack of continuity caused by changing of responsibilities, etc. are listed below and are discussed as appropriate throughout this report.

• The silviculture liability identified in the 2006-2011 Magpie Forest IFA was not dealt with and new liability was created during the audit term – see Plan Implementation and Monitoring sections.



- Lack of compliance staff during most of audit term and some compliance planning requirements – see Monitoring section.
- The District Silviculture Effectiveness Monitoring program was inadequate see Monitoring section.

#### Discussion:

Each of the three factors summarized above that led to the District workload and understaffing are discussed below.

<u>Surrenders</u> - As noted, Wawa District was burdened with the surrender of three FMUs during or shortly before to the audit term. By comparison, in the Northeast Region, only one other Crown Unit exists, the Temagami Forest in North Bay District. According to MNRF, these surrenders were unexpected and unprecedented. The audit team agrees that the sector downturn (that led to business bankruptcies and eventual surrender of forest resource licences) was unprecedented in recent history. We do believe however, that MNRF should have expected much of what eventually occurred i.e. the surrender of the FMUs. The market downturn in 2008 was huge and had an almost immediate negative effect on virtually the entire forest industry sector across Canada. Local harvesting was largely curtailed starting in late 2008 and there was no significant market improvement for years. In addition, many of the forest industry companies in the area were inter-related (i.e. part of the Buchanan group of companies).

As discussed in the Commitment section, several other units have also been surrendered across Ontario since the forest sector downturn in 2008. Since market downturns are cyclical and the world economy seems more volatile than ever, the surrender of forest licences to the Crown are likely to keep occurring into the future. This topic is discussed further in the Commitment section.

<u>Amalgamations</u> - According to several MNRF staff, there were considerable efforts undertaken during the audit term at the District and Region levels aimed at amalgamating several of the local FMUs including the Magpie. Regional MNRF staff noted that District staffing levels were set with amalgamations and new tenure models in mind. Based on interviews, the audit team believes that amalgamation may eventually occur and this would lead to less FMUs in Wawa District but this is not certain. It is also of no consequence to the audit term since amalgamation did not occur.

Following the movement of one Wawa District forester to MNRF Forest Industry Branch in 2011 and the retirement of another forester in 2013, the four permanent management foresters in Wawa District were reduced to two. Approval was not given to replace the departing foresters so there were only two permanent management foresters available within Wawa District for the five management units (three of which were Crown units for a portion of or all of the audit term).

<u>Transformation</u> – In September 2012, the Ontario Government announced that the MNRF would move forward with a plan to modernize its business and operate more efficiently. This process was termed 'Transformation' and its purpose was to review operations to ensure that



the MNRF focus be on natural resource management. Through Transformation and other changes, the Government estimated the elimination of about 28 full-time and 102 seasonal positions; saving the Ministry about \$7.1M annually<sup>2</sup>.

The first year of Transformation, 2012-2013, focused on identifying core tasks and responsibilities for the various positions within MNRF in order to find the needed efficiencies. Starting in the fall of 2013, Business Process Improvement (BPI) statements were created to clarify specific task responsibility by position. The next step in this process was to develop series of templates that indicated staffing positions and levels for the various branches at MNRF. At the District level, the template consists of organizing the MNRF into two branches - Resources Operations and Resources Management. Resources Management contains the Foresters and other staff responsible for management of the District management units including on-the-ground compliance, whereas the Resources Operations staff are responsible for setting compliance direction and for permitting. The BPI process was completed in January 2015.

The importance of the District template to this audit is that each District had to follow it and there was little allowance for variation in District workload. This means that each District, regardless of actual area, number of forest management units, presence/absence of Crown units, etc. was to be essentially equally staffed. As noted above, Wawa District had a large workload due to having three of the five FMUs surrender and their efforts in aiding the amalgamation processes. While the audit team found the staff complement of most positions to be adequate, the template only allows for two permanent management foresters (possibly three if there is an Area MNRF office within the District – this was not the case in the Wawa District, which saw the closure of the Manitouwadge Area office through Transformation). In addition, as noted, there was a reluctance to hire permanent staff in the advent of planned amalgamations.

The table below indicates, for the Northeast Region, the forest management unit responsibility by MNRF District and the permanent management forester positions allocated. All the Northeast Region Districts have either one or two FMUs to administer, except Wawa District which has five FMUs. A review of the Northwest and Southern MNRF Regions indicates a similar trend of one to two forests with two to three management foresters. As noted earlier, there are management unit amalgamation plans in Wawa District that may eventually lead to less FMUs but if/when this may happen is not certain.

Transformation during 2013-2014 also shifted the lead responsibility for forest management planning duties from the District level to the Regional level. In order to re-organize according to the new structure, beginning in April 2014, staff was put through a Provincial hiring process. The hiring process took approximately one year and resulted in most positions being filled by April, 2015. As a result of Transformation, tasks and daily operations changed hands between staff and offices. This had a notable effect on continuity of information and management of the Magpie Forest during the term of the audit and was still apparent during conduct of the audit.

<sup>&</sup>lt;sup>2</sup> https://news.ontario.ca/mnr/en/2012/09/natural-resources-moves-forward-with-transformation-plan.html



Corporate MNRF did attempt to address the Wawa District staffing needs through several initiatives. In 2012, for about one year, a forester from Chapleau District was provided to aid with the development of the Phase II Magpie FMP. Support funding was provided on an annual basis for the three Crown units that Wawa managed. Due to the template restriction and the hiring limitation imposed by the planned amalgamations, this funding could not be used to recruit an additional permanent forester, but it was provided to hire contract staff to address additional workload. Wawa District unsuccessfully completed two separate competitions to hire a contract forester for the District in the last year. Both competitions were only able to attract a small number of candidates interested in working on a temporary basis and those candidates that were interviewed were later deemed unqualified. In response, Corporate MNRF created a new forester job description that allowed for the hiring of candidates that were able to obtain their Registered Professional Forester (RPF) designation within one year. Corporate MNRF also provided a temporary forester intern position, which was recruited and filled by the District. The position provided support to Wawa for approximately nine months until the candidate moved to another District.

District	Forest Management Unit Responsibility (italic = Crown)	# permanent staff management forester positions allocated
Chapleau	2 - Martel, Pineland	2
Cochrane	1 - Abitibi	2
Hearst	2 - Hearst, Gordon Cosens	2
Kirkland Lake	1 - Timiskaming	2
North Bay	2 - <b>Temagami</b> , Nipissing	2
Sault Ste. Marie	2 - Algoma, Northshore	3
Sudbury	2 - Sudbury, Spanish	2
Timmins	1 – Romeo Malette	2
Wawa	5 – <i>Pic River, Big Pic</i> , White River, Nagagami, <i>Magpie</i>	2

Table: Northeast Region Responsibility and Management Forester Allocation

**Conclusion:** Although the temporary staffing solutions provided by Corporate MNRF during the audit term reflected the best of intentions, they only provided short term solutions that required additional District resources to fulfill recruitment and training obligations.



The policies of Corporate MNRF, which are drawn from the Provincial commitment statements and regulations, direct the daily operations of District MNRF staff administering and operating the Magpie Forest. The audit team found that, during the audit term, Wawa MNRF did not have adequate staffing to fully meet the commitments on the Magpie Forest. As noted, the contingent of permanent foresters at Wawa District decreased from four to two during the audit term and the workload increased during this same time period as forests were surrendered and efforts were focussed on amalgamating forests, which did not occur.

The audit team is cognizant of the need for government groups to periodically re-organize, find efficiencies, etc. As evidenced by the larger burden of work in Wawa District versus all other Districts in Ontario, the failure to plan for impending surrender of forests or to refine staffing once surrenders occurred, the planning to amalgamate forests in Wawa District, and the re-organization that occurred under Transformation, the Magpie Forest was under-staffed during the audit term and there was a failure to meet some important management requirements.

Recommendation 1: Corporate MNRF shall provide Wawa District MNRF the resources needed to meet all management obligations on the Magpie Forest.



#### Recommendation # 2

## Principle: PRINCIPLE 2 – PUBLIC CONSULTATION AND ABORIGINAL INVOLVEMENT

**Criterion:** To examine the involvement of Aboriginal communities in forest management planning and its benefits.

**Procedure(s)**: Review whether Aboriginal peoples were provided with, and whether they availed themselves, of opportunities to achieve more equal participation in the benefits provided through forest management planning and assess the results. Include the following

• examine whether the actual results have been appropriately reflected in the annual district condition 34 (formerly T & C 77) reports.

**Background Information and Summary of Evidence**: Reviewed Condition 34 Reports provided for 2011-2012; and 2014-2015; Condition 34 Report (Wawa\_C34\_2013\_14.pdf); Condition 56 District Report 2014-2015 (Formerly Condition 34) (Wawa.pdf)

• Insufficient information provided in the reports to give the reader a clear picture of the status of progress with each First Nation

**Discussion:** Annual District Condition 34 (now Condition 56) Reports were found to be lacking in detail and many of the questions had been left without response. Condition 56 reporting is now done through an online survey provider, giving a consistent approach to the reporting that provides opportunity for reporting on each of the six components of Condition 56 of Declaration Order MNR-75: Environmental Assessment Requirements for Forest Management on Crown Lands in Ontario (August 18, 2015). The reports were found to be general in nature lacking sufficient detail about each individual Aboriginal community for each question in the survey; important considerations when reporting on Aboriginal participation on a District basis. Completed surveys that were examined left questions about what had occurred with the Aboriginal communities that had not been included in each question.

The reports were found to be lacking in detail with significant gaps in providing information regarding negotiations with Aboriginal communities. These reports provide the base of a five-year reporting requirement to the MOECC and the public.

**Conclusion:** Reporting needs to include sufficient information to illustrate clearly the status of progress with **each** Aboriginal community for **each** of the six components of Condition 56 of Declaration Order MNR-75: Environmental Assessment Requirements for Forest Management on Crown Lands in Ontario (August 18, 2015).



Recommendation 2: Corporate MNRF shall consider a means to reflect progress on a community-by-community basis for each of the six points included in the negotiations targets of Declaration Order MNR-75 condition 56.



#### **Best Practice**

#### **Principle: PRINCIPLE 2 – PUBLIC CONSULTATION AND ABORIGINAL INVOLVEMENT**

**Criterion:** To examine the involvement of Aboriginal communities in forest management planning and its benefits.

**Procedure(s)**: Review whether Aboriginal peoples were provided with, and whether they availed themselves, of opportunities to achieve more equal participation in the benefits provided through forest management planning and assess the results. Include the following

- interviews with MNRF District Manager, Aboriginal community leaders
- whether there were any negotiations with Aboriginal communities at the district level relevant to the applicable EA condition and whether the management unit was involved
- assess the results of negotiations including opportunities offered and opportunities that were implemented

**Background Information and Summary of Evidence**: Interviews with Chiefs of both Michipicoten and Missanabie Cree First Nations, and District Manager and RDLO Wawa District MNRF. Review of contract between Crown and Michipicoten First Nation Economic Development Corporation.

**Discussion:** MNRF worked with Michipicoten First Nation in the review and development of a business plan that provided for the creation of a company under the ownership of Michipicoten First Nation that could perform forest management duties on the Magpie Forest. The result of this effort was a) the creation of Michipicoten First Nation Economic Development Corporation (MFNEDC) and b) an agreement between the Crown and MFNEDC for the performance of non-consulting services for 2 <sup>1</sup>/<sub>2</sub> years that included preparation of the Phase II FMP as per the FMPM; other forest management requirements as provided in the FMPM; and, GIS services.

While a mutual interest to build forest management capacity within the First Nation was somewhat achieved, the relationship between Wawa District MNRF and Michipicoten First Nation has been strengthened.

**Conclusion:** In light of the lack of opportunities normally associated with forest harvesting and with insufficient human resource capacity within the Wawa District MNRF to perform these duties, this effort is seen by the audit team as one that warrants a best practice.

Best Practice: Wawa District MNRF District Manager and staff are commended for supporting Michipicoten First Nation in the development of Michipicoten First Nation Economic Development Corporation and for contracting the company to perform forest management duties on the Magpie Forest.



#### Recommendation # 3

#### Principle: PRINCIPLE 3 – FOREST MANAGEMENT PLANNING

Criterion: 3.9.8.1 Prescriptions for Operations

**Procedure(s)**: 1. Assess the forecast of expenditures including whether:

- The required forecasts and explanations adequately reflect operations proposed during the second five-year term
- They are adequate to meet LTMD objectives

#### Background Information and Summary of Evidence:

Planned expenditures outlined in the Phase II FMP included \$69,000 of forecasted funding from the Forestry Futures Trust (FFT) for the undertaking of renewal operation on areas of natural depletion. These expenditures were not approved by the Forestry Futures Trust Committee (FFTC) nor was a formal proposal submitted to access this funding. The 2009 FMPM stipulates that only approved FFT projects can be included in the FMP-20 planned expenditures. (2009 FMPM Part B pg. 101 ln 23).

**Discussion:** This recommendation is largely clerical in nature without any major significant impacts on long-term forest sustainability. It is however important that the direction and guidance of the relevant FMPM be followed during the forest management planning process. Further to this, additional staffing resources would allow for the preparation and submission of the funding proposal to the FFTC.

**Conclusion:** During the preparation of the next FMP, the Plan Author should ensure that planned renewal expenditures are listed in accordance with the FMPM.

Recommendation 3: During the preparation of the next FMP, only approved Forestry Futures Trust projects shall be included in the planned renewal expenditure.



#### Recommendation # 4

#### Principle: PRINCIPLE 4 – PLAN ASSESSMENT AND IMPLEMENTATION

**Criterion:** Criteria 4.3 Harvest. To review and assess through field examination whether information used in preparation of the FMP was appropriate and assess the implementation of the management strategy.

**Procedure(s)**: Review and assess in the field the implementation of approved harvest operations. Include the following:

- assess whether: the harvest and logging methods implemented were consistent with the FOP; the FOP was consistent with the SGRs; the FOP was certified by an R.P.F. or other qualified individual, and actual operations, were appropriate and effective for the actual site conditions encountered including
  - residual stand structure required of the FMP including individual residual tree retention and downed woody material
  - whether harvest operations were conducted to minimize site disturbance taking soil and weather conditions into account
  - whether wood utilization followed the Scaling Manual by considering items such as stump heights, wood left on site
  - for selection silviculture system harvest and thinning projects assess and report on the percentage of residual damage and comment on the impact on future forest conditions and sustainability

**Background Information and Summary of Evidence**: There were high stumps noted at three of the four harvest sites visited – Stops 24, 25 and 26.





**Discussion**: High stumps were also noted through MNRF compliance reporting on these blocks. As these blocks were harvested mainly in November 2015 and there were no discernable environmental reasons or pattern to the high stumps, this was likely a result of operator haste or inexperience.

**Conclusion:** Leaving high stumps is a wasteful practice not allowed by Ontario's Scaling Manual. Wood utilization direction in the Scaling Manual must be adhered to.

Recommendation 4: The forest manager shall ensure that operators abide by wood utilization direction found in the Scaling Manual.



#### Recommendation # 5

#### Principle: PRINCIPLE 4 – PLAN ASSESSMENT AND IMPLEMENTATION

**Criterion:** Criteria 4.3 Harvest. To review and assess through field examination whether information used in preparation of the FMP was appropriate and assess the implementation of the management strategy.

**Procedure(s)**: Review and assess in the field the implementation of approved harvest operations. Include the following:

- assess whether: the harvest and logging methods implemented were consistent with the FOP; the FOP was consistent with the SGRs; the FOP was certified by an R.P.F. or other qualified individual, and actual operations, were appropriate and effective for the actual site conditions encountered including
  - residual stand structure required of the FMP including <u>individual residual tree</u> <u>retention</u> and downed woody material
  - whether harvest operations were conducted to minimize site disturbance taking soil and weather conditions into account
  - whether wood utilization followed the Scaling Manual by considering items such as stump heights, wood left on site
  - for selection silviculture system harvest and thinning projects assess and report on the percentage of residual damage and comment on the impact on future forest conditions and sustainability

**Background Information and Summary of Evidence**: There were very few operations during the term. One of the blocks viewed (Stop#24), a 27 ha cut in fall of 2015, had few trees retained for wildlife use with a large portion having none.





**Discussion**: Walkabout of the block showed no residual trees had blown down so it was evident that no effort was made to retain wildlife tree in the area.

**Conclusion:** FMP Section 8.2.2.2.2 Wildlife Tree Retention requires that for areas harvested under the clearcut silviculture system, an average of at least 25 trees per ha be retained in reference to any given 20ha area within an operational block.

Recommendation 5: The forest manager shall ensure that operators abide by the FMP tree retention direction.



#### Recommendation # 6

#### Principle: PRINCIPLE 4 – PLAN ASSESSMENT AND IMPLEMENTATION

**Criterion:** Criteria 4.3 Harvest. To review and assess through field examination whether information used in preparation of the FMP was appropriate and assess the implementation of the management strategy.

**Procedure(s)**: Review and assess in the field the implementation of approved harvest operations. Include the following:

- assess whether: the harvest and logging methods implemented were consistent with the FOP; the FOP was consistent with the SGRs; the FOP was certified by an R.P.F. or other qualified individual, and actual operations, were appropriate and effective for the actual site conditions encountered including
  - residual stand structure required of the FMP including individual residual tree retention and downed woody material
  - whether harvest operations were conducted to minimize site disturbance taking soil and weather conditions into account
  - whether wood utilization followed the Scaling Manual by considering items such as stump heights, wood left on site
  - for selection silviculture system harvest and thinning projects assess and report on the percentage of residual damage and comment on the impact on future forest conditions and sustainability

**Background Information and Summary of Evidence**: One site harvested in 2013 was viewed (Stop 1). The utilization of conifer trees was good but most hardwood trees had not been harvested.





**Discussion**: At the time of licencing there was a plan to utilize the hardwood but this did not materialize. In an effort to utilize the remaining hardwood, the FRL holder was re-issued these blocks with new areas in 2015. There was still no market for the hardwood at that time. In order to try to remove some of the hardwood, MNRF identified it in the 2015-2016 AWS and subsequent AWS for public fuelwood use along with another ~300 ha on the Magpie Forest. There is little evidence that the large amount of hardwood standing on this site will be used as fuelwood.

**Conclusion:** The audit team believes this site and others like it should be deemed two-pass harvest. This allows a defined period between the first removal – usually the conifer – and the second – the hardwood. If the second removal does not occur within the allowed time period, it must be dropped in bush or cut and brought to roadside or otherwise treated so that renewal of the stand can occur (usually chemical tending). Expediting regeneration on these stands is imperative.

Recommendation 6: The forest manager shall classify as two-pass harvest systems all stands not fully harvested during the audit term. Following this, FMPM requirements for two-pass harvest systems need to be followed on these stands.



#### Recommendation # 7

#### Principle: PRINCIPLE 4 – PLAN ASSESSMENT AND IMPLEMENTATION

**Criterion:** Criteria 4.3 Harvest. To review and assess through field examination whether information used in preparation of the FMP was appropriate and assess the implementation of the management strategy.

**Procedure(s)**: Review and assess in the field the implementation of approved harvest operations. Include the following:

- assess whether: the harvest and logging methods implemented were consistent with the FOP; the FOP was consistent with the SGRs; the FOP was certified by an R.P.F. or other qualified individual, and actual operations, were appropriate and effective for the actual site conditions encountered including
  - residual stand structure required of the FMP including individual residual tree retention and downed woody material
  - whether harvest operations were conducted to minimize site disturbance taking soil and weather conditions into account
  - whether wood utilization followed the Scaling Manual by considering items such as stump heights, wood left on site
  - for selection silviculture system harvest and thinning projects assess and report on the percentage of residual damage and comment on the impact on future forest conditions and sustainability

**Background Information and Summary of Evidence**: The three blocks viewed that were harvested in November 2015 had good utilization. Unfortunately, for unknown reasons, the operator in these blocks pulled out in December 2015 and most of the harvested wood was left at roadside and along skid trails.





**Discussion**: Stumpage and renewal fees have not been paid on this wood but it will be available for other users at end of the 2016-2017 AWS term (i.e. by April 1, 2017).

**Conclusion:** Although MNRF is very aware of the situation, the auditors felt a recommendation was needed to ensure all efforts are made to collect Crown fees and bring this harvested wood to market.

Recommendation 7: The forest manager shall make sure that all harvested wood is made available to other users at the earliest available date.



#### Recommendation # 8

#### Principle: PRINCIPLE 4 – PLAN ASSESSMENT AND IMPLEMENTATION

**Criterion:** Criteria 4.3 Harvest. To review and assess through field examination whether information used in preparation of the FMP was appropriate and assess the implementation of the management strategy.

**Procedure(s)**: Review and assess in the field the implementation of approved harvest operations. Include the following:

- assess whether: the harvest and logging methods implemented were consistent with the FOP; the FOP was consistent with the SGRs; the FOP was certified by an R.P.F. or other qualified individual, and actual operations, were appropriate and effective for the actual site conditions encountered including
  - residual stand structure required of the FMP including individual residual tree retention and downed woody material
  - whether harvest operations were conducted to minimize site disturbance taking soil and weather conditions into account
  - whether wood utilization followed the Scaling Manual by considering items such as stump heights, wood left on site
  - for selection silviculture system harvest and thinning projects assess and report on the percentage of residual damage and comment on the impact on future forest conditions and sustainability

**Background Information and Summary of Evidence**: The curtailment of operations and eventual bankruptcy of DFPL in the previous audit term led to a silviculture liability on the Magpie Forest. This was deemed a critical recommendation in the 2011 Magpie Forest IFA (Recommendation 10).

**Discussion**: Due to the partial harvest of some stands and abandonment of operations that occurred during the 2011-2016 audit term, new silviculture liability has been created on the Magpie. This is a concerning trend that cannot continue.

**Conclusion:** The audit team feel that no further harvesting of new blocks should occur on the Magpie Forest until it can be demonstrated that the current silviculture liability is being dealt with through timely completion of planned treatments and that renewal of each new block will occur within the normal timeframes and that mainly preferred treatments occur as per the FMP.

Note that this finding has led to a number of recommendations in this audit related to the silviculture liability. These look at ensuring adequate staffing is in place to deal with management of the Magpie Forest including completing needed silviculture treatments, declaring all naturally regenerating areas within the stipulated timelines, dealing with slash on areas deemed naturally regenerating, surveying areas deemed naturally renewing in advance of the FTG schedule and completing FTG surveys identified as part of the silviculture liability.



#### **Recommendation 8:**

- Before licencing new areas for harvest, the forest manager shall ensure that the existing silviculture liability on the Magpie Forest is being addressed through completion of the planned renewal treatments in accordance with the schedule.
- To ensure that new silviculture liability is not created, the forest manager shall develop and implement a renewal plan for each new harvest area, which favours preferred silviculture treatments. These treatments should occur as planned and should not be delayed.



#### Recommendation # 9

#### Principle: PRINCIPLE 4 – PLAN ASSESSEMENT AND IMPLEMENTATION

**Criterion:** Criteria 4.4.1 To review and assess through field examination whether information used in preparation of the FMP was appropriate and assess the implementation of the management strategy

**Procedure(s)**: 1. Review and assess in the field the implementation of approved renewal operations. Include the following

- select a representative sample of each type of regeneration and site preparation operation from those areas where operations have been conducted during the fiveyear period of the audit and from each of the five years being audited (to provide for assessing the effectiveness of renewal prescriptions), including any exception prescriptions implemented
  - include, as part of this sample, the 10% sample required of criteria 8.1.11 for the specific year of the FRT expenditures or criteria 8.2.4 for the SPA
- an examination of aerial photographs, FOIP reports, annual report information, including maps, for these operations
- determine whether the renewal operations implemented were consistent with the locations in the approved FMP, AWS
- assess whether site preparation and regeneration treatments were consistent with the FOP; the FOP was consistent with the SGRs; the FOP certified by an R.P.F. or other qualified individual, and actual operations, were appropriate and effective for the actual site conditions encountered including
  - whether site preparation operations were conducted to minimize site disturbance taking soil and weather conditions into account
  - assess the effectiveness of operations to reduce the areas of slash piles and chipping debris and treatments to regenerate these areas
- assess the effectiveness of implementation of the approved exception monitoring program for any exception prescriptions implemented
- consider whether there are any gaps between the planned and actual levels of each type of renewal activity seen in the field; consider results of determination under criteria 6

#### Background Information and Summary of Evidence:

Since the curtailment of harvesting operation in 2008, a backlog of silviculture liabilities has existed on the Magpie Forest. Harvesting operations which took place in 2013 & 2015 have added to the current silviculture obligations on the Forest. Efforts were undertaken in 2013 to re-visit backlog areas which were previously prescribed for artificial renewal and assign a



natural FOP where stocking was deemed sufficient to meet the SGR target. Additionally, areas harvested in 2013 were visited and assigned a post-harvest FOP.

Due to staffing and access restrictions, the balance of the silviculture liabilities (~618 ha) was not assessed along with the 2015 harvest areas. As such, ~443 ha of area originally prescribed for natural renewal has yet to be officially declared in the Annual Reports (AR). The majority of these areas were harvested nearly ten years ago. This total does not include the harvest areas from 2013 and 2015 which increases the existing silviculture liability.

The 2009 FMPM clearly stipulates the following for the reporting of natural regeneration:

2009 FMPM Part E pg. 10 In 36-38; "Areas planned for natural regeneration will normally be reported in the year in which the disturbance (harvest or natural) occurred. If salvage harvest is being considered in areas of natural disturbance, reporting of natural regeneration may be delayed for one or two years."

**Discussion:** The delayed reporting for natural regeneration was noted during the previous IFA. Areas prescribed for natural renewal which were adjacent or intermixed with areas planned for artificial renewal were not declared until all of the artificial renewal treatments were implemented and deemed adequate. This was done to allow for natural SGRs to be changed should these areas be in need of supplementary planting. Once an area has been reported as being naturally renewed no other treatments can be reported for those areas (double counting).

This system worked well when active harvest and renewal programs were being implemented on the forest; however, the surrender of the SFL to the Crown has left these areas in limbo and well beyond the reporting timelines of the FMPM. The timely reporting of renewal areas (natural and artificial) is a critical metric in determining if renewal targets and objectives are being met on the Forest and if the ratio of implemented renewal treatments is in accordance with that modelled in the FMP.

**Conclusion:** It is imperative that the outstanding areas originally prescribed for natural renewal be assessed and declared in the Annual Report.

Recommendation 9: The forest manager shall ensure that the backlog of natural renewal area be declared in accordance with FMPM direction.



#### Recommendation # 10

#### **Principle: PRINCIPLE 4 – PLAN ASSESSEMENT AND IMPLEMENTATION**

**Criterion:** Criteria 4.4.1 To review and assess through field examination whether information used in preparation of the FMP was appropriate and assess the implementation of the management strategy

**Procedure(s)**: 1. Review and assess in the field the implementation of approved renewal operations. Include the following

- select a representative sample of each type of regeneration and site preparation operation from those areas where operations have been conducted during the fiveyear period of the audit and from each of the five years being audited (to provide for assessing the effectiveness of renewal prescriptions), including any exception prescriptions implemented
  - include, as part of this sample, the 10% sample required of criteria 8.1.11 for the specific year of the FRT expenditures or criteria 8.2.4 for the SPA
- an examination of aerial photographs, FOIP reports, annual report information, including maps, for these operations
- determine whether the renewal operations implemented were consistent with the locations in the approved FMP, AWS
- assess whether site preparation and regeneration treatments were consistent with the FOP; the FOP was consistent with the SGRs; the FOP certified by an R.P.F. or other qualified individual, and actual operations, were appropriate and effective for the actual site conditions encountered including
  - whether site preparation operations were conducted to minimize site disturbance taking soil and weather conditions into account
  - assess the effectiveness of operations to reduce the areas of slash piles and chipping debris and treatments to regenerate these areas
- assess the effectiveness of implementation of the approved exception monitoring program for any exception prescriptions implemented
- consider whether there are any gaps between the planned and actual levels of each type of renewal activity seen in the field; consider results of determination under criteria 6

#### Background Information and Summary of Evidence:

The prolific natural seeding of larch trees (*Larix Lariciana*) was a key observation during the field portion of the audit. Generally located in low-lying poorly drained sites, larch typically occupy the same site types as black spruce (*Picea Mariana*) and eastern white cedar (*Thuja Occidentalis*). Mature larch trees will produce upwards of 20,000 cones per year producing



close to 300,000 seeds. Larch trees can start producing seed at fairly young age 12-15 years with peak production achieved on average at age 75. A pioneer species and aggressive seeder, a single mature larch tree can convert a spruce stand to larch stand.

The FTG data and the TAR highlight this phenomenon showing a significant trend in the SB1 forest unit. SGRs which targeted SB1 FUs were underachieved by 75%. SB1 failures were similar for all silviculture intensities; SB1-EXT-SB1 78%, SB1-BAS-SB1 64%, SB1-INT-SB1 79%. The majority of these SS failures are trending toward LC1OC1 and LCSB FUs. LC1OC FUs are overachieving targets by ~10,000% on the entire forest. This data clearly indicates that larch is increasing on the Forest at a higher rate than what has been forecast in the FMP.

In considering the impact of these trends, the TAR states that next planning cycle should make changes to the post renewal succession rules and modelling assumptions which are more in line with the reported FTG trends. While this approach will lead to more accurate species and volume yield predictions for low-lying stands, it does not address the root the cause of this phenomenon, which is leading to the significant decline of the SB1 FU on the forest.

Larch trees are largely considered an un-marketable species with some limited use for niche markets and small allowance in pulping fiber streams. Larch is generally by-passed in harvest blocks and left standing on-site to meet the wildlife tree retention guidelines of the Stand and Site Guide. Lowland stands where larch has been left standing are typified by significant amounts of fast growing larch regeneration. This was observed during the field audit on lowland and upland sites in addition to areas surveyed for free growing status.

**Discussion:** The proliferation of larch, referred to by the audit team as 'larch creep' is not unique to the Magpie Forest. This trend has been seen on several forest management units particularly in the Northeast Region. Due to poor markets, mature larch trees are left on-site in order to meet the wildlife tree retention targets of the Stand and Site guide. Black spruce leading stands are showing a conversion trend towards larch leading stands. This trend does not appear to be influenced by the level of silviculture intensity prescribed for a given site. The aggressive seeding nature of mature larch trees is outcompeting natural and planted black spruce seedlings. Operational intervention is required to remove standing mature larch trees in order to reduce stocking levels of larch in regenerating stands.

Section 8.2.2.2.2 in the Phase II FMP stipulates the following operational tree retention requirements:

- Retain an average of at least 25 stems/ha.
- Normally, only trees considered to be windfirm should be selected as wildlife trees.
- Retain an average of at least 10 large stems or large stubs/ha with a minimum of 5 large living trees on each hectare.
- Large wildlife trees will be a mix of living cavity trees, stubs, super-canopy trees, veteran trees, diversity trees, and safe dead trees.
- Large wildlife trees should reflect the species composition of the stand. However, when available, trembling aspen and white spruce are the preferred species; white birch is also a suitable component of the wildlife tree mix.



- When the number of large wildlife trees averages less than 25/ha, additional wildlife tree requirements may be met by retaining small safe standing dead trees, small stubs, or any other living trees.
- Wildlife trees will generally be well dispersed. Retain an average of at least 15 individual stems/ha; the remaining stems may occur in clumps.
- Reasonable efforts will be made to avoid knocking down standing wildlife trees during renewal and tending treatments.
- Wildlife trees that fall to the ground, or are purposely felled for worker safety reasons, become downed woody material

The current tree retention operational guidelines stipulated in the FMP do not provide any measures to prevent the proliferation of larch via the retention of mature residual larch trees. The FMP should be reviewed and amended to disallow this practice particularly on low-lying spruce leading sites.

**Conclusion:** The current practice of leaving mature larch trees standing on-site is leading to prolific seeding on regenerating stands. FTG trends are showing drastic drops in SB1 area and a marked increase in LC1OC FU's which are outside the modelled ranges in the FMP. Changes to the FMP and operational practices need to be implemented in order to alter this trend.

Recommendation 10: Operational direction in the Phase II FMP needs to be amended to disallow the use of larch trees as residual wildlife stems. Operational practices must follow this direction.



#### Recommendation # 11

#### Principle: PRINCIPLE 4 – PLAN ASSESSEMENT AND IMPLEMENTATION

**Criterion:** Criteria 4.4.1 To review and assess through field examination whether information used in preparation of the FMP was appropriate and assess the implementation of the management strategy

**Procedure(s)**: 1. Review and assess in the field the implementation of approved renewal operations. Include the following

- select a representative sample of each type of regeneration and site preparation operation from those areas where operations have been conducted during the fiveyear period of the audit and from each of the five years being audited (to provide for assessing the effectiveness of renewal prescriptions), including any exception prescriptions implemented
  - include, as part of this sample, the 10% sample required of criteria 8.1.11 for the specific year of the FRT expenditures or criteria 8.2.4 for the SPA
- an examination of aerial photographs, FOIP reports, annual report information, including maps, for these operations
- determine whether the renewal operations implemented were consistent with the locations in the approved FMP, AWS
- assess whether site preparation and regeneration treatments were consistent with the FOP; the FOP was consistent with the SGRs; the FOP certified by an R.P.F. or other qualified individual, and actual operations, were appropriate and effective for the actual site conditions encountered including
  - whether site preparation operations were conducted to minimize site disturbance taking soil and weather conditions into account
  - assess the effectiveness of operations to reduce the areas of slash piles and chipping debris and treatments to regenerate these areas
- assess the effectiveness of implementation of the approved exception monitoring program for any exception prescriptions implemented
- consider whether there are any gaps between the planned and actual levels of each type of renewal activity seen in the field; consider results of determination under criteria 6

#### Background Information and Summary of Evidence:

Based on the updated silviculture liability assessment summary, there were a total of 891 slash pads that were not piled. Four additional blocks were listed as having no slash management activities; however, the total number of un-piled slash pads is unknown. Additionally, 407 slash pads have been piled however none have been burned to date. Based on the liability



assessment slash pile burning is to occur on  $\sim$ 731 ha's of the liability blocks ( $\sim$ 73% of the total area).

During the field audit it was noted that slash management activities were not fully implemented in the silviculture liability blocks that were re-assigned natural renewal

prescriptions. Recommendation 8 aims to address the current silviculture liability on the Forest; however, there is concern that planned slash management activities will not be fully implemented on areas which were recently declared naturally renewing.

**Discussion:** The audit team is concerned that planned slash management activities will not occur on blocks recently re-assigned as naturally renewing. The active management of slash is an important forest management activity, which helps ensure there is a minimal net loss of productive forest area on the landscape.

**Conclusion:** Slash management obligations must be addressed on silviculture liability blocks recently declared as naturally renewing.

Recommendation 11: The forest manager shall ensure that all slash management activities be implemented on backlog areas recently declared naturally renewing.



#### Recommendation # 12

#### Principle: PRINCIPLE 6 – MONITORING

Criterion: 6.2.1 SFL/AFA Holder Compliance Planning and Monitoring

**Procedure(s)**: Review the Five or Ten Year Compliance Strategy (Plan) and the Annual Plans of Action (Schedule). Determine whether:

• The actual level of the implemented overall monitoring program is appropriate and effective, and whether it is in accordance with the approved FMP and AWS (criteria 3.5.11, 3.9.9, 3.1.4).

<u>Consider Principle 4 which refers to determining whether plans to monitor compliance are</u> <u>effective for each type of activity during review of operations including field audit</u>

**Background Information and Summary of Evidence**: Compliance inspections during the audit term were completed by MNRF staff and, for FRL holders, contract staff. The inspectors were certified and the FOIP reports completed were thorough and timely. MNRF completed 15 FOIP reports during the audit term and industry, 13. Eight of the 13 industry FOIPs were from a 2011-2012 review of crossings blocked by beavers on the Magpie Forest.

It was noted that MNRF found many operational issues that were not reported by the FRL inspectors. In 2013, MNRF found butting, leaving wood, unauthorized movement of wood and garbage on site. None of these issues were identified by the industry inspectors. In 2015, MNRF found wood piled on the road, high stumps, equipment and old culverts left on site. Industry inspectors did note the old culverts left on site.

**Discussion**: As discussed in the audit report, in December 2015, operators abandoned the sites. As a result, the blocks were not closed and follow-up inspections were not conducted by the contracted inspectors so there was no opportunity to review the operations and see the issues found by MNRF. Since the abandonment of the work, MNRF have emailed the FRL holder to get issues dealt with but, as of the time of the on-site visit by the audit team, there had been no replies.

**Conclusion:** As managers of the Forest, MNRF must ensure all operations are compliant. Although few operations were completed during the audit term, many operational issues were identified by MNRF during FOIP inspections and by the auditors during the audit. Most of these issues were not identified by the FOIP inspectors contracted by the FRL holder (but, as noted, no post-harvest inspections were completed on the 2015 harvest areas as the blocks were never finished).

The number of issues found in the 2013 not identified by the contracted FOIP inspector was enough to warrant this recommendation. All inspectors should be seeing the same operational issues, regardless of who they work for.



Recommendation 12: The District MNRF shall ensure that, when issues are being missed, complicit compliance inspectors are involved in joint meetings aimed at improving their skills.



#### Recommendation # 13

#### **Principle: PRINCIPLE 6 – MONITORING**

**Criterion:** 6.3.3 - To review and assess whether an effective program exists to assess regeneration and silviculture success in accordance with the applicable FMPM, FIM, FOSM and SEMMO.

Procedure(s): To assess the actual level of the overall monitoring program including whether

- it was in accordance with the FMP, including silviculture guide exceptions monitoring, and whether it was appropriate based on the field audit and other evidence gathered through analysis of related criteria
- the amount of area eligible for survey is consistent with past levels of harvest and whether all areas are being addressed

#### Background Information and Summary of Evidence:

FTG surveys were last completed on the Magpie Forest in 2012 by the former Dubreuil Silvicultural Forester. A total of 5,333 ha were assessed which is approximately 56% of the FMP planned survey area. Based on the updated silviculture liability report, there is a total of 3,988 ha of outstanding areas eligible for FTG assessment. These harvest blocks were either declared for natural renewal or received artificial renewal treatments between 2003-2008. Additionally, the FTG survey backlog would include the balance of the natural renewal areas which need to be reported in the upcoming AR's (see Recommendation 3).

**Discussion:** The timely completion of FTG surveys provides important data and trends related to the success of the implemented SGRs. Compiled FTG data provides critical input into the development/refinement of new SGRs and post-renewal succession rules.

**Conclusion:** It is important that the survey backlog be addressed to ensure compliance with the FMPs reporting timelines. The outstanding FTG survey backlog must be assessed.

Recommendation 13: The forest manager shall ensure that the FTG survey backlog is addressed expediently.



#### Recommendation # 14

#### **Principle: PRINCIPLE 6 – MONITORING**

#### **Criterion:** 6.3.2

**Procedure(s)**: Assess whether the management unit assessment program (SFL and District) is sufficient and is being used to provide the required silviculture effectiveness monitoring information including whether it

- assesses overall effectiveness of treatments, including those that are exceptions to silviculture guides i.e. documented program, survey methodology such as survival, stocking, free-to-grow surveys, records, use and evaluation of results e.g. appropriateness of treatment for actual site conditions, area regenerated to the projected forest unit (silviculture success) or to another forest unit (regeneration success)
- determines the need for and the type of remedial action required if an area is not successfully regenerated (e.g. in fill plant, tending)
- assesses reasons where eligible areas are not determined to be successfully regenerated to the projected forest unit (silviculture success)
- is appropriately used to update the FRI
- assesses progress towards achieving the management strategy
- compare district MNRF SEM results with those of the SFL

#### Background Information and Summary of Evidence:

MNRF implemented a partial SEM program in 2013, which focused on reassessing the silviculture liability blocks that were last harvested in 2008. Less than half of the total area was assessed (~400 ha), and SGR's for 350 ha of stands previously prescribed for intensive renewal were changed to a natural prescription. In addition to these areas, all of the harvest blocks from 2013 (~379 ha) were assessed and assigned a post-harvest FOP. Due to a reassignment of staffing resources, the balance of the liability areas (~618 ha), and none of the 2015 harvest blocks (~200 ha) were assessed.

During the field audit several of the blocks that had been changed to a natural prescription were viewed. All of these sites were originally prescribed for artificial renewal based on the FMP's preferred SGR for those specific FUs and ecosite types. The change to a natural prescription will lead to a significant shift in the target forest unit with a marked increase in MW2, PO1 and SF1 FUs. While some blocks were found to have excellent stocking to meet the requirements of the SGR target, others were near the limit of the minimum stocking standard. Block 04-46 was typified by patchy conifer ingress while regenerating hardwood stems had been heavily browsed by the moose population. Additionally, these developing stands are now predominantly hardwood leading mixedwoods growing on site types which are



ideally suited for conifer species, in particular jack pine. Hardwood leading stands are now largely comprised of 'off-site' poplar and birch which is typified by poor growth and form that are highly susceptible to disease and decay.

It is the opinion of the audit team that these areas should be monitored prior to FTG assessment to determine if remedial treatments are needed.

**Discussion:** It is important that a proper monitoring system is in place to identify, in a timely manner, areas that require remedial treatments. MNRF implemented a partial monitoring program during the audit term; however due to scarce human resources, it was only conducted in 2013. Recommendation 8 addresses the need to fulfill the existing silviculture obligation on the Forest.

The change of SGR prescriptions from active to natural regeneration is not considered optimal for those FUs and site types. As such, these areas may have reduced stocking and may not meet minimum requirements.

It is important that the regeneration on these stands be closely monitored to allow for prompt remedial treatments where needed.

**Conclusion:** Proper SEM must be implemented on blocks where the prescription was changed during the audit term from active to natural renewal.

Recommendation 14: The forest manager shall ensure that areas deemed to be naturally renewing during the audit term are monitored prior to FTG assessment to identify the need for possible remedial treatments.



#### Recommendation # 15

#### Principle: PRINCIPLE 6 – MONITORING

#### **Criterion:** 6.3.2

**Procedure(s)**: Assess whether the management unit assessment program (SFL and District) is sufficient and is being used to provide the required silviculture effectiveness monitoring information including whether it

- assesses overall effectiveness of treatments, including those that are exceptions to silviculture guides i.e. documented program, survey methodology such as survival, stocking, free-to-grow surveys, records, use and evaluation of results e.g. appropriateness of treatment for actual site conditions, area regenerated to the projected forest unit (silviculture success) or to another forest unit (regeneration success)
- determines the need for and the type of remedial action required if an area is not successfully regenerated (e.g. in fill plant, tending)
- assesses reasons where eligible areas are not determined to be successfully regenerated to the projected forest unit (silviculture success)
- is appropriately used to update the FRI
- assesses progress towards achieving the management strategy
- compare district MNRF SEM results with those of the SFL

#### Background Information and Summary of Evidence:

The District MNRF Silvicultural Effectiveness Monitoring (SEM) program was only partially implemented during the audit term (2012, 2014 & 2015). The direction of the District SEM program is provided by the MNRF Region with core task and reporting requirements updated on an annual basis.

Silviculture monitoring activities were solely focused on Core task 1 which involves a requisite 10% intensive ground sampling of company AR FTG submissions. During the audit term a total of 332 ha were surveyed by MNRF staff which represents a 2.7% audit sample of the 11,994 ha of FTG area submitted by the company. A spreadsheet was compiled in 2012 and 2014 comparing the AR submissions and the results of the MNRF ground surveys. A formal District SEM summary report was completed for the 2014 program. The 2015 SEM program was significantly underachieved with only 5% (26 ha) of the targeted areas surveyed during the season.

None of the 2015 District SEM data was compiled into a summary spreadsheet nor was a formal SEM report completed for the 2015 SEM program. The summarized survey data for 2012 revealed limited variance between company and MNRF FTG calls. The 2014 report did identify some discrepancies; however, given the minimal sample size (61 ha), these observations bear little weight. The report does highlight a need to meet the Core 1 Task data collection targets.



#### Discussion:

The implementation of an effective SEM program plays an important role in the delivery of an active and adaptive forest management system. MNRF is bound under the amended 2003 Class EA to ensure that a systematic silviculture monitoring program is delivered.

The MNRF Regional SEM direction provided during the audit term focused on a total of four core tasks to be completed on each of the management units located within each respective District. Core Task 1 - *Verify the free-to-grow results reported in a recent Annual Report* was the primary area of focus by the Wawa district during the audit term. The primary purpose of Core Task 1 is to identify any discrepancies in the submitted AR FTG data and provide a summary analysis on the success/failure of implemented renewal prescriptions. This data can then be used to identify potential gaps in survey methodology and effectiveness along with guiding potential changes to ground rule prescriptions and post renewal successional pathways. It is important that a sufficient sample size is collected in order to ensure an adequate level of confidence in the derived analysis and trends.

The Wawa District MNRF has recently undergone some significant staffing changes as part of the recent ministerial transformation initiative. Efforts have been made to increase available staffing dedicated to collection of SEM data; however, recent collection efforts have been focused on the more active management units within the District. Although sufficient staffing resources were assigned to SEM in 2015, the Magpie survey targets were significantly underachieved due to low daily survey production and access issues. Data collected from 2015 was never compiled or analyzed and was sent directly to MNRF Region.

**Conclusion:** MNRFs SEM program was insufficient in terms of the sample size of the total monitoring area surveyed during the audit term.

Recommendation 15: Wawa District MNRF shall ensure that a Silviculture Effectiveness Monitoring program of adequate size is implemented.



#### Recommendation # 16

### Principle: PRINCIPLE 7 – ACHIEVEMENT OF MANAGEMENT OBJECTIVES AND SUSTATINABILITY

**Criterion:** Criteria 7.1 Year Ten Annual Report (AR)/Trend Analysis Report - 2009 FMPM: for plans which expired on March 31, 2009 and later, a Year Ten AR is required in accordance with the requirements in the 2009 FMPM for the last annual report of the plan.

**Procedure:** Examine the Year Ten AR for the term of the audit and assess whether the text, tables and maps including digital information is <u>an accurate and complete</u> compilation of information contained in previous annual reports for the five-year FMP term. For those items not covered by subsequent procedures in this criterion assess whether the report has been prepared in accordance with the applicable FMPM requirements. Determine whether the associated deadlines have been met.

**Background Information and Summary of Evidence**: The TAR was well written and notes that the significant trends over time were mainly all due to the deep, protracted industry downturn. Information presented in the TAR meets most IFAPP and FMPM requirements and is consistent with the majority of the findings of the audit.

Three specific issues in the TAR were noted:

- There was just over a month delay in receipt of the final TAR it was due by the preaudit meeting of May 2<sup>nd</sup>, 2016 and a draft version was sent on June 8<sup>th</sup> (final on June 10<sup>th</sup>).
- The final version did not include a discussion of the progress made in implementing the actions taken as a result of the 2011 IFA.
- The report often cites a lack of Forest Renewal Trust funds as a reason for not completing needed silviculture or regeneration assessments.

**Discussion**: The delay in receipt of the TAR did not cause undo hardship to the audit team and the TAR was later amended to include the missing information, so no recommendation is made for these issues. However, the discussions related to lack of Forest Renewal Trust Funding are not correct. There is currently about \$2.4M available for applicable silviculture treatments in the Magpie Forest Renewal Trust account and most of this has been available since the surrender of the SFL in May 2013.

**Conclusion:** The TAR must accurately summarize activities for the given periods. To include information that there was not enough funding to complete needed silviculture treatments is not correct. These references need to be removed and the text regarding why silviculture treatments did not occur, revised. The audit team notes that revision to the TAR did occur about one month following the conduct of the field audit. This revised version is included in this report (Appendix 7).



Recommendation 16: The Trends Analysis Report shall be revised to remove any discussion regarding the ongoing lack of Forest Renewal Trust funds beyond the surrender of the SFL in May 2013.



#### Independent Forest Audit – Record of Finding

#### Recommendation # 17

#### Principle: PRINCIPLE 8 – CONTRACTUAL/MNRF OBLIGATIONS

**Criterion:** Criteria 8.1 - To review compliance with the terms and conditions of the specific SFL and, based on the results of that review, make a recommendation on extension of the SFL or Agreement. Previous IFA action plans and <u>status report items</u> relevant to MNR require review, in addition to those relevant to the SFL or Agreement holder.

**Procedure(s)**: Review the audit action plan status report and assess whether:

- the status report was prepared in accordance with requirements
- it was prepared <u>within 2 years following approval of the action plan</u>, unless otherwise directed by the Minister (e.g. an interim status report may have also been required)
- the approved action plan was implemented
- the status report appropriately reflects what actually occurred to address the audit recommendations; if any actions were inconsistent with the approved action plan whether a reasonable explanation has been provided
- actual actions were effective in addressing the audit recommendations

**Background Information and Summary of Evidence**: Regional/Corporate level recommendations in IFAs are dealt with annually in one Provincial Action Plan and one Status Report. These reports deal with the recommendations directed at Regional/Corporate MNRF in all the IFAs from a single year. Timing for these reports is based on approval of the final IFA report for the calendar year. In the case of the 2006-2011 IFAs, the Lac Seul IFA was approved on November 12, 2012 (about six months after the Magpie IFA). The Provincial Action Plan and Status Reports met submission timelines – the PAP was submitted within two months of the Lac Seul IFA and approved in April, 2013 while the PSR was submitted in March, 2015 and approved in July, 2015.

**Discussion**: The audit team agrees that the PAP and PSR documents provide a concise package for the annual IFAs completed but find the process to be inflexible and the actions not as timely as they should be for time-sensitive recommendations. For example, the key recommendation from the 2006-2011 Magpie IFA (#10) was directed mainly at Corporate MNRF and had a time component attached. The actions developed for this recommendation should have been available for implementation as soon as possible or at least with the other actions developed for that IFA. Delaying this response by almost one-half year while waiting on another IFA almost ensured that the timelines associated with the recommendation could not be met. Another example is Recommendation #1 in this report. The actions for this recommendation should be developed as soon as possible so that staffing for the Magpie Forest can be expediently addressed.

Waiting to deliver actions to Corporate recommendations seems counter-intuitive and raises some questions: why should all IFAs be delayed by one? What happens if one is delayed by



even longer? What happens if deadlines set for a recommendation(s) cannot be met due to this delay?

**Conclusion:** The individual actions for time-sensitive recommendations aimed at Corporate MNRF need to be developed as soon as possible and provided to those that need them.

Recommendation 17: For time-sensitive recommendations, Corporate MNRF shall act as soon as possible to ensure compliance with applicable timelines.



## **APPENDIX 2 – MANAGEMENT OBJECTIVES TABLE**

Summary of the status of the 2009-19 FMP Objectives

Objectives	Auditor Assessment and Comments					
Objective 1 Forest Diversity						
To develop and maintain 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.						
<b>Objective 1.1:</b> Age Class Structure	Partially met. Very low harvest levels mean					
To ensure that changes in the abundance of	younger forest is not being created and is					
mature and old growth forest are similar to	under-represented and older forest is over-					
the expected natural condition	represented.					
<b>Objective 1.2:</b> Forest Composition and	Partially met. Low harvest and silviculture					
Abundance	levels, delay/shift to less intensive silviculture					
To ensure that within the limits of silvicultural	treatments may delay meeting planned					
practices changes in the abundance of forest	conditions for some forest units. The notable					
unit areas are similar to the expected natural	increase in abundance of larch on some					
condition.	forest types may also make it difficult to					
	meet this objective if this trend continues.					
Objective 1.3: Spatial Diversity	Partially met. Very low harvest levels will					
To emulate natural disturbance patterns at	delay time taken to meet this objective. If					
the landscape level.	the very low harvest levels persist, select					
	patch sizes will not be formed.					
Objective 2. – Social and Economic Objec						
To derive sustainable social and economic bene						
Objective 2.1: Wood Supply	Met. The 2009-2019 FMP provides a					
To provide a sustainable, predictable and	sustainable supply of timber. Since the					
economical supply of timber products	sector downturn, local markets have not					
required by wood processing facilities that	required much of this timber supply.					
receive wood from the Forest. This will						
contribute to the viability of the forest						
industry and the well being of forest based						
communities	Mat Canadanahla wantu was dana dari					
<b>Objective 2.2:</b> Remote Tourism and	Met. Considerable work was done during					
Recreation	planning for the 2009-2019 FMP and the					
To moderate the impacts of forest operations	Phase II FMP to moderate the impacts of					
on remote tourism and recreational activities	forest operations on remote tourism groups.					
consistent with the Crown Land Use Atlas.	Destight mot Due to the last of activities or					
Objective 2.3: Road Based Tourism, Recreation and Commercial Activities	Partially met. Due to the lack of activities on					
	the forest between 2009 and 2016					
To moderate the impact of forest operations on road based tourism and recreational	maintenance and increasing road density was					
	not achieved due to the lack of harvesting					
activities, mineral exploration and other road	and road building on the Forest. These					
based commercial activities consistent with the Crown Land Use Atlas.	indicators will have to be re-evaluated in the preparation of the 2019-2029 FMP.					
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Objective 2.4: Healthy Forest	Partially Mot Thoroword fow operations				
Objective 2.4: Healthy Forest	Partially Met. There were few operations				
Ecosystems	during the term and few compliance issues. Delay in treatments and selection of less				
To undertake all forest management	intensive silviculture treatments on some of				
operations using sound environmental					
practices to maintain healthy forest	the silviculture liability stands may not allow				
ecosystems.	for the full achievement of this objective.				
<b>Objective 2.5:</b> Public Participation	Met. Considerable effort was expended in				
To encourage and support the participation	encouraging participation in development of				
of the general public, the Local Citizens	the Phase II FMP. A best practice has been				
Committee and First Nations in the	identified for efforts to involve a local First				
development of the forest management plan	Nation in the process.				
for the Magpie Forest.					
Objective 2.6: Cultural, Heritage, and	Met. There have been no compliance issues				
Aboriginal Values	related to this objective and AOCs have been				
To minimize the impactd of forest operations	developed to minimize the chance of				
on cultural, heritage, and aboriginal values.	disturbance of these values.				
<b>Objective 3.</b> – Provision of Forest Cover O	bjectives				
To provide forest cover for those values that de	epend on forest cover.				
<b>Objective 3.1:</b> Featured Species Habitat	Met. Stand and Site Guide approach followed				
To ensure that changes in the abundance of	in Phase II FMP. Moose and marten were				
potential preferred habitat for regionally	featured species in Phase I FMP. Both were				
featured species are similar to the expected	provided Fine Filter adjustments in Phase II.				
natural condition.					
<b>Objective 3.2:</b> Species at Risk Habitat	N/A. Nine species at risk were found or				
To ensure that changes in the abundance of	expected to occur on the Magpie Forest – five				
potential preferred habitat for species at risk	birds, three bats, and one lichen. As per				
are similar to the expected natural condition.	direction in the Stand and Site Guide, the				
	Phase II FMP provided for site-specific				
	habitat protection through associated AOC				
	prescriptions e.g. nests, roosts, etc.				
<b>Objective 3.3:</b> Riparian Zones and	Met. Protection for riparian zones and water				
Water Quality	quality was provided through associated AOC				
To ensure the maintenance of riparian zones,	prescriptions.				
water quality and habitat for fisheries					
resources					
<b><u>Objective 3.4:</u></b> Non-Timber values	Met. AOC prescriptions were developed to				
To implement forest operations in a manner	protect non-timber values. Compliance plan				
that protects non-timber values.	developed to support proactive risk				
	management before operations begin on cut				
	approval basis.				
<u>Objective 4</u> . – Silviculture Objectives					
	dable silvicultural program that will provide				
To develop and implement a realistic and affordable silvicultural program that will provide appropriate levels of forest renewal and stand maintenance to develop the desired future					
forest condition.					
Objective 4.1: Forest Renewal	Partially met. Areas surveyed for FTG met				
To ensure the successful renewal of	the >95% target for meeting the minimum				
harvested stands.	regeneration standard of the SGR. The				
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planned FTG survey target was underachieved by ~44% with an existing survey backlog of 3,988 ha. The renewal intensity profile for the implemented treatments since 2009 align well with the targets of the FMP. Renewal operations during the audit term
were well outside the FMP targets with no active regeneration implemented during this period. ~87% of the areas declared naturally renewing during the audit period were previously planned for active renewal.



## **APPENDIX 3 – CONTRACTUAL OBLIGATIONS**

The following table provides the contractual obligations of the Crown to the Magpie Forest. Note that many contractual obligations are linked to a SFL but are still an obligation under Crown management. Each condition is provided on a separate row with comments by the audit team to report on the degree of attainment of the condition.

Obligation	Manager Performance			
Payment of Forestry Futures and Ontario Crown charges	As of April 1, 2016 a minimal arrear of \$1,428.28 existed for outstanding Crown and Forestry Futures dues.			
Periodic review of licensee's performance Audit action plan and status report	Partially met. Action Plan was completed on time but Status Report tardy by about two months. Both reports are complete and the actions determined for the prior IFA appear good. Most recommendations are being addressed. Exception is the critical recommendation (#10) related to the silviculture liability. Some surveys were completed to re-classify some areas but none of the planned silviculture treatments were completed. This has led to a number of recommendations in this audit report.			
	The Provincial Action Plan and Status reports also complete and both produced on time. Timeliness of response to time-sensitive recommendation from the prior Magpie IFA was found to be a concern and a recommendation is made.			
Payment of forest renewal charges to Special Purpose Account/Forest Renewal Trust (FRT)	Met. Although the Forest is currently a Crown Management Unit, eligible silviculture work is still being funded by a Forest Renewal Trust Fund. The FRT minimum balance (~\$1.8M) was in place at the surrender of the SFL in May 2013 and has been increased to ~\$2.4M as of 2016. As of April 1, 2016, a minimal arrear of \$1,202.73 existed for outstanding FRT dues.			
Special Purposes Account/Forest Renewal Trust eligible silviculture work	Not applicable. No silviculture work was invoiced to the FRT during the year of the FRT special procedures report. MNRF did not invoice the FRT for survey work done in 2013.			
Forest Renewal Trust/Special Purposes Account forest renewal charge analysis	Met. A formal FRT charge analysis was completed in 2011 which included the silviculture liability blocks. FRT rates were subsequently reviewed annually; however, a formal summary was not prepared.			



## **APPENDIX 4 – AUDIT PROCESS**

The Independent Forest Audit Process and Protocol (IFAPP) was developed by MNRF to provide a comprehensive and consistent method of evaluating forest management activities on Crown land. The IFAPP (2016) states that the purpose of an Independent Forest Audit is to:

- a) assess to what extent forest management planning activities comply with the Forest Management Planning Manual and the CFSA;
- b) assess to what extent forest management activities comply with the CFSA and with the forest management plans, the manuals approved under the Act, and the applicable guides;
- c) assess 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;
- d) compare the forest management activities carried out with those that were planned;
- e) assess the effectiveness of any action plans implemented to remedy shortcomings revealed by a previous audit;
- f) review and assess a licensee's compliance with the terms and conditions of the forest resources licence;
- g) provide a conclusion regarding sustainability of the Crown forest.

The IFAPP is based on eight guiding principles and contains 92 procedures that are applicable to the Magpie Forest. The audit procedure serves as a framework to provide a structured approach to evaluating whether or not forest management activities meet the requirements governing forestry practices on Crown land in Ontario. The guiding principles are:

- Commitment
- Public Consultation and Aboriginal Involvement
- Forest Management Planning
- Plan Assessment and Implementation
- System Support
- Monitoring
- Achievement of Management Objectives and Forest Sustainability
- Contractual Obligations

MNRF categorized most of the IFA procedures based on complexity and their potential impact on forest sustainability. The IFAPP directs the audit team to assess through sampling, per audit principle and associated criteria, the three categories of procedures as follows:

- Administrative procedures low risk: 20-30% of low risk procedures are to be assessed;
- Administrative but also having a bearing on sustainable forest management medium risk: 50-75% of medium risk procedures are to be assessed; and,
- Procedures directly related to sustainable forest management high risk: 100% of high risk procedures are to be assessed.



Table 3 summarizes the number of procedures selected by the audit team for audit based on the direction provided by the IFAPP.

IFA Procedures Audited, by Risk Category								
Principle		Low Risk			Medium Risk			Applicable
		Selected (#)	% Audited	Applicable (#)	Selected (#)	% Audited	Audited #	Procedures Not Audited
1. Commitment	-	-	-	2	2	100	-	
2. Public Consultation and Aboriginal Involvement	-	-	-	6	6	100	2	
3. Forest Management Planning	6	4		9	9	100	14	3.6.1.1 3.6.1.2
4. Plan Assessment & Implementation	1	1	100	1	1	100	10	
5. System Support	-	-	-	2	2	100	1	
6. Monitoring	1	1	100	5	5	100	11	
7. Achievement of Management Objectives and Forest Sustainability	-	-	-	-	-	-	15	
8. Contractual Obligations	-	-	-	2	2	100	6	
Totals	8	6	-	27	27	-	59	

Table 3. IFA Procedures Selected by the Audit Team

The audit process for the Magpie Forest IFA consisted of eight components:

- 1. Audit Plan: KBM prepared an audit plan that described the schedule of audit activities, audit team members and their qualifications, audit participants, and auditing methods. The audit plan was submitted to MNRF, the Forestry Futures Trust Committee (FFTC), and the Wawa Area LCC.
- 2. Public Consultation: KBM placed an advertisement in the Sault Star prior to the preaudit meeting advising the public of the upcoming audit. The advertisement identified the purpose of the audit and invited the public to submit comments to KBM by using an online survey or by contacting KBM directly.



- 3. Aboriginal Engagement: MNRF Wawa District and the MNRF Resource Liaison Officer provided KBM with contact information for the two Aboriginal communities within or adjacent to the Magpie Forest Michipicoten First Nation and Missanabie Cree First Nation. An invitation letter was sent to each of the Aboriginal communities requesting their input, encouraging them to contact KBM if they wished to participate in the audit and asking if they required more information before making a decision. KBM also offered to arrange in-person meetings with each of these Aboriginal communities. KBM contacted the Chief of each of these First Nations through email and telephone to request an interview. An interview was conducted with each Chief.
- 4. Field Site Selection: The audit team conducted the preliminary site selection prior to the pre-audit meeting. Annual Work Schedules and Annual Reports were used to ascertain the amount and type of forest operations carried out on the Forest during the audit period. A stratified random sample of sites was then selected to ensure that selected sites were representative of a cross section of all activities conducted on the Forest during the audit period. The auditees were informed of the site selections before the field visit.
- 5. Pre-audit Document Review: Prior to the five-day site visit, the audit team reviewed documents provided by the auditees, including the:
  - a. 2009-2019 Phase I/II FMPs for the Magpie Forest;
  - b. Annual Work Schedules and Annual Reports associated with the above FMPs for the audit term;
  - c. Magpie Forest Independent Forest Audit 2006-2011 Report;
  - d. Magpie Forest 2006-2011 Independent Forest Audit Action Plan and the Magpie Forest 2009-2011 Independent Forest Audit Action Plan Status Report;
  - e. Provincial Independent Forest Audit Action Plan and Provincial Independent Forest Audit Status Report; and
  - f. The Trends Analysis Report.
- 6. On-Site Audit: The objectives of the field site visits were to confirm that activities were conducted according to plan, that they conformed to provincial laws, regulations, and guidelines, and that they were effective. The site visit began on June 13, 2016. Two days were spent in the field, with the remainder spent reviewing documents and conducting interviews. The closing meeting was held in Wawa on June 17, 2016. The meeting provided a forum for the audit team to present and discuss preliminary audit findings with the auditees. The following table indicates the audit sample intensity.



Treatment	Courses	2011-2016 Audit (values in hectares or percentage)					
Treatment	Freatment Source		2012-13	2013-14	2014-15	2015-16*	Total
	AR Total	0	0	0	0	0	0
Plant	Sample Size	0	0	0	0	0	0
	%	-	-	-	-	-	-
	AR Total	0	0	0	401	0	401
Natural	Sample Size	0	0	0	129.5	0	129.5
	%	-	-	-	32%	-	32%
	AR Total	0	0	0	0	0	0
SIP	Sample Size	0	0	0	0	0	0
	%	-	-	-	-	-	-
	AR Total	0	0	379	62	200	641
Harvest	Sample Size	0	0	220	0	167	387
	%	-	-	58.05%	0%	84%	60%
	AR Total	0	0	0	0	0	0
Tending	Sample Size	0	0	0	0	0	0
	%	-	-	-	-	-	-
	AR Total	0	5,100	0	0	0	5,100
FTG	Sample Size	0	688	0	0	0	688
	%	-	13.49%	-	-	-	13.49%

Table 4. Sampling intensity for each forestry activity examined as part of the field site visits.

\* Annual Report not available. Estimated values provided by MNRF

7. Audit Report: The audit results are presented in this report, following a brief description of the audit process and the forest licence area under review. Within the report, the audit team has made recommendations to address instances of a non-conformance to a law and/or policy, or an identified lack of effectiveness in forest management activities.

Recommendations from this audit must be addressed in an action plan developed by MNRF Wawa District, with input and review by MNRF Regional and Integration Branch representatives. MNRF Integration Branch will develop an action plan to address the recommendations applicable to Corporate MNRF.

Suggestions are no longer highlighted in audit reports, nor do they need to be addressed in action plans. Any suggestions of the audit team have been incorporated within the regular text of this report.

### **Public Response**

There were no comments received from the public regarding the Magpie Forest IFA.

### **Local Citizens Committee**

A letter was emailed to each of current LCC members to notify them of the audit and invite their input. Follow-up phone calls and emails were sent approximately two weeks after the letters were sent. No written responses were received. An email was sent to the LCC members on a weekly basis for the three weeks leading up to the field audit. There was one email response



from an LCC member. A survey link was also distributed to the LCC members on the week of the audit with a reminder that KBM would be in Wawa if anyone wished to speak in person or by phone. When KBM arrived in Wawa for the opening meeting, one member attended the meeting and was later interviewed along with a previous member of the LCC. The audit team then attempted to contact more members of the LCC through phone calls during the audit week. By end of week, four members were interviewed by the audit team.

#### **Aboriginal Communities**

Two Aboriginal communities are part of forest management on the Magpie Forest – Michipicoten First Nation and Missanabie Cree First Nation. Following discussions held with the MNRF Resource Liaison Officer, KBM contacted the Chief of each of these First Nations through email and telephone to request an interview. A telephone interview was conducted with each of the Chiefs during which each party was asked how their respective communities might best be engaged.

#### **Overlapping Licensees, Contractors and Commitment Holders**

There was no mailout for this audit. The newspaper advertisement, with a link to the online survey, provided the notice of audit for these groups.

#### **Ministry of Natural Resources and Forestry**

MNRF District staff participated in all aspects of the audit. Interviews were held with the District Manager, Area Supervisors, Management Forester, Biologist, Technicians and other support staff. The MNRF District Manager and other District personnel also accompanied the audit team in the field during the truck day. A Regional MNRF representative also participated in the audit through delivery of needed documents, attendance of a portion of the field component of the audit and the main audit meetings. A MNRF Integration Branch representative also participated through telephone attendance of the closing meeting.

### **Forestry Futures Trust Committee**

Two members of the Forestry Futures Trust Committee participated in the pre-audit meeting, the truck field tour and the closing meeting.



## **APPENDIX 5 – LIST OF ACRONYMS**

AOC	Area of Concern			
AR	Annual Report			
AWS	Annual Work Schedule			
BPI	Business Process Improvement			
CLUPA	Crown Land Use Policy Atlas			
CFSA	Crown Forest Sustainability Act			
DFPL	Dubreuil Forest Products Ltd.			
DM	District Manager			
FFTC	Forestry Futures Trust Committee			
FIM	Forest Information Manual			
FMP	Forest Management Plan			
FMPM	Forest Management Planning Manual			
FMU	Forest Management Unit			
FOIP	Forest Operations Information Program			
FOP	Forest Operations Prescription			
FRI	Forest Resource Inventory			
FRT	Forest Renewal Trust			
FTG	Free-To-Grow			
HPA	High Priority Aspect			
IFA	Independent Forest Audit			
IFAPP	Independent Forest Audit Process and Protocol			
KBM	KBM Resources Group			
WALCC	Wawa Area Local Citizens Committee			
LCC	Local Citizens Committee			
LTMD	long-term management direction			

MAFA Moose Aquatic Feeding Area



- MNRF Ministry of Natural Resources and Forestry
- OHTCL Olav Haavaldsrud Timber Company Ltd.
- PAP Provincial Action Plan
- PSR Provincial Status Report
- RD Regional Director
- RPF Registered Professional Forester
- SEM Silviculture Effectiveness Monitoring
- SFL Sustainable Forest Licence
- SFMM Strategic Forest Management Model
- SGR Silviculture Ground Rule



# APPENDIX 6 – AUDIT TEAM MEMBERS AND QUALIFICATIONS

Name	Responsibility	Qualifications		
Brad Chaulk	Co-Lead auditor, core team member (harvest operations, planning, monitoring, contractual obligations, determination of sustainability)	R.P.F., H.B.Sc.F.; over 20 years of experience as a practising forester, educator and consultant; primary areas of practice are silviculture, forest management and forest inventory; completed ISO 14001 EMS Lead Auditor training; worked on 20 previous IFAs as either silviculture, harvest or planning auditor. Brad has been co- lead on two prior audits and lead on one.		
Stephane Audet	Co-Lead auditor, core team member (Silviculture planning, implementation, and monitoring, contractual obligations, determination of sustainability)	R.P.F., H.B.Sc.F.; 15 years of forestry experience with a primary focus on silviculture. Stephane has been the silviculture auditor on eight previous IFAs and has conducted 6 FSC and SFI audits in Ontario and Quebec. Mr. Audet has completed the ISO 14000 EMS Lead Auditor Training.		
Peter Higgelke	Core team member (Wildlife, ecological planning and implementation, access planning and implementation, Aboriginal involvement, contractual obligations, determination of sustainability)	R.P.F.; MScF; 30 years forestry experience in Ontario; Peter has completed 24 IFAs in various roles including lead, harvest, silviculture, wildlife, planning, Aboriginal involvement and public consultation; FSC 5 certification audits and 8 surveillance audits;		
Mike Barten	Audit team member (secretariat, consultation, socioeconomic impacts and other supervised components as needed)	H.B.E.Sc. and Geography. Works on KBM forestry-related projects, Aboriginal projects, jurisdictional policy scans, and research support.		



# **APPENDIX 7 – TREND ANALYSIS REPORT**

This document was provided by MNRF and has not been revised or altered in any way.

