

Pic River Forest

**Independent Forest Audit
April 1, 2011 – March 31, 2016**

FINAL REPORT

An aerial photograph showing a vast, dense forest covering rolling hills and a large lake. The forest is a mix of green and brown, suggesting a mix of tree species or a seasonal change. The lake is dark blue and occupies the left side of the frame. The sky is a clear, light blue.

**ArborVitae Environmental
Services Ltd.**

February 21, 2017

Table of Contents

1.0	EXECUTIVE SUMMARY	1
2.0	TABLE OF AUDIT FINDINGS	3
3.0	INTRODUCTION.....	4
3.1	AUDIT PROCESS AND CONTEXT.....	4
3.2	MANAGEMENT UNIT DESCRIPTION.....	5
3.3	CURRENT ISSUES	7
3.3.1	<i>Low Level of Harvest</i>	7
3.3.2	<i>NFMC Becoming Established</i>	8
3.3.3	<i>MNRF District Staffing</i>	8
3.4	SUMMARY OF CONSULTATION AND INPUT TO AUDIT	8
4.0	AUDIT FINDINGS	8
4.1	COMMITMENT	8
4.2	PUBLIC CONSULTATION AND ABORIGINAL INVOLVEMENT	9
4.2.1	<i>Local Citizens Committee</i>	9
4.2.2	<i>FMP Public Consultation Process</i>	10
4.2.3	<i>Aboriginal Participation</i>	10
4.3	FOREST MANAGEMENT PLANNING.....	11
4.3.1	<i>Planning Team Activities</i>	12
4.3.2	<i>Plan Production</i>	12
4.3.3	<i>Harvest Planning</i>	13
4.3.4	<i>Silvicultural Planning</i>	13
4.3.5	<i>Areas of Concern</i>	13
4.3.6	<i>Special Wildlife Considerations</i>	14
4.3.7	<i>Access</i>	14
4.3.8	<i>Plan Amendments</i>	14
4.3.9	<i>Annual Work Schedules</i>	14
4.4	PLAN ASSESSMENT AND IMPLEMENTATION	14
4.4.1	<i>Harvest</i>	14
4.4.2	<i>Areas of Concern</i>	15
4.4.3	<i>Silvicultural Operations</i>	15
4.4.4	<i>Access</i>	17
4.5	SYSTEM SUPPORT.....	17
4.5.1	<i>Human Resources</i>	17
4.5.2	<i>Document and Record Quality Control</i>	18
4.6	MONITORING	18
4.6.1	<i>Compliance Planning and Monitoring</i>	18
4.6.2	<i>Annual Reports</i>	18
4.6.3	<i>Silvicultural Effectiveness Monitoring</i>	19
4.7	ACHIEVEMENT OF FOREST MANAGEMENT OBJECTIVES & SUSTAINABILITY.....	20
4.7.1	<i>Trend Analysis Report</i>	20
4.7.2	<i>Assessment of Objective Achievement</i>	21
4.7.3	<i>Assessment of Sustainability</i>	21
4.8	CONTRACTUAL OBLIGATIONS	22
4.9	CONCLUSIONS AND LICENCE EXTENSION RECOMMENDATION.....	23

APPENDIX – AUDIT FINDINGS.....	25
APPENDIX – ACHIEVEMENT OF FMP MANAGEMENT OBJECTIVES	42
APPENDIX - COMPLIANCE WITH CONTRACTUAL OBLIGATIONS.....	50
APPENDIX – AUDIT PROCESS	55
APPENDIX – LIST OF ACRONYMS	61
APPENDIX – AUDIT TEAM MEMBERS AND QUALIFICATIONS	63

1.0 EXECUTIVE SUMMARY

This audit of the Pic River Forest covers the five-year period from April 1, 2011 – March 31, 2016. The Forest was formed through the amalgamation of the Black River Forest (BRF) and the Pic River Ojibway Forest (PROF) that was effective April 1, 2013. Therefore, during the first two years of the audit period, the BRF and PROF were separate entities managed under separate Sustainable Forest Licences (SFL's) held by Great West Timber Limited. Great West went out of business and relinquished the SFL's to the Crown in January 2013. During the period from January to April 1, 2013, the forests were technically managed by the Crown. From April 1, 2013 onwards, the amalgamated Forest was managed by the Nawiinginokiima Forest Management Corporation (NFMC or the Company). NFMC is awaiting an SFL from the Ontario Ministry of Natural Resources and Forestry (MNR) and has managed the Forest under three successive Forest Resource Licences. The current licence is for two years and is scheduled to expire on March 31, 2017.

During the first two years of the audit period, there were two one-year plan extensions of the 2006 FMP on the PROF and a single one-year plan extension on the BRF followed by a one-year contingency plan. Since April 1, 2013, the Forest has been managed under an FMP prepared by the Wawa MNR District and the consulting company GreenForest Management Inc, acting on behalf of BDO Canada Limited, the receiver for Great West Timber. NFMC, which is implementing the 2013 FMP, had no role in preparing the plan.

Because Great West was bankrupt, the MNR was the *de facto* forest manager during the first two years of the audit period. MNR did a very good job keeping up the management of the forests and is to be commended for honouring the silvicultural contracts that were in place at the time, which prevented the creation of much larger silvicultural liabilities. NFMC has been very diligent in surveying the forest and identifying legacy needs as well as undertaking renewal on recent harvests. During the audit period, renewal kept up with harvesting, which was at a very low level but increased significantly on a percentage basis in 2015-16.

The overall results of this audit are favourable and the level of performance was high during the audit period. The forest was found to be managed in a manner consistent with sustainability during the audit period. The Company has substantially met the obligations in its Forest Resource Licences and is adhering to the direction in the Crown Forest Sustainability Act.

While the overall performance was good, there are opportunities for improvement and 13 recommendations were issued. Operationally, three recommendations were issued with respect to the maintenance of roads and water crossings. The reporting of natural regeneration needs to be more timely and the auditors also recommend that the Company follow up on the status of the area classed as degraded forest in the 2006 PROF FMP – while some restoration work was done early in the 2006 plan period, the challenge and the opportunity posed by these areas has been overlooked in the 2013 FMP. Lastly, a number of mapping errors came to the attention of the auditors during their field inspections and the Company has been enjoined to continue its work to fix errors and gaps in its inventory.

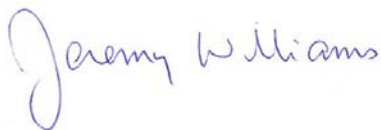
The Forest is fortunate to have a very engaged LCC that went through some difficult times from 2011 – 2014 as a result of changes made in advance of the formal amalgamation of

the BRF and PROF. While the membership has increased in recent years, there is a recommendation for MNRF to provide additional support.

One of the challenges associated with the Forest is distance. The re-structuring of MNRF known as Transformation has created added challenges for MNRF – in particular the staffing template assigned to Wawa District has the foresters responsible for more than twice the workload of foresters in other Districts. Transformation has also increased the level of staffing movement within MNRF, which is sufficiently high that it was disruptive to the effectiveness of MNRF during the latter years of the audit period. The audit team believes that there are opportunities for MNRF to find efficiencies – one recommendation is that MNRF consider making better use of technology to help it fulfil its responsibilities. The audit team has also recommended that the forester workloads in Wawa District be right-sized and that MNRF management of the Pic River Forest be streamlined through the development of a protocol between Wawa and Nipigon Districts for organizing their responsibilities on the Forest to provide greater consistency and efficiency.

Two recommendations arose from the audit team's review of the 2013 FMP – most notably that the quality of the plan objectives and indicators be improved. The need for Corporate MNRF to develop a management approach for woodland caribou in the discontinuous range is also the subject of a recommendation.

The audit team concludes that management of the Pic River Forest was generally in compliance with the legislation, regulations and policies that were in effect during the term covered by the audit, and the Forest was managed in compliance with the terms and conditions of the Forest Resource Licences held Nawiinginokiima Forest Management Corp. Forest sustainability is being achieved, as assessed through the IFAPP. The audit team recommends that the Minister issue a Sustainable Forest Licence to NFMC with a term of twenty years.



Jeremy Williams
Lead Auditor

2.0 TABLE OF AUDIT FINDINGS

A description of the background information, related discussion and conclusions of recommendations is found in Appendix 1.

Recommendation on Licence Extension
The audit team concludes that management of the Pic River Forest was generally in compliance with the legislation, regulations and policies that were in effect during the term covered by the audit, and the Forest was managed in compliance with the terms and conditions of the Forest Resource Licences held by Nawiinginokiima Forest Management Corp. Forest sustainability is being achieved, as assessed through the IFAPP. The audit team recommends that the Minister issue a Sustainable Forest Licence to NFMC with a term of twenty years.
Recommendations Directed to the SFL Holder/MNRF District
2. The Wawa MNRF District Manager shall continue to make efforts to support the growth of LCC membership and support the adoption of video-conferencing to link up LCC members in Terrace Bay and Manitouwadge as well as MNRF District staff.
3. The planning team for the 2019 FMP for the combined Big Pic and Pic River Forests shall ensure that the 2019 FMP meets the requirements of the relevant FMPM with respect to the inclusion of a description of the historic forest condition.
4. The planning team for the 2019 FMP shall conduct an analysis to determine the current status of stands in the former degraded (DEG) forest unit and whether further action is required to manage these stands commensurate with the FMP objectives.
6. NFMC shall conduct timely reporting of natural regeneration areas.
7. NFMC shall ensure that grader operators have received appropriate training so as to avoid the occurrence of wing-walls/false ditches.
8. NFMC shall clear vegetation along road rights-of way that impede vision along its forest access roads, prioritizing roads that are in greatest use.
9. NFMC shall complete the necessary remediation and maintenance operations at the Ice Creek bridge so as to address current environmental issues and avoid future ones.
10. Wawa and Nipigon District MNRF shall explore the implementation of approaches to more efficiently undertake organization responsibilities, including attendance at meetings, stakeholder outreach, and compliance and other in-field inspections.
11. The Wawa and Nipigon MNRF Districts shall develop a protocol or agreement which provides for the efficient organization of MNRF's management and administrative responsibilities on the Pic River Forest.
12. NFMC shall assess the extent of mapping errors for the period 2011-2013 and take appropriate action to ensure that map data is corrected as required and included in the planning inventory for the next FMP (expected in 2019).
13. The planning team for the 2019 FMP shall include realistic and measurable targets for all ecological indicators in the next FMP.
Recommendations Directed to Regional or Corporate MNRF
1. Corporate MNRF shall ensure that Wawa District's full-time forester staff complement per forest managed by the District falls within the range experienced in other Districts within the Northeast Region.
5. Corporate MNRF shall fulfill its commitment to develop a management strategy for discontinuous woodland caribou range to enhance connectivity between the northern continuous range and southern coastal Lake Superior populations. MNRF shall also provide appropriate assistance to planning teams for incorporating the strategy into future Forest Management Plans.

3.0 INTRODUCTION

3.1 AUDIT PROCESS AND CONTEXT

The Crown Forest Sustainability Act (CFSA), and one of its Regulations (160/04), directs the Minister of Natural Resources and Forestry (MNR) to conduct regular audits of each of the province's managed forests. These audits assess compliance with the CFSA, the Forest Management Planning Manual (FMP), and the forest management plan (FMP). Usually, an IFA will also assess whether the licensee has complied with the terms and conditions of its Sustainable Forest Licence (SFL). However, in this case, Nawiingnokiima Forest Management Corporation (NFMC or the Company) has not yet been granted a SFL by MNR; instead the Company has managed the forest under the authority of a series of three Forest Resource Licences (FRL's). One-year FRL's were issued for 2013-14 and 2014-15, and the current FRL has a two-year term starting April 1, 2015.

In addition to the compliance aspects described above, the auditors also evaluated the effectiveness of operations in meeting plan objectives and improvements made as a result of prior IFA results. The guiding document which describes the precise manner in which audits are to be carried out is the Independent Forest Audit Process and Protocol (IFAPP), which is produced by the MNR¹. Consistent with the CFSA, the IFAPP requires the audit team to provide a conclusion regarding the sustainability of the Crown forest.

An important characteristic of the IFAs is that they review the performance of both the MNR and the Company. The MNR has many responsibilities related to forest management, including review and approval of key documents (including the FMP, annual reports, annual work schedules, etc.), overseeing management of non-timber resources, undertaking compliance inspections, etc. In other words, the activities and accomplishments of both parties with forest management responsibilities are covered by the audit.

This audit of the Pic River Forest covers a five-year period from April 1, 2011 – March 31, 2016. The Forest is the result of the amalgamation of the Black River Forest (BRF) and the Pic River Ojibway Forest (PROF) that was effective April 1, 2013. Therefore, during the first two years of the audit period, the BRF and PROF were separate entities, being managed under separate FMP's. There were separate Sustainable Forest Licences for the BRF and the PROF held by Great West Timber Limited (GWT), one of the Buchanan Group of companies, but the SFL's were relinquished to the Crown in January 2013 after Great West went out of business. For the period from January to April 1, 2013, the forests were technically managed by the Crown. From April 1, 2013 onwards, the amalgamated Forest was managed by NFMC.

The planning history on this Forest is complex. At the start of the audit period, the terms of the FMP's on the BRF and PROF had ended. However, for 2011-12, one year plan extensions were put in place. These were followed by another one-year plan extension on the PROF and a one-year contingency plan on the BRF. The new FMP for the Pic River Forest came into effect on April 1, 2013. Therefore, this audit examined all forest operations that occurred on the BRF and PROF between April 1, 2011 and March 31, 2013, and on the Pic River Forest from April 1, 2013 to March 31, 2016. The development of what became the 2013 FMP started in 2008 however there were numerous delays due to the issues identified above. The long-term

¹ The IFAPP is available on the MNR web site <http://www.ontario.ca/ministry-natural-resources-and-forestry>

management direction (LTMD) was approved prior to this IFA term, but the operational part of the plan was prepared during the audit term and was assessed as part of the audit. ArborVitae Environmental Services Ltd. (AVES) undertook this IFA using a four-person team. Profiles of the team members are provided in Appendix 6.

3.2 MANAGEMENT UNIT DESCRIPTION

MNRF Wawa District in the Northeast Region is the lead administrative district for the Forest; prior to the amalgamation of the two predecessor forests, Wawa administered the BRF while the PROF was administered by the Nipigon District in the MNRF Northwest Region. MNRF Nipigon has some continuing responsibilities on the PROF part of the Forest and participated in this IFA.

The Pic River Forest consists of two separate sections (Figure 1). The land between the two sections and to the north of the Pic River Forest is the Big Pic Forest, which is licensed to NFMC. The two forests are scheduled to be amalgamated as of April 1, 2019. For a variety of reasons, a two-year contingency plan is being developed for both forests for the April 1, 2017-March 31, 2019 period, after which a full FMP is expected to come into effect.

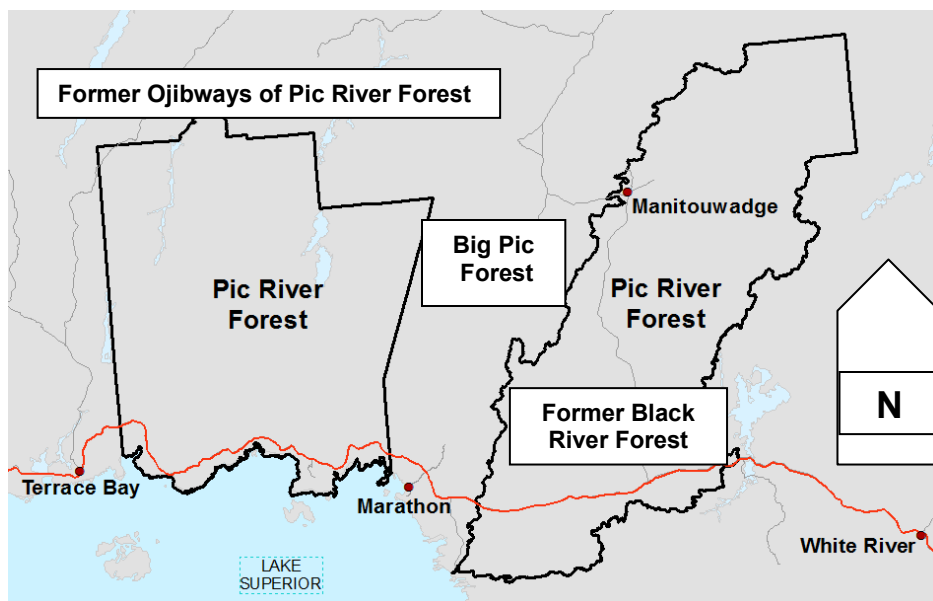


Figure 1. Map of the Pic River Forest.

Figure 1 is also notable in that neither Wawa nor Nipigon are on the map. Marathon is approx 190 km from Wawa and from Nipigon, and Wawa to Manitouwadge is approximately 200 km. To get from Wawa to the north part of the PROF takes four hours under good conditions. Dealing with distance is a significant issue for MNRF, the Company and stakeholders such as LCC members, and is a factor behind a number of the recommendations that appear in this audit report. MNRF's decision to close the Manitouwadge office is probably not reversible, but the loss of having staff located close to the forest and those active in it is noticeable.

The total area within the boundaries of the Forest is 495,640 ha, of which 1.2% is patent land and a minor amount of federal land. Of the provincial Crown land, 27,428 ha is not available for timber production since it is within the boundaries of provincial parks, conservation reserves,

and other protected areas. This leaves a total of 462,483 ha of managed Crown forest area. The classification of this area is presented in Table 1. The forest is quite productive, since there is very little non-forest or non-productive forest area present. Of the managed Crown land, 88% is productive forest that is the foundation for commercial forestry operations. However, the Pic River Forest is considered rather small by contemporary standards, hence the planned amalgamation with the Big Pic Forest.

Table 1. Managed Crown Land in the Pic River Forest²

Land Class	Managed Crown Land (ha)
Water	23,827
Non-forested Land	3,974
Non-productive Forest ^a	28,229
Productive Forest ^b	406,453
Total	462,483

Highway 17 runs east-west through the southern part of the Forest, along the shore of Lake Superior. There are few communities located within the Forest. Manitouwadge is the largest, with a population of

approximately 2100 people in 2011. Marathon is located between the two parts of the Forest, as is the community of the Ojibways of Pic River First Nation, whose traditional territory covers the majority of the PROF part of the Forest. Ginoogaming and Long Lake First Nations are located to the northwest of the PROF, and have traditional territory on the Forest. The Pic Moberg First Nation community lies just east of the BRF part of the Forest.

As is discussed throughout the report, there was almost no harvesting on the PROF section during the audit period, and a modest level of harvesting on the BRF section. B&M Hauling, based in Manitouwadge, undertook the majority of the operations on the BRF. In 2015-16, AVTB Terrace Bay (AVTB) cut a small area on the PROF, and in March 2016, a harvest company started by the Ojibways of Pic River Development Corp began cutting on the PROF.

The key mills supplied by the Forest are the AVTB pulp mill, located in Terrace Bay, and the White River Forest products sawmill located to the east in White River. Both mills primarily use spruce and jack pine, with the pulp mill taking 55% of the harvest during 2013-15 and the sawmill taking 33% of the harvest. Finding a market for the hardwood is a major challenge in this area – some of the hardwood is used as biomass for power generation at AVTB and approximately 10% of the harvest has gone to Atlantic Power's biomass facility in Calstock. Smaller amounts of volume have also gone to Olav Haavalsrud's mill in Hornepayne (recently sold), the Columbia Forest Products' hardwood veneer mill in Hearst, and commercial and personal fuelwood use.

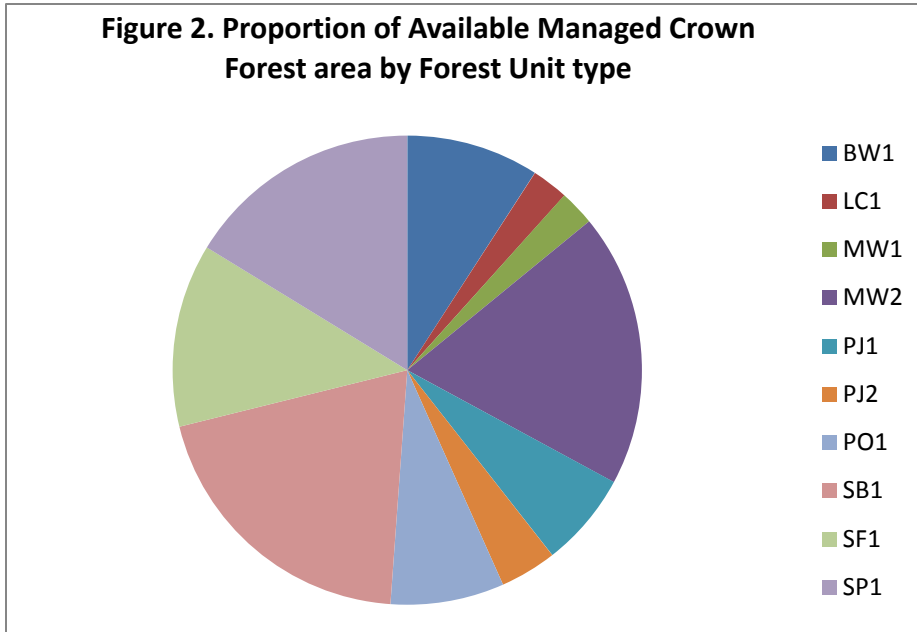
The forest is primarily boreal, although along the Lake Superior shore there are scattered outlier populations of tolerant hardwood species more typical of the Great Lakes-St. Lawrence Forest type. Figure 2 shows that the forest is dominated by coniferous species. The largest forest units are Mixedwood 2 (MW2 – 20% of the Crown production forest area), Black Spruce 1 (SB1 – 19.1%), and Spruce Pine 1 (SP1 – 16.4%). MW2 stands are on average evenly-balanced between softwood and hardwood and contain negligible amounts of jack pine. (Mixedwood stands with a meaningful jack pine component are in the MW1 forest unit.)

² Data are sourced from Table FMP-1, Phase 1 2013 Pic River FMP.

a – areas incapable of growing commercial trees e.g. rock and muskeg

b – forest areas capable of growing commercial trees

Figure 2. Proportion of Available Managed Crown Forest area by Forest Unit type



SB1 stands are essentially pure black spruce stands on lowland or shallow upland sites. Most of these stands are of fire origin. SP1 stands are primarily black spruce stands on upland sites with low levels of hardwood (generally less than 20%) and little balsam fir. Jack pine can range from negligible to moderate components of these stands.³

The forest has a considerable amount

of young and old stands, with 20% of the available managed area being less than 20 years of age. Only 13.5% of the forest is between 21 and 60 years of age, while 37% is between 61 and 100 years. The average age of the forest is estimated at 74 years. The highly desirable pure Jack Pine 1 (PJ1) and SB1 forest units have an age class structure that indicates a heavier level of utilization – almost 31% of the area in both FU's is less than 20 years of age. The average age of the PJ1 FU is 46 years, while the SB1 has an average age of 69 years.

The Forest is of great value to local residents, contributing immeasurably to their identity. Virtually all area residents use the forest in a way that is important to them, including a wide range of recreational activities.

Like all Ontario forests, the Pic River Forest supports a variety of wildlife species that depend on a mosaic of habitats. Many of the species common to the Forest are highly valued for providing recreational opportunities such as hunting and viewing. Moose is especially important. However, as discussed in Section 4.3.6, forest management is most strongly influenced by the presence of woodland caribou, which is classified as endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

3.3 CURRENT ISSUES

Several issues stood out during this audit as being particularly relevant to the performance of the auditees:

3.3.1 Low Level of Harvest

The level of harvest during the audit period was very low, representing approximately 22% of the planned level. The rate of harvest on the PROF sub-unit was especially low, with only 344

³ Other forest units include BW1 (white birch), LC1 (lowland conifer), PJ2 (jack pine 2), PO1 (poplar), and SF1 (spruce-fir). LC1 includes stands with high proportions of larch and cedar as well as black spruce. The PJ2 forest unit is primarily jack pine leading mixtures which black spruce and lesser amounts of poplar and birch. SF1 stands are typically 60% black spruce and balsam fir with almost 20% white spruce on average.

ha being reported as harvesting during the five-year period. The loss of many area mills, the bankruptcy of the company holding the SFL's for the PROF and the BRF, and concerns raised by the Ojibways of Pic River First Nation regarding non-community members harvesting the PROF sub-unit combined to keep the harvest level very low.

3.3.2 NFMC Becoming Established

Nawiinginokiima is the first Local Forest Management Corporation established in Ontario. It holds the licences for the Big Pic Forest and the Pic River Forest. The company formally came into being during the audit period and has spent a considerable amount of time setting itself up and beginning operations. MNRF has not yet issued an SFL to NFMC for the Pic River Forest, however it is expected to do so shortly. The auditors were initially concerned that there may be issues associated with the start up and dealing with past liabilities on the Forest. Plus, as the first LFMC, there was a considerable amount of effort expended to ensure that the organization and functioning of NFMC was effective.

3.3.3 MNRF District Staffing

The auditors identified issues with the ability of the MNRF organization to effectively deliver its responsibilities, particularly at the District level. Issues with MNRF effectiveness were compounded for the Pic River Forest due to the long distances from the Forest to both the Nipigon and Wawa District offices – the closure of the Manitouwadge Area Office has deprived the MNRF of staff in the immediate vicinity of the Forest. In this audit there are recommendations related to the MNRF template of positions and overcoming the compounding challenge of distance.

3.4 SUMMARY OF CONSULTATION AND INPUT TO AUDIT

The majority of the input into the audit was provided by the auditees. It is notable that MNRF staff from both Nipigon and Wawa Districts actively participated in the audit, as well as staff from Northeast Region and Corporate MNRF. Input touched on all of the aspects and challenges covered by the audit, and MNRF staff were able to inform the auditors regarding the activities that took place prior to the creation of the NFMC. LCC members were also actively involved in the audit and provided a great deal of context and information regarding not only the LCC but the activities of the forest industry and MNRF during the audit period.

The audit team advertised in two local newspapers and notices were distributed to interested stakeholders through the LCC and to members of the Manitouwadge Outdoors Enthusiasts. No responses to these invitations were received.

The audit team contacted the Chiefs of six First Nations with interests on the Forest and representatives of three Métis organizations. In-person interviews were conducted with three First Nations representatives. Aboriginal consultation is described in more detail in section 4.2.3. A more detailed discussion of input into the audit can be found in Appendix 4.

4.0 AUDIT FINDINGS

4.1 COMMITMENT

At the time of the audit, the Pic River Forest was not certified to a third-party Sustainable Forest Management (SFM) standard and as a result, the commitment principle was assessed. In

general, both the NFMC and the MNRF have demonstrated their commitment to managing the forest well and sustainably.

NFMC has in place an Environmental Policy and a Corporate Social Responsibility Charter, which can be found on its web page. The Environmental Policy covers all aspects of NFMC's business, and includes public outreach and continuous improvement. As an LFMC, NFMC has five objects in its charter, including providing economic development opportunities for aboriginal peoples and local entities, and optimizing the value of Crown resources. NFMC has begun to implement activities consistent with these objects, most notably providing material support to the new logging company started up in 2015 by the Ojibways of Pic River First Nation. Support has included offering the services of the forest operations superintendent for one day per week to help the company develop operational capacity.

Additional evidence of NFMC's commitment is represented by the energy expended by the Company in examining and addressing various liabilities that arose due to the bankruptcy of Great West Timber, which held the licences for the BRF and PROF until January 2013. The silvicultural liabilities left by Great West have been assessed and treated by NFMC. Access infrastructure has been inspected and repaired /maintained where necessary, for the most part.

MNRF is strongly committed to the sustainable management of the forest. MNRF's mandate arises from the Crown Forest Sustainability Act (CFSA), which has sustainability at its core. Additional evidence includes MNRF's continuous efforts to keep forest management approaches and practices current with science.

MNRF has recently undergone a major re-structuring and the resulting staffing allocations have resulted in there being a very low number of foresters in the Wawa District compared to the responsibilities. Wawa District stands out among the Districts in the Northeast Region as it is the administrative lead on five forests and has only two foresters. **Recommendation # 1** is intended to bring Wawa District forester staffing levels in line with regional norms.

4.2 PUBLIC CONSULTATION AND ABORIGINAL INVOLVEMENT

As indicated above, the MNRF is planning to amalgamate the Pic River Forest with the Big Pic Forest, effective April 1, 2019. There is also discussion about potential changes to the administration and licensing of the White River Forest and the Nagagami Forest, and the auditors encountered some concern and confusion regarding these potential changes in their discussions with LCC members, other stakeholders, and Aboriginal community representatives. MNRF has done extensive outreach with many stakeholders and Aboriginal communities regarding the amalgamation of the Pic River and Big Pic Forests. This process is well-advanced and the outcome is clear. The concerns relayed to the auditors related to what subsequent changes might be made and a fear that there would be a loss of influence in a larger forest. The audit team felt that it was worthwhile alerting MNRF to the concerns that were raised but decided against a recommendation given the extensive consultation /information provision effort undertaken by MNRF associated with the Pic River – Big Pic amalgamation.

4.2.1 Local Citizens Committee

The Pic River Forest now has one Local Citizen's Committee (LCC), the Pic River Public Consultation Committee, after the two separate LCCs for the predecessor forests were amalgamated. The amalgamation ushered in a period of change and decline in the LCC's effectiveness that has only recently begun to turn around. In an effort to facilitate attendance by members of the amalgamated LCC, and to encourage representation from Marathon, MNRF

moved the LCC meeting location to Marathon. Unfortunately, no Marathon residents joined the LCC, and overall attendance declined significantly as Manitouwadge members (who make up the majority of the membership) were not motivated to travel to Marathon, especially during winter. Attendance during the 2011-14 period was very low.

Issues that affected the LCC's effectiveness, as identified by the committee itself at a 2013 meeting intended to advise the District Manager of the concerns of the committee included:

- Low LCC interest & attendance due to meetings being held in Marathon, as well as forestry-only related items allowed for discussion;
- Discomfort with making recommendations when quorum not met;
- Need for more local members, and lack of response from MNRF regarding nominations for new members; and
- Need for more female representation on the LCC.

Although the LCC believes its effectiveness has improved recently and expresses 'cautious optimism' about its future, there is need for ongoing additional support of the committee by MNRF. This is addressed in **Recommendation # 2**.

In early 2016, the LCC ToR was updated from the 2011 version in preparation for the upcoming development of the 2019 FMP for the amalgamated Pic River and Big Pic Forests. The new ToR reflects the current status of LCC membership which now stands at 12 members representing 9 interest groups, including one female member. A notable change to the new 2016 LCC ToR is the provision for the establishment of subgroups in an effort to attract more members from the former PROF portion of the FMU. The subgroup structure appears to be a good model for ensuring that local knowledge representation continues to feed into the forest management planning process as the forest undergoes future amalgamation.

LCC members expressed a desire to have the MNRF DM attend a greater number of LCC meetings. The audit team supports the LCC's suggestion and notes that the use of video conferencing could assist in this regard.

4.2.2 FMP Public Consultation Process

The FMP Supplementary Documentation section 6.1.9 details the 2013 FMP public consultation summary, including concerns raised by the public and the response provided. Information centres were held in Terrace Bay, Manitouwadge and Marathon in May 2012 (Stage III), and in September 2012 (Stage IV). Details regarding the information centres (notably Stage III) were reviewed with the LCC in advance. The public consultation process was followed appropriately.

4.2.3 Aboriginal Participation

One of the characteristics of NFMC that distinguishes it from most other forest management companies in Ontario is the presence of two Aboriginal Board members: representatives of the Ojibways of Pic River First Nation and Pic Moberg First Nation. There is also a space available for a third Aboriginal representative from the aboriginal community in Hornepayne, however as of the date of the audit no representative had been identified.

Even before NFMC formally assumed management of the PRF, there was a good level of Aboriginal participation in forest planning. Of the 32 planning team meetings held between April 15, 2008 and January 30, 2013, there were representatives of Aboriginal communities present at all but 7 meetings. MNRF provided a high level of support for their participation, providing information and maps when requested; for example, the Planning Team minutes from April

2012 indicate that the Wawa MNR Aboriginal Liaison Officer was working with all six communities with interests on the Forest. This is not to say that the process went smoothly at all times – in late 2012, the Ojibways of Pic River sent a letter to the MNR outlining three major concerns – two related to access and one to values. These were resolved in relatively short order but did threaten to derail the planning process.

One of the corporate objects of NFMC is “To provide for economic development opportunities for aboriginal peoples” and the NFMC has acted on this in a number of ways, most notably by providing incentives and operational support for the start up of the MKWA Timber Company.

4.3 FOREST MANAGEMENT PLANNING

There has been extensive planning on the Pic River Forest prior to and during the audit period and further planning lies ahead in the immediate future. The amalgamation of the two predecessor forests had been planned for some time however it was delayed due to the 2008-09 recession and the bankruptcy of GWT. The following planning processes are relevant, although two of them are for plans that will come into effect after the audit period.

Black River Forest

A one-year extension of the 2006 FMP covering 2011-12.

A one-year contingency plan covering 2012-13.

Pic River Ojibway Forest

A one-year extension of the 2006 FMP covering 2011-12.

A one-year extension of the 2006 FMP covering 2012-13.

Pic River Forest

A full FMP that came into effect April 1, 2013

Amalgamated Pic River and Big Pic Forest

A two-year contingency FMP scheduled to come into effect April 1, 2017

A full FMP scheduled to come into effect April 1, 2019

At times, many of these processes overlapped – for example, in 2011, there were separate planning processes for the one-year extension of the 2006 PROF FMP, the preparation of the one-year BRF contingency plan, the 2013 FMP, and Phase II planning on the Big Pic Forest, which involved most of the same parties interested in the Pic River Forest.

This IFA reviewed the planning process for 2012-2013 PROF plan extension and the 2012-13 BRF contingency plan only. The processes of preparing the plan extensions that came into effect on April 1, 2011 are out of scope of this audit since they occurred prior to the audit period.

During the latter portion of the audit period, a planning team was developing a 2017-2019 Contingency Plan for the soon-to-be amalgamated Pic River and Big Pic Forests. This Contingency Plan is being prepared to synchronize planning schedules on the two forests, in preparation for the development of a full FMP expected to take effect April 1 2019. Although the effective date of the 2017-2019 Contingency Plan is outside the scope of this audit, work done on this contingency plan up to March 31, 2016 was reviewed. To date, the draft plan has been submitted to the MNR for review.

4.3.1 Planning Team Activities

The GWT bankruptcy and the MNRF transformation impacted the functionality of the Pic River 2013 FMP planning team. Of the 17 original positions on the planning team, 8 positions were reassigned to new members by the end of the planning process, including the Plan Author, both Co-Chairs, Operations Forester, Silvicultural Forester, Area Biologist, Aboriginal Liaison Officer, and the A/District Resource Planner. Ten additional MNRF staff were added to the planning teams to support the efforts. There was also a change in the District Manager during this time period. Interviews with a sample of planning team members, MNRF staff and LCC members indicate that the 2013 FMP Plan Author and planning team functioned well, given the circumstances. The MNRF did struggle with planning team attendance during this period. Lower staff capacity as a result of the transformation, as well as challenges with travel were cited as primary causes of MNRF attendance issues. **Recommendation # 10** addresses this issue at a more general level.

4.3.2 Plan Production

The 2012-13 PROF extension proposal was endorsed by the LCC in September 2011. On October 18 2011, the extension proposal was submitted to the MNR and was approved on October 31. The final extension plan was submitted on November 29, 2011 and approved by the MNR Regional Director on December 6, 2011. The 2012-13 PROF plan extension and proposal met the documentation requirements in FMPM sections 3.3.1, 3.3.3 and 3.3.3.1.

The 2012-13 Contingency Plan for the BRF was prepared due to delays in the preparation of the amalgamated Pic River Forest FMP. A contingency plan, rather than a plan extension, was prepared because there was insufficient timber allocated in the 2006 still available for another year of operations. The contingency plan proposal process, rationale, as well as public notification, consultation and final sign-off met the requirements of FMPM Part C section 3.

The planning process for what became the Pic River 2013 FMP began in 2007. The LTMD was prepared in accordance with 2004 FMPM. On September 15, 2010 the Planning Team endorsed the LTMD, and in December 2010, it was submitted for public review. The process was put on hold for most of 2011, as a result of the bankruptcy. By late December 2011, the LTMD was submitted to the MNRF. The MNRF Regional Director provided preliminary endorsement on January 31, 2012.

Despite all of the delays, the process for developing the 2013 Pic River FMP was effective. The draft plan was reviewed by a reasonable number of MNRF staff, including planning team members, advisors, MNRF support team members and others. Overall, a wide range of individuals reviewed the plan and provided feedback. The 2013 Pic River Forest FMP received all the required approvals.

The 2013 FMP plan document meets most of the requirements of the FMPM, although it lacked a detailed description of the historic forest condition. MNRF staff indicated that this plan component had been prepared by the first plan author and its exclusion in the final FMP was an error. This is likely attributable to the lack of continuity of plan authors and other planning team members, as well as changes in MNRF staff over the transition period. **Recommendation # 3** is provided to address this omission.

4.3.3 Harvest Planning

The 2013 FMP brought together and made consistent the planning approach on the former BRF and PROF. The 2006 FMPs organized the BRF according to the NE Region Boreal Standard Forest Units, while the PROF was organized according to the NW Region version. For the 2013 FMP, the NE Regional standard forest units, which had evolved since 2006, were used for the entire forest. The 2006 PROF FMP also identified a forest unit consisting of stands that had been degraded primarily due to spruce budworm, as is further discussed below. The 2013 FMP also reflected direction provided in the Stand and Site Guide (SSG)⁴.

In part because of the large distance between the BRF and PROF, and due to differences in the forests and the traditional users of timber, separate AHA's were calculated for each of the former forests (henceforth call sub-units of the PRF). In addition, the sub-units were maintained as separate planning areas insofar as the provision of mature and old growth forest, wildlife habitat supply and marten core areas. This approach also led to there being separate indicators for each sub-unit under some objectives.

Even though the two sub-units were separated for the purpose of calculating the AHA (and thus foregoing any allowable cut effect), the 2013 FMP provided for a 50% increase in the planned harvest area in comparison to the 2006 FMP's (an increase from 2,653 to 3,904 ha/year). However the AHA is forecast to decline from the 3,940 ha in the 2013 FMP period to a low of 2,720 ha/yr by 2053, before trending higher to reach 3,460 ha/yr in 2113. The planned harvest volume follows a similar trajectory. The profile of the harvest over time is ascribed to the age class structure of the forest as well as efforts to meet other management objectives.

4.3.4 Silvicultural Planning

The audit team reviewed the conditions on regular operations, planned renewal, tending and protection operations, renewal support requirements, and forecasts of expenditures in the 2013-2018 FMP. All elements were in conformance with applicable planning requirements and were adequate to reflect the proposed 5 years of operations. Silvicultural Ground Rules (SGR's) and the associated silvicultural standards had been updated from the 2006 FMPs for the BRF and the PROF. The 2012 Contingency Plan for the BRF was also reviewed and was found to be in conformance with all silvicultural planning requirements.

In the 2006 FMP for the PROF, some 12,000 ha of degraded stands were grouped into a forest unit (Degraded Forest or DEG) and the objective was to rehabilitate or reclassify degraded stands where access was possible as they were selected for operations (either for harvest or renewal) in the Annual Work Schedules. This objective was not met as the DEG forest unit was dropped in the 2013 FMP; the status of the DEG stands is not apparent. This is addressed in **Recommendation # 4**.

4.3.5 Areas of Concern

The AOC prescriptions developed for the 2013 plan are consistent with the direction in the SSG. Some additional revisions were made to prescriptions to adapt them to local circumstances (e.g. specific lake-trout lakes, canoe routes), but in general the direction of the SSG was followed. The FMP contains prescriptions for 45 types of AOCs, 26 of which deal with wildlife values (predominantly stick nests). The other AOCs are concerned with protection of infrastructure (8), tourism values (5), aquatic/riparian ecosystems (4) and cultural values (2). The audit team reviewed the prescriptions and found them to be appropriate for protecting the intended values.

⁴ The full title is the Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales.

4.3.6 Special Wildlife Considerations

One of the more challenging aspects of developing the FMP was the integration of measures related to caribou habitat. There is a small population of caribou occupying a narrow zone that runs along the northern shoreline of Superior – the land they inhabit is the Lake Superior Coastal Range. The forest area to the north of the coastal range is known as the range of discontinuous caribou habitat. Ontario's CCP describes the role of the discontinuous range as providing connectivity between the northern continuous distribution and the Lake Superior coastal population. While there is considerable corporate direction for managing caribou within its zones of continuous distribution, comparable direction for the discontinuous range is absent in spite of a commitment in the CCP to *"develop a management strategy for discontinuous range management to enhance connectivity between the northern continuous range and the southern coastal Lake Superior populations"*. As one MNRF biologist noted, it is disconcerting that the most imperilled portion of caribou range in the province (i.e. the discontinuous zone) is the last to have a strategy developed for it. The need for a strategy for managing caribou habitat in the discontinuous zone is the subject of **Recommendation # 5**.

4.3.7 Access

There are 131.4 km of primary road and 115.5 km of branch road scheduled for construction in the 2013 FMP. All the required content related to access planning is provided and consistent with the requirements of the FMPM related to corridor identification and use management.

4.3.8 Plan Amendments

There were five amendments to the 2013 FMP, all of which were administrative. This is a low number of amendments, likely reflecting the low level of harvest activity on the forest. Amendments were approved in a timely manner.

4.3.9 Annual Work Schedules

Since NFMC has taken over planning responsibilities on the PRF, timelines for submitting the AWS were in line with FMPM requirements. AWS presentations were made to the LCC in all years within the scope of this audit, except for 2014, which was the year that the AWS was prepared by another forest management contractor (RW Forestry) in Thunder Bay. Interviews with the LCC indicate that they were very happy with AWS presentations they have received.

During the audit period, the AWS's provided a planned harvest area that was generally equal to between 2 – 2.7 times the average annual planned harvest area. In cases where the planned harvest area exceeded 2 years of harvest area, a reasonable rationale was provided. In many cases, the rationale consisted of rolling over areas not harvested in previous years due to poor market conditions and reduced harvest.

4.4 PLAN ASSESSMENT AND IMPLEMENTATION

4.4.1 Harvest

The harvest level on the PRF has been very low during the audit period. The actual harvest level has been 22% of the planned level during the first three years of the 2013 FMP, and there was no harvesting on the PROF between 2009-10 and 2013-14, and in 2014-15 and 2015-16, a total of 344 ha was harvested. One of the more challenging factors is the utilization of OSB-quality hardwood (i.e. poplar and white birch), since all of the hardwood using mills in the North Superior region closed during the past decade, and only one has opened under new ownership

(Ren-tech) manufacturing a new product (pellets). The AVTB mill has begun to take small amounts of hardwood for use in pulping, and there are several consumers of biofibre, which is one way of using the mid to low-quality hardwood. This has constrained the types of stands that can be operated.

It is notable that the harvest level is expected to continue its recent rising trend on the PRF. Most notably, the Ojibways of the Pic River First Nation have started up a forest harvesting company, which began operations on the PROF subunit in January 2016. As the Company develops staff and experience, the harvest level on the PROF sub-unit, and the forest as a whole could rise substantially.

Operations were conducted well – utilization was good (within the context of challenging hardwood markets), there was negligible site damage and the retention of residuals was at or above required levels. The management of slash and chipper debris improved during the audit period – there is additional room for improvement. The audit team suggests that NFMC continue to explore an implement improvements in the ways that logging waste is dealt with to minimize loss of productive area.

4.4.2 Areas of Concern

The audit team inspected 10 different types of AOCs during the course of the audit, both from the ground and by aerial reconnaissance. The audit team found no violations of the prescriptions in the AOCs inspected. One issue regarding a skidder violating a riparian AOC was noted in the compliance reports however this appears to have been an isolated incident.

4.4.3 Silvicultural Operations

Silvicultural projects observed in the field were generally of good quality; the prescriptions were appropriate for the site conditions and appeared to have been effective. There were no systemic issues or concerns associated with renewal and tending operations. The observed treatments were consistent with SGR's and associated silvicultural standards.

Table 2 compares planned versus actual levels of silvicultural activities during i) the 5-year 2011-2015 audit period, ii) the 2006-2013 FMP terms for the BRF and the PROF, which were both extended to seven years, and iii) the first three years of the 2013 FMP term. The planned levels of silvicultural activities were not achieved in the latter two timeframes because the reduced levels of harvesting over the same time periods resulted in less area being available for treatment. Over the seven-year 2006 FMP term, regeneration activities were implemented at a rate proportionately higher than the level of harvesting, indicating that the renewal effort has kept up with the level of harvesting. After the first three years of the 2013 FMP, the rate of regeneration was slightly less than the level of harvesting. During the 2006 and 2013 FMP terms, more area was planted than planned and less area than planned was declared regenerated by natural means. The low rate of natural regeneration is further discussed in Section 4.6.3 and is addressed by **Recommendation # 6**.

Following the GWT bankruptcy, MNRF made the decision to honor all silvicultural contracts and proceeded to implement critical silvicultural and monitoring programs (i.e., free-to-grow assessments) during the 2011-2013 period. MNRF staff at both Districts are to be commended for this effort since the investments of prior silvicultural work have been realized and a costly backlog of silvicultural work has been avoided.

Table 2. Planned versus actual areas for silvicultural activities during the audit period and applicable FMP terms.

	Area (ha) treated in audit period 2011- 2015	Area (ha) treated during PROF & BRF 2006 & BRF 2006 FMPs (2006- 2012)	7-yr Planned Area	Percent Actual/ planned	Area (ha) treated in 1 st 3 years of the PRF 2013-2018 FMP	5-yr Planned Area	Percent Actual/ planned
Renewal							
Natural Regeneration	559	2,401	8,975	27%	559	8,936	6%
Artificial Regeneration: planting	2,781	7,370	8,230	90%	1,482	7,271	20%
Total Regeneration	3,340	9,771	17,205	57%	2,041	16,207	13%
Site Preparation							
Mechanical	1,086	1,993	7,685		1,086	5,736	
Chemical	322	460	1,330		322	2,671	
Total Site Preparation	1,408	2,453	9,015	27%	1,408	8,407	17%
Tending: chemical aerial	4,920	4,402	8,915	49%	1,022	5,281	19%
Harvest	4,036	10,329	19,058	54%	2,719	19,518	14%
Free-to-grow assessment	9,480	13,630	20,905	65%	0	24,119	0%

Site preparation was conducted on approximately 51% of artificial regeneration projects during the audit period. This was an appropriate proportion for the observed site conditions, since many sites had little competition and limited amounts of slash and debris, and these could be planted without site preparation. The mechanical site preparation treatments, which were conducted mostly with passive disk trencher equipment, were of generally good quality.

The renewal support program was reviewed and found to be sufficient to support NFMFC's proposed tree planting program. Planned cone collection forecasts for the 2006 & 2013 FMPs were not achieved for all species however the current seed inventory (as of Sept 2016) is adequate to support silvicultural needs for planting stock production for the next several years. There is no seeding program implemented or planned for the Pic River Forest. There is no tree improvement infrastructure on the forest and NFMFC is not a member of any seed associations (e.g. NESMA), thus no improved seed is available for planting stock production.

In general, tending treatments were conducted on appropriate sites and appeared to be effective. However, three blocks inspected in the field that were tended during the 2011 – 2013 period did not appear to require treatment, which was likely due to lack of site inspections to determine tending needs prior to treatment. Also, the tending treatments on two other blocks appeared to be ineffective. The latter may be related to the spray program being carried out late in the season on these sites, at times when target species were less susceptible to the treatment. These issues were not observed for treatments conducted in 2014 and 2015. NFMFC has implemented a program of field inspections to determine tending needs and to refine the treatment boundaries, as well as post-application field inspections to determine treatment effectiveness. These measures should minimize instances of these situations in future. There were no compliance issues associated with the tending program.

4.4.4 Access

The company's annual reports indicate that there was less than 10 km of primary and branch road constructed over the audit period, although there was a considerable amount of grading and other maintenance, covering over 2,000 km. During the audit period, NFMC received approximately \$1.3 million through the provincial roads funding program, of which almost 80% was used for maintenance of the existing road network. The audit team drove on more than half of the newly-constructed road and much of the existing road network on the Black River subunit to confirm that the funds were invested as claimed. Roads were in reasonable condition appropriate for their use.

The audit team noted three issues. For considerable lengths of some roads, the audit team noted that grading operations resulted in the creation of wing-walls. This is addressed in **Recommendation # 7**. The audit team also noted the need to conduct brushing along roadsides to ensure clear lines-of-sight for safe driving conditions. This is addressed in **Recommendation # 8**. Lastly, although most crossings were in good condition, the audit team viewed two that needed remedial attention; one has been addressed since the field visit. The remaining crossing is the topic of **Recommendation # 9**.

4.5 SYSTEM SUPPORT

4.5.1 Human Resources

NFMC is well-staffed with a core of competent and enthusiastic staff and it has made effective use of contract staff to provide additional expertise where needed.

The entire MNRF organization is facing staffing challenges associated with the roll-out of its Transformation initiative, which has re-structured District and Regional responsibilities and staffing. The extent of the disruption is negatively affecting the organization's effectiveness, and this was observed in a number of ways in this audit.

In the case of the PRF, the challenges are compounded by the great distances (and travel times) from the Nipigon and Wawa District Offices to the Forest. The recent closure the Manitouwadge Area Office has contributed to the problem – Wawa District is now renting accommodation in Manitouwadge to help ease the amount of time staff spend travelling. (The relatively low number of forestry staff allocated to Wawa District, in comparison with the District workload, exacerbates the problem – see **Recommendation # 1**.) The audit team highlights the opportunity for MNRF to accelerate the adoption of technologies that could help mitigate the challenges associated with distance. As activity levels increase on the Forest, MNRF will have greater incentive to find ways to work more efficiently - **Recommendation # 10** is intended to encourage this line of thinking.

A second organizational issue arises because the PRF straddles the Nipigon and Wawa Districts and also the Northeast and Northwest Regions. Activities on the PROF sub-unit are under the jurisdiction of Nipigon District and MNRF Northwest Region, whereas the BRF is administered by the Wawa District and the Northeast Region. As discussed in **Recommendation # 11**, management of the forest would be improved by streamlining management and administrative responsibilities.

4.5.2 Document and Record Quality Control

Both the Company and MNRF are experiencing challenges regarding the management of documents from the early part of the audit period, and earlier. In the case of MNRF, the challenges were primarily associated with the fate of records following the closure of the Manitouwadge Area Office – many of the records are in boxes at the Wawa District Office, waiting to be organized.

The Company had more significant challenges, since many of the records originating prior to 2014, formerly held by GWT, were not transferred to NFMFC or to MNRF. Field records, planning documents, and even 2,172 ha of FTG data obtained from assessments in 2007 were not available. The Company has been intensively surveying its landbase to search for areas where there may be silvicultural or assessment liabilities, and is making good progress in completing these surveys. The Company is reaching the point where the combination of its growing catalogue of available data as well as the growing obsolescence of the earlier records will lead it to move forward using its own data and information.

During field inspections for activities implemented in the years 2011-2013, auditors noted mapping errors on 5 sites inspected in the field. This is the subject of **Recommendation # 12**.

4.6 MONITORING

4.6.1 Compliance Planning and Monitoring

The 10-year compliance strategy for the forest, included in the 2013 Phase I FMP, contained all the required content as outlined in the Forest Compliance Handbook. In addition, annual components of the compliance plan were included in each year's AWS as required. MNRF District annual compliance plans were not produced in any year of this audit's scope for Wawa District and only for one year by Nipigon District. This is permissible in the guidance provided by Directive 07 02 03 of the 2010 Forest Compliance Handbook; however the 2014 version of the Handbook puts increased emphasis on the utility of these annual plans. Accordingly, both MNR Districts have indicated a greater commitment to annual compliance planning in future.

In total, only 95 audit inspections were completed by MNRF and industry staff combined during the audit term. Although this number is a low in comparison with other SFLs, given the relatively small size of the forest and low level of operations, the small number of inspections is not disconcerting. No non-compliances were reported in the audit inspections, although 6 operational issues were identified related to road planning (3), unhailed winter harvest (2) and an unauthorized crossing of a creek by a skidder. None of the issues remain outstanding.

4.6.2 Annual Reports

Annual Reports (AR's) covering five years are within the scope of this audit. The 2011-12 and 2012-13 AR's were submitted for the BRF and PROF by several different authors on behalf of the different managers and overseers of the Forests (including Pic River Development Corporation, NFMFC, and the MNRF). There was consistency in the production of the 2013-14 and 2014-15 AR's since the plan author of the 2013 FMP produced these documents for NFMFC. This 2013-14 and 2014-15 ARs are well written, include all the content required by the FMPM and make good use of tables in the body of the reports to provide data clearly. Good explanations of factors affecting operational levels are provided.

4.6.3 Silvicultural Effectiveness Monitoring

NFMC has developed and implemented a comprehensive system for monitoring silvicultural operations. This system includes field inspections of all harvest blocks either during or before harvesting, post-cut assessments to verify and/or to refine Forest Operations Prescriptions (FOP's), installation and assessment of plantation survival plots, field inspections for the assessment of tending needs and refinement of boundaries before treatment, tending effectiveness surveys conducted one year after treatment, and regeneration and competition assessments conducted 4 years after treatment to determine if any silvicultural follow-up is required. This monitoring includes a mix of visual and formal assessments. At the time of the audit, much of the data was captured on paper and maps, but NFMC is developing digital record keeping procedures and links to planning and scheduling silvicultural operations.

Although NFMC has developed a good system of identifying natural regeneration areas, reporting of these areas in annual reports has not kept up with FMP forecasts, as indicated by the low rate of natural regeneration reported for both the 2006 and 2013 FMP terms. Timely reporting of natural regeneration is important since the FMP calls for natural regeneration to comprise more than 50% of total renewal for the forest. **Recommendation # 6** addresses this.

During the audit period, MNRF District staff at Wawa and Nipigon implemented SEM programs according to direction on core tasks from the Provincial Silvicultural Program and from the respective MNRF Regions. Work was completed on all required core tasks as needed, despite the complexities of merging the PROF and BRF and the associated changes in management responsibility during the audit period. In general, MNRF assessments were consistent with the results of free-to-grow surveys conducted by the licensees. No significant issues were identified with regeneration success, although the MNRF assessors noted that a few stands that had not received prescribed tending treatments sometimes contained higher proportions of hardwood species than intended and thus were not tracking towards the future forest units projected by the respective SGRs, however, sample sizes were too small to draw definitive conclusions in this regard. MNRF implemented tending programs from 2011 to 2013 that were intended to deal with a backlog of sites needing tending and NFMC has kept up an appropriate tending program since then. These measures should minimize any potential impacts of this issue in future.

Free-to-grow (FTG) Assessment Results

During the audit period, 13,630 ha were assessed for FTG status (see Table 2) and 10,503 ha were approved by MNRF as FTG (77% renewal success). For the terms of the two 2006 FMP's, FTG assessments were completed on 66% of the planned area for the PROF and BRF combined (including the two-year extensions/ contingency plan). During the first three years of the 2013 FMP term, no FTG assessments were conducted. Analysis of inventory records indicates that there is a backlog of approximately 25,000 ha requiring FTG assessment on the PRF. NFMC has a Silvicultural Liability Plan in place which addresses the backlog of FTG assessment area, as well as other aspects of the SEM program for the forest. In addition, NFMC is collaborating with MNRF to implement an intensive, ground survey-based SEM pilot project. Coincident with this project, NFMC is in process of implementing a large ground-based survey program which will assess most or all of the backlog area by the end of the FMP term.

4.7 ACHIEVEMENT OF FOREST MANAGEMENT OBJECTIVES & SUSTAINABILITY

4.7.1 Trend Analysis Report

The Trend Analysis was comprehensive and included the required information and analysis. The key trends identified in the report have been discussed in preceding sections of this audit report. Some of the more subtle trends include a discussion about the much higher proportion of planned SPF timber that has been cut, compared with hardwood, and the implications for the renewal program. The analysis of planned versus actual volume per hectare was also of interest. The increasing trend in volume /ha achieved is quite significant, rising from 76 m³/ha during the 1996 plan period to 101 m³/ha during the 2006 FMP period. In the first two years of the 2013 FMP, the realized average yield was 139 m³/ha, which perhaps can be attributed to an emphasis on cutting the better stands early in the plan period and the increased use of biofibre.

For the area declared FTG during the audit period, Table 3 shows the area that regenerated to each forest unit versus the target forest unit. Note that some surveyed areas, such as older stands, could not be assigned to forest units because silvicultural records were absent or were not compatible with this analysis. It is difficult to portray this data in a common format because of the changes to forest units over time associated with the historical FMPs for the PROF and BRF, the different prescriptions associated with these areas, and Regional differences in standard forest units. Accordingly, provincial forest units, which have broader definitions than local or Regional forest units, have been utilized to bring all the data into a common format. The yellow highlighted cells indicate the area that renewed to the target forest unit (i.e. silvicultural success). The right-hand column in Table 3 reports the percent of the area harvested in the original forest unit that renewed to the planned forest unit (i.e. the silvicultural success rate). The overall rate of silvicultural success (i.e. the proportion of area matching the projected (target) future forest unit based on the appropriate SGRs) is 69%, which is a reasonable result.

Table 3. Pic River Forest FTG Results 2010-15, expressed as Provincial Forest Units.

Area (ha)	FTG FU							Grand Total	Silv Succ
	BWT	MCL	MCU	MIX	PJK	POP			
Target FU									
BWT	0		17	50		80	148	0%	
MCL		1	71	49	4		125	0%	
MCU	28	83	4,000	361	17	16	4,505	89%	
MIX	1		84	1,683	20	170	1,958	86%	
PJK			1,115	8	637		1,760	36%	
POP			68	560		1	629	0%	
Grand Total	29	84	5,355	2,712	678	268	9,125	69%	

NFMC's silvicultural and harvest mapping and record keeping, FTG assessment data management, and inventory update process were reviewed and was found to be in conformance with FMPM and FIM requirements.

The analysis of the degree of the achievement of 2013 FMP objectives is consistent with that of the auditors (see next section) and the plan author concluded that the forest was being managed sustainably, while acknowledging that the socio-economic objectives that are concerned with benefits from harvesting are being under-achieved.

4.7.2 Assessment of Objective Achievement

The audit team evaluated the extent to which objectives in the 2013 FMP had been achieved. The audit team fully recognizes that an assessment based on three years of data is necessarily preliminary, however it looks very likely that the actual level of harvest will be well below the planned level for the whole of the plan term, although harvesting levels are projected to rise gradually as MKWA increases its rate of harvest, primarily on the PROF sub-unit.

The 2013 FMP has ten objectives, each of which is supported by one or more indicators. The audit team reviewed the achievement to date of these objectives and found that there has been little progress towards meeting the objectives that are based on forest operations. The chief reason for this is that the level of harvest has been very low compared to the planned level. Consequently, there were few disturbances that changed the forest and fewer economic benefits than anticipated. Several objectives are associated with outcomes from planning. These can be useful additions to the suite of objectives but they have no role in guiding performance once the plan is approved.

The targets set for most ecological objectives are defensible, however for some, they seem to provide little or no direction for forest management and are therefore of little utility. The socio-economic objectives in the plan are generally weak – of the five, two and large parts of a third are based on planning outcomes, one is concerned with maintaining the area of Crown productive forest available for timber management (this value is very stable; any changes are the result of government policy which is outside of the Company's control), and one simply commits the Company to managing its own roads (this should go without saying). In conclusion, the assessment of progress towards achieving the 2013 FMP objectives provides little insight because it is early in the plan term, the harvest level has been very low, and a number of the objectives are of limited value. The objectives of limited utility are the subject of **Recommendation # 13**.

Due to the weaknesses of some of the objectives and their indicators, and the overwhelming influence that the low level of harvest has had on likelihood of objective achievement, little insight regarding sustainability can be gained from this assessment of objective achievement.

4.7.3 Assessment of Sustainability

The auditors considered a wide array of information in evaluating the sustainability of management of the Pic River Forest. The evidence leads the audit team to conclude that forest sustainability is being achieved as assessed through the Independent Forest Audit Process and Protocol document.

The main factors that led to this conclusion are:

1. The very low harvest level makes it difficult to argue that the forest is not being managed sustainably. While the level of economic benefits generated by the forest is less than planned, there is still a significant benefit being generated while most ecological aspects of sustainability are being supported. The social and economic components of SFM are being given attention. Notably, the Company has provided considerable financial and advisory support to the Ojibways of Pic River First Nation as they have started up a logging company (MKWA Timber Corp) and the LCC is very engaged and provides a crucial link to area residents.
2. While there were silvicultural liabilities created on the Forest due to the bankruptcy of Great West Timber, the decision by MNR to honour existing planting, tending and other

renewal contracts in place at the time of the bankruptcy prevented greater losses from occurring. MNRF staff deserve great credit for making the right decision in a very heated environment.

3. NFMC is doing an excellent job of managing the forest. The Company has expended a great deal of effort understanding the silvicultural and monitoring liabilities, developing plans to address them, and overhauling and modernizing the data and records system.
4. The Forest is generating reasonable amount of funds and NFMC has made good progress restoring the Forest Renewal Trust to its appropriate level (See discussion in section 4.8).

4.8 CONTRACTUAL OBLIGATIONS

NFMC has been issued a series of Forest Resource Licences (FRL's) for the Pic River Forest since April 1, 2013. After two one-year FRL's, the Company now holds a two-year FRL that is scheduled to expire March 31, 2017. By that time, MNRF and the Company expect that NFMC will have been issued a SFL. Many conditions of an FRL are identical or very similar to the conditions in an SFL, however there are some differences. The audit team assessed NFMC's compliance with the conditions in the FRL's in general, and most specifically with respect to the current FRL. The conclusion is that the Company is in compliance with the terms of the FRL, or is working towards compliance in situations where it is dealing with liabilities resulting from bankruptcy of GWT, the previous SFL-holder. The detailed assessment can be found in Appendix 3.

The Company is up-to-date in all of its Crown payments. NFMC inherited a combined deficit of \$1.1 million in the Forest Renewal Trusts for the two previous forests. The Company has reduced the deficit to approximately \$300,000 in 2016 and is well on its way to eliminating the deficit in a timely manner. The Company also inherited a 25,000 ha backlog of areas that required free-to-grow assessment, as well as a backlog of area that required tending following renewal. Much of the tending backlog has been addressed. While almost 9,500 ha of FTG assessment was done during the first two years of the audit period, NFMC has yet to do any FTG assessment on the Forest.

Auditors reviewed in the field a total of 1,189 ha of area that was mechanically site prepared, planted and tended in 2014-2015, representing 76% of eligible silviculture work that was charged to the Forest Renewal Trust for that year. Field inspections of these activities determined that maps were accurate and that work was completed as invoiced to the FRT per the Specified Procedures Report.

IFA's were conducted in 2011 on each of the predecessor forests. Six recommendations were issued on the BRF and seven on the PROF; many of the recommendations were issued on both forests. The action plans were developed as the previous SFL-holder was in bankruptcy proceedings and MNRF transformation was being planned. In general, the recommendations related to monitoring conifer renewal and providing timely tending interventions have been met and some progress has been made in eliminating the backlog of free-to-grow assessment area. MNRF has also made some progress in meeting its silvicultural effectiveness monitoring and increasing the number of compliance inspections it conducts. Further work is planned to completely eliminate the remaining backlog in area requiring FTG assessment.

The Company also met the licence requirements regarding annual planning and reporting, instituting an effective compliance program, and meeting the intent of the wood supply commitments on the Forest.

4.9 CONCLUSIONS AND LICENCE EXTENSION RECOMMENDATION

This audit has reviewed the management of the Pic River Forest for the period April 1, 2011 to March 31, 2016. This period covered two one-year plan extensions for the two predecessor forests and a second one year extension on the PROF and a one-year contingency plan on the BRF. The last three years of the audit term saw the NFMC implement the first three years of the 2013 FMP. The audit scope also includes the preparation of the second plan extension and the Contingency Plan as well as the preparation of the 2013 Phase I plan.

The audit period can be usefully divided into two parts. During the first two years, the two predecessor forests were still separate entities and were essentially managed by MNRF since the SFL-holder, Great West Timber had gone bankrupt. The Pic River Forest came into being on April 1, 2013 and during the three most recent years of the audit period, the forest was licensed to NFMC. While NFMC implemented a 2013 FMP on the Forest, neither it nor its staff were involved in its development. MNRF staff did a commendable job managing the two forests during the first part of the audit period, however significant databases and other information was not transferred to the new company, which imposed a burden on NFMC as it was starting up. The Company, with assistance from MNRF, has done very well to update and generate its own information. Also during the audit period, the MNRF went through a major re-organization that created a number of challenges for Wawa and Nipigon Districts, some of which they are still dealing with.

The audit team has developed 13 recommendations, in addition to the licence extension recommendation, which is a relatively low number that indicates a good overall audit. Five of the recommendations are directed towards the NFMC, three towards the MNRF Districts (usually Wawa but sometimes both Wawa and Nipigon) and two to the Corporate levels of MNRF. Three recommendations are directed towards the planning team for the 2019 FMP.

Three of the recommendations may be classified as operational, and all pertained to roads and water crossings. The Company's performance on the remainder of its operational activities was quite good. The three recommendations directed towards the planning team point to deficiencies or weaknesses in the 2013 FMP. The most significant of those concerns the set of plan objectives and associated indicators, which the audit team felt were not overly useful or informative. The recommendations directed to Corporate MNRF reflect the fact that there were significant needs and opportunities identified on the Pic River Forest to address forest management issues which also have broader implications for management of the Province's forests. The audit team identified a number of challenges faced by District MNRF staff in effectively meeting MNRF responsibilities and these led to three recommendations.

The overall results of this audit are favourable. NFMC, with support from the MNRF, has built an excellent organization and has created a sound footing for future success. Management of the Pic River Forest as implemented by NFMC and the MNRF Wawa and Nipigon Districts is found by this audit to be sustainable and in compliance with the Crown Forest Sustainability Act.

The audit team concludes that management of the Pic River Forest was generally in compliance with the legislation, regulations and policies that were in effect during the term covered by the audit, and the Forest was managed in compliance with the terms and

conditions of the Forest Resource Licences held by Nawiinginokiima Forest Management Corp. Forest sustainability is being achieved, as assessed through the IFAPP. The audit team recommends that the Minister issue a Sustainable Forest Licence to NFMC with a term of twenty years.

APPENDIX 1 – AUDIT FINDINGS

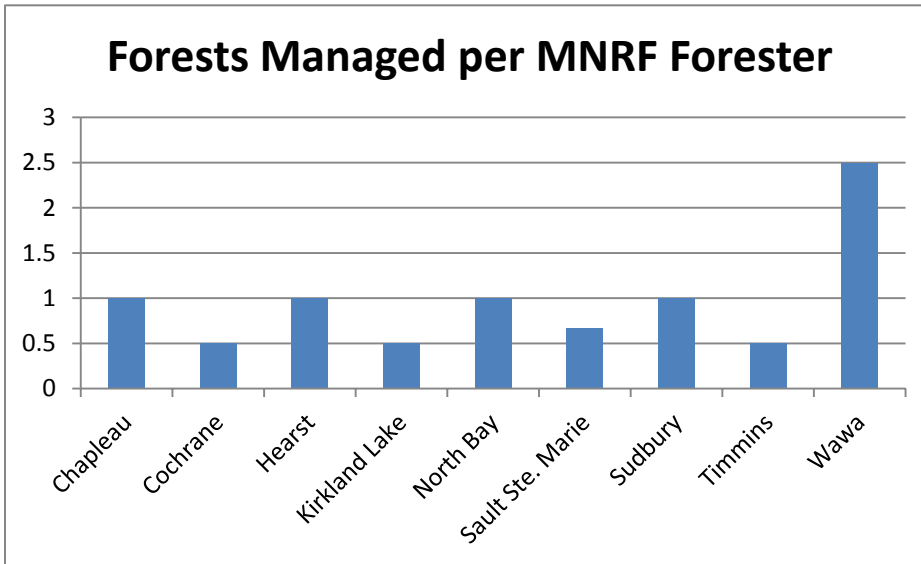
Recommendation # 1

Principle 1: Commitment

Procedure 1.1: 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 Wawa District is the lead MNRF administrative district for five different forests, including the Pic River Forest. Nipigon District retains some responsibilities on the Pic River Forest, specifically on the PROF sub-unit.



Wawa District has been assigned two full-time forester positions in the staffing structure associated with the newly re-structured MNRF. In comparison with all other Districts in the Northeast Region, this places an untenable workload on the foresters. The figure to the left shows that in no other District does one forester position have responsibility for more than one forest, whereas in Wawa District each forester is responsible for 2.5 forests.

Discussion: The District has brought this staffing discrepancy to the attention of Northeast Region and the District has been given funding to hire foresters on contract, however this has not proved to be an effective way of addressing the workload challenges. The value of using contract staff is limited by the amount of staff movement within MNRF; in particular the availability of full-time positions elsewhere in the organization lures away many contract staff. There is also a period of time during which the new staff need to be overseen by the existing staff, in effect adding to the full-time foresters’ workload.

The pending amalgamation of the Pic River and Big Pic Forests will reduce to four the number of forests where Wawa is the lead manager. This amalgamation is planned to take effect as of April 1, 2019. There are also plans, at an earlier stage of development, to amalgamate the Magpie Forest with the Martel Forest. An April 1, 2021 date is currently contemplated and it is not yet determined which District will be the lead – Chapleau District is the lead for the Martel Forest.

There are two limitations to relying on these amalgamations to reduce the workload of Wawa District foresters. The first is that even if Wawa remains the lead District for three forests by 2021, this is still a greater workload for the District foresters than is the case in all other NE Region Districts. Secondly, the process associated with the amalgamations involves a great deal of forester time, since the planning load is often higher than usual (e.g. the planning associated with merging the Pic River and Big Pic Forests illustrates this) and there are other additional duties. It is not uncommon for amalgamation processes to take longer than expected (having insufficient staff resources could lead to a delay).

Conclusion: The workload associated with being the lead MNRF manager for five forests is too much for two foresters to handle effectively. The amalgamation processes themselves add to the forester workload. Given the timelines and workload profiles outlined above, the audit team does not believe it will be effective

for MNRF to wait for amalgamations to reduce the workload for the Wawa District forester staff.

Recommendation: Corporate MNRF shall ensure that Wawa District's full-time forester staff complement per forest managed by the District falls within the range experienced in other Districts within the Northeast Region.

Recommendation # 2

Principle 2: Public Consultation and Aboriginal Involvement

Criterion 2.1: Local Citizens Committee

Procedure 2.1.2: Review and assess whether the LCC met the purposes and conducted its activities in accordance with the applicable FMPM. Include the following: ...

- Interview a representative sample of LCC members and review LCC reports to determine whether in their view the LCC has achieved its purpose and if there are areas where the LCC may be improved

Background Information and Summary of Evidence: The LCC for the Pic River Forest is an amalgamation of the former Manitouwadge Public Consultation Committee and the Terrace Bay Resources Advisory Committee. The amalgamation of the LCCs accompanied the amalgamation of the PROF and BRF for the Pic River FMP process.

The amalgamation of the two LCC's did not go well, as the decision to move meetings to Marathon did not result in any new members from Marathon and led to resignations and declining attendance by the members from Manitouwadge. In addition, the former PROF LCC lost most of its members.

Early efforts to bring on new members foundered, to the frustration of the LCC membership. In 2012, the LCC recommended four people who were willing to join the LCC, however, LCC members stated to the audit team that the MNRF did not respond. LCC meeting minutes indicate that the MNRF wanted more representation from different groups, despite the fact that LCC participation and attendance was very low, and quorum was not often met at LCC meetings. The second attempt at nominating new members was more successful, and starting in 2015, six new members were brought forward by the new LCC Chair and appointed by the DM.

The current makeup of the LCC consists almost exclusively of Manitouwadge residents. Only 2 of the 12 members represent interests on the former PROF. Interviews with LCC members and MNRF staff also indicated that more First Nation participation on the LCC would be very welcome, however, there appears to be little interest by First Nations to participate in forest management planning through the LCC.

One of the changes to the ToR aimed at increasing diversity of membership is the provision for the establishment of subgroups. This is an effort to attract more members from the former PROF portion of the amalgamated FMU, and to promote community representation in the event of future amalgamations. The ToR states that "the LCC may be composed of subgroups with each subgroup representing a community within the larger forest management unit and with all subgroups forming the collective function of the LCC in the wider geographic land base". In addition, provisions are included for resources to have "local community representatives from each subgroup to meet on a regular basis to address collective issues related to the entire FMU as required". LCC members interviewed expressed strong satisfaction in the concept of subgroups being approved in the 2016 ToR.

Despite recent improvements, the following concerns remain, from the LCC's perspective:

1) Increasing community representation:

The distance for Terrace Bay members to travel to attend meetings in Manitouwadge remains an issue. The LCC wishes to explore remote conferencing options, which apart from saving travel time and costs for the Terrace Bay members may also encourage other members (either from Terrace Bay or other communities) to join. Opportunities to use the video conferencing facilities at AV Terrace Bay may exist.; Manitouwadge Health Centre has already offered theirs.

2) Maintaining Member Interest in the LCC

The past 5 years has seen a loss in LCC membership, including long-serving members. LCC members interviewed often felt that the MNRF's interest in maintaining the LCC appears to drop outside of planning

years. While this is perhaps the primary mandate of the LCC, this limited scope may over time have a negative impact on maintaining longstanding members, who bring valuable and significant local knowledge to the forest management planning process. Given the strong connection between LCC members and the community, and the enthusiasm by LCC members to contribute to broader forestry and natural resource stewardship in their communities, providing the LCC with educational partnerships and opportunities for community stewardship beyond that of the forest management planning process seems a logical approach to fostering good will and providing knowledgeable input into management of the forest.

3) Future Amalgamations

Several LCC members expressed trepidation over future amalgamations, which could result in less local input into the forest management planning process. Given the challenges that occurred during the PROF and Black River Forest amalgamation, ensuring future amalgamations are able to accommodate expanded regional interests and participation will be important. The new 2016 LCC ToR includes provisions for the subgroup model, which, if applied, could be a cost-effective and efficient way of accommodating a larger pool of community interests as the Forest expands.

Discussion: The management of the LCC has proven to be challenging for Wawa District MNRF. While the decision to move the meetings to Marathon was a good idea as an effort to broaden participation, the MNRF was slow to recognize that it was not working. The long distance from Wawa to Marathon and Manitouwadge contributed to the lack of recognition of the situation that was developing, and MNRF appeared to be rather disconnected from the LCC during the 2012-2014 period.

The LCC membership deserves recognition for their perseverance and pro-active efforts to address the challenges that they faced. The LCC has identified a number of valid concerns based on their experience in providing input into the management of the forest.

Distance remains a challenge, however in the view of the audit team, the availability of video conferencing should be taken advantage of. This includes not only conferencing between Terrace Bay and Manitouwadge but also with Wawa. The technology is present and well suited to exactly this type of situation – it should be used.

Conclusion: MNRF faces a challenge in keeping local citizens committees engaged as forests become larger through amalgamations. The following recommendation is intended to spur MNRF to continue to search for ways to overcome these issues as they relate to the Pic River LCC.

Recommendation: The Wawa MNRF District Manager shall continue to make efforts to support the growth of LCC membership and support the adoption of video-conferencing to link up LCC members in Terrace Bay and Manitouwadge as well as MNRF District staff.

Recommendation # 3
<p>Principle 3: Forest Management Planning</p> <p>Criterion 3.3: Management Unit Description</p> <p>Procedure 3.3.1.1 /3.3.1.3: Both the 2004 and 2009 FMPM contain the following direction: Assess the description of the historic forest condition considering forest type, natural processes, and fire and disturbance history as it impacts the plan ...</p>
<p>Background Information and Summary of Evidence: The 2013 FMP for the Pic River Forest does not describe the historic forest conditions, and members of the planning team acknowledge that this section was unintentionally omitted.</p>
<p>Discussion: The draft of the next version of the FMPM (expected in 2017) that was made available for public comment contains direction that the FMP will describe the historic forest condition. The draft FMPM provides an excellent rationale for this: <i>“The historic forest condition will provide insight into the natural dynamics of the forest, the effects of past forest management, and the current forest composition. Historical management unit information will also be useful in understanding trends and changes in forest composition, and past use of forest resources from the management unit.”</i></p>
<p>Conclusions: The 2019 FMP should meet the requirements of the FMPM that is in place at the time, and which is expected to include a requirement to describe the historic forest condition.</p>
<p>Recommendation: The planning team for the 2019 FMP for the combined Big Pic and Pic River Forests shall ensure that the 2019 FMP meets the requirements of the relevant FMPM with respect to the inclusion of a description of the historic forest condition.</p>

Recommendation # 4
<p>Principle 3: Forest Management Planning</p> <p>Procedure 3.5.4: FMP Silvicultural Ground Rules – Direction: The FMP must contain silvicultural practices and ground rules relevant to specific forest conditions and objectives.</p> <p>Consider the identified SGR: current and future forest conditions, forest unit/working group (/FU/WG); SGRs have been updated to reflect changes in practice gained from experience and forestry research.</p>
<p>Background Information and Summary of Evidence:</p> <p>In the 2006 FMP for the PROF, there was a plan objective as follows: “Silvicultural Objective: to rehabilitate or reclassify degraded stands where access is possible as they are selected for operations (either for harvest or renewal) in the Annual Work Schedules. Target: treatment of 100 ha of DEG forest unit until the degraded stands have removed from the land base. Although 360 ha of this forest unit were treated during the 2006-2012 term, there was more than 12,000 ha of the DEG forest unit on the PROF land base so the target associated with this objective has not been achieved.</p>
<p>Discussion: This item was discussed during the preparation and review of the BMI for the amalgamated FMP, and due to the incorporation of the Northeast Regional FUs the DEG designation was dropped. However, these stands were tracked as low volume representing the former DEG FU and incorporated into operational planning. In the end, a number of the stands originally allocated were dropped due to how the planning team incorporated the direction as per the CCP (2009) for the creation of the DCHS along the Lake Superior Coastal continuous zone and discontinuous zone deferral, as many DEG stands are located in this zone.</p>
<p>Conclusion: Determination of the current status of stands in the former DEG forest unit should be completed to see if further action is required to manage these stands commensurate with the objectives of future FMPs. The 2016 eFRI has not been analysed to determine the current stand compositions of the former DEG FU. Having a task team for the 2019-2029 FMP conduct this analysis would be a useful first step, followed by an assessment of where former DEG and/or low volume stands are situated with respect to areas meeting harvest eligibility criteria.</p>
<p>Recommendation: The planning team for the 2019 FMP shall conduct an analysis to determine the current status of stands in the former degraded (DEG) forest unit and whether further action is required to manage these stands commensurate with the FMP objectives.</p>

Recommendation # 5

Principle 3: Forest Management Planning

The subject of this recommendation is not specifically addressed by an IFAPP procedure, however the IFAPP allows audit teams to develop recommendations to address situations where they perceive a critical lack of effectiveness in forest management activities, even though no non-conformance with law or policy has been observed.

Background Information and Summary of Evidence. Ontario’s broad strategy for managing caribou habitat is based on a Dynamic Caribou Habitat Schedule (DCHS) in which large areas of habitat (generally greater than 10,000 ha) are managed as a contiguous matrix so that significant pieces of landscape are



always in a suitable condition for caribou occupancy. Because the Lake Superior Coastal Range of caribou habitat is generally very narrow (extending < 10 km inland from the lake), it is spatially challenging, or impossible to configure DCHS blocks so as to achieve continuous landscape occupancy comparable to what can be achieved in more contiguous caribou range.

In the FMP, the joint objectives of providing for continuous habitat in the coastal range and connectivity through the discontinuous range was addressed by providing a number of 20-year deferral areas through the coastal range and somewhat broader deferrals (also 20-year) extending inland with the intent of providing travel corridors for caribou. The largest deferral/linkage area is between Neys Provincial Park and the Killala Conservation Reserve and covers almost 30,000 ha.

Caribou ranges in the vicinity of the Big Pic Forest¹

Discussion: While NFM’s method for managing connectivity in the discontinuous range is logical, the FMP itself notes that its approach has been developed in the absence of a provincial strategy. Ontario’s CCP contains the following commitment (No 2.7): *Ontario will develop a management strategy for discontinuous range management to enhance connectivity between the northern continuous range and the southern coastal Lake Superior populations. This connectivity will improve the prospects for persistence of the coastal populations...*

The discontinuous range of caribou includes portions of several other Forests to the north and west of the Algoma Forest (i.e. White River, Nagagami, Algoma, Kenogami, Lake Nipigon, Lakehead, and Black Spruce). An approach should be developed for managing in a consistent manner across the discontinuous range of caribou using the most appropriate methods to facilitate connectivity at landscape scales.

Conclusions: Corporate MNRF shall fulfill its commitment presented in the CCP in 2009 to develop a management strategy for the discontinuous caribou range.

Recommendation: Corporate MNRF shall fulfill its commitment to develop a management strategy for discontinuous woodland caribou range to enhance connectivity between the northern continuous range and southern coastal Lake Superior populations. MNRF shall also provide appropriate assistance to planning teams for incorporating the strategy into future Forest Management Plans.

¹ Map from <https://www.ontario.ca/page/ontario-species-risk-evaluation-report-caribou-boreal-population-rangifer-tarandus>

Recommendation # 6

Principle 6: Monitoring

Procedure 6.3: Silviculture Standards and Assessment Program – Direction: The entire cycle from SGRs, FOPs, field operations, regeneration assessment surveys to FRI update must be assessed. Assessing and reporting on the achievement of regeneration efforts to ensure standards are met is required in accordance with the FOSM, FIM, and FMPM.

Review annual reports, including maps, to determine if areas to be assessed and results of the surveys have been identified, and for consistency with records of the assessments and results of the field audit including whether the reports and records are consistent with the location and results as seen in the field (cross-reference to criteria 4.4- 4.6).

Background Information and Summary of Evidence: For the 2006-2012 FMP terms for the PROF and BRF combined, the area of natural regeneration comprised 27% of planned, compared with the area of artificial regeneration, which was 90% of planned. For the first three years of the PRF FMP (2013-2015), the reported area of natural regeneration was 10% of planned, compared with 34% for artificial regeneration.

Discussion: Although NFMC has developed a good system of identifying natural regeneration areas, reporting of these areas in annual reports has not kept up with FMP forecasts, as indicated by the low rate of natural regeneration reported for both the 2006 and 2013 FMP terms. Timely reporting of natural regeneration is important, since in the 2013 FMP for the PRF, natural regeneration was planned to comprise 55% of the total regeneration effort.

Conclusion: NFMC needs to implement more timely reporting of natural regeneration areas.

Recommendation: NFMC shall conduct timely reporting of natural regeneration areas.

Recommendation # 7

Principle 4: Plan Assessment and Implementation

Procedure 4.7.1 Review and assess in the field implementation of approved access activities. Include the following:

- assess whether roads have been constructed, maintained, decommissioned and reclaimed to minimize environmental impacts and provide for public and operator safety

Background Information and Summary of Evidence. During the course of the site visits, the audit team drove on approximately 300 of km of primary and branch roads on the Black River Subunit. For considerable lengths of some roads, the audit team noted that grading operations resulted in the creation of wing-walls. This occurs when grading of roads is not performed ideally, and as a result roadbed material accumulates in a ridge along the sides of roads, impairing drainage from the road surface into ditches.



Along some roads, the poor grading practices had resulted from a grader operator in training however the auditors observed other lengths of road where the grading practices should be improved.

Along some roads, the poor grading practices had resulted from a grader operator in training however the auditors observed other lengths of road where the grading practices should be improved.

Wing-wall at km 22 on Camp 70 road

Discussion: False ditching occurs when the wing-walls channelize run-off and cause water to flow down the roads. This may lead to erosion of the road surface causing both safety and environmental hazards. The material accumulated in the wing-walls is also not used for the road surface and therefore can result in poorer driving surfaces and the need for greater amounts of gravel or road-bed material, potentially increasing costs. Greater operator training is required to ensure that proper grading practices are implemented.

Conclusion: This is a training issue that can be addressed by reviewing training requirements and ensuring that operators have received appropriate training.

Recommendation: NFMC shall ensure that grader operators have received appropriate training so as to avoid the occurrence of wing-walls/false ditches.

Recommendation # 8

Principle 4: Plan Assessment and Implementation

Procedure 4.7.1 Review and assess in the field implementation of approved access activities. Include the following:

- assess whether roads have been constructed, maintained, decommissioned and reclaimed to minimize environmental impacts and provide for public and operator safety

Background Information and Summary of Evidence. The audit team noted that significant lengths along primary and branch roads in the Black River subunit were in need of brushing to provide for safe visibility along lines-of-sight. Trees and shrubs are encroaching from the edges of the cleared rights-of-way to the road sides so as to limit visibility, particularly around corners. MNR and company staff concurred with this assessment. Although the audit team does not have an estimate of the total length of roadway involved, the need was apparent.

Discussion: MNRF’s Environmental Guidelines for Access Roads and Water Crossings directs attention to the need to “remove roadside vegetation that shades the road, for safety (visibility) and for drying of the road.” In addition the access roads section of the Supplementary Document of the 2013 FMP contains the following description of maintenance provisions that are to apply to all managed roads (relevant portions indicated in bold): *“The road and road right-of-way will receive maintenance, which will be carried out as required to maintain the road for forest management purposes (e.g. harvest, renewal, tending and hauling activities). These roads will be maintained to minimize risk to road users and minimize the potential for environmental damage. Maintenance operations may include any one or combination of the following; summer grading, ditching, drainage, **brush clearing with mechanical or chemical methods (e.g. application of chemical herbicides for vegetation control along road shoulders)**, gravelling, re-shaping of road bed, dust control measures, signage, snow plowing, sanding/salting and clearing existing right-of-ways including the harvest of merchantable trees as required.”*

Conclusion: The company has a commitment to ensure that the roads and rights-of-way are maintained in a safe condition. This commitment, as stated in the FMP, includes managing brush growing along the roadside.

Recommendation: NFMC shall clear vegetation along road rights-of way that impede vision along its forest access roads, prioritizing roads that are in greatest use.

Recommendation # 9

Principle 4: Plan Assessment and Implementation

Procedure 4.7.1 Review and assess in the field implementation of approved access activities. Include the following:

- assess whether roads have been constructed, maintained, decommissioned and reclaimed to minimize environmental impacts and provide for public and operator safety

Background Information and Summary of Evidence. During the course of the site visits, the audit team inspected approximately 15 watercrossings (bridges and culverts). The crossings were in good shape however the bridge at km 17 on the Ice Creek Road was an exception. There are very steep approaches to the bridge from both sides. By virtue of the local landforms, this location, although difficult, was the best choice to access a large cutblock. A large quantity of road material has run into the creek spanned by the bridge because of the steep approaches, and road gravel was apparent in the creek up to 20 m downstream. The creek connects two walleye lakes. Inspection under the bridge and along the approaches revealed that measures taken to intercept road runoff were not effective and/or in need of maintenance.



Roadbed material washing into creek under the bridge at km 17 on Ice Creek Road

Discussion: This circumstance requires remediation to address the environmental issues that exist as a result of the failure of present measures to effectively restrict roadbed material from entering the creek.

Conclusion: The bridge and its approaches are in need of maintenance/remediation.

Recommendation: NFMC shall complete the necessary remediation and maintenance operations at the Ice Creek bridge so as to address the current environmental issues and avoid future ones.

Recommendation # 10

Principle 5: System Support

System support concerns resources and activities needed to support plan development and implementation so as to achieve the desired objectives. The organization's human resources and information management systems must support sustainable forest management.

Criterion 5.1: Human Resources

Background Information and Summary of Evidence: Throughout the audit report, several factors have been identified and discussed which provide challenges to MNRF's ability to efficiently oversee and administer the PRF. These factors are:

- long distances between the Nipigon and Wawa District offices and the Forest;
- staff resource availability due to high levels of staff movement and retirement within MNRF; exacerbated in the case of Wawa District by the relatively low number of full-time foresters per forest managed by the District; and
- the workload demands associated with on-going forest management unit amalgamations and related activities, such as planning.

One-way travel time from the Wawa District office to the more distant parts of the forest can be more than three hours even under good conditions. MNRF staff from Nipigon District also have to travel long distances to get onto the PROF sub-unit. MNRF staff also incur significant travel time to meet with NFMC and many of the stakeholders and affected Aboriginal communities.

Secondly, the rate of staff turnover, including retirements, and staff moving from one position and location to another within MNRF has made it difficult to establish working relationships. There is also a period of time for new staff to become familiar with and effective in conducting their responsibilities, and activities such as document review and the processing of amendments get disrupted when people move or leave. The relatively small number of forest positions in Wawa District (see **Recommendation # 1**) has been discussed.

The audit team recognizes that MNRF staff had a good attendance record at planning team meetings and LCC meetings during the audit period. However, as the level of activity increases on the PRF, as is expected, the audit team anticipates that MNRF will be increasingly challenged to maintain its responsibilities, including a suitable presence on the Forest.

Discussion: The factors discussed above are beyond the control of either of the Districts. The audit team is of the opinion that District staff could become more efficient if the MNRF was more active in seeking approaches to overcome the challenges identified above. Technology, the increased use of contractors and partners, and other strategies offer potential. For example, there are opportunities to expand the use of video conferencing, so as to reduce the amount of travel required to participate in meetings. The use of contractors to conduct compliance inspections may be option. The use of satellite transmission between the field and the office could also be explored. For example, when a potential need for a plan amendment or AWS revision arises, the industry person on-site could link with the MNRF person by satellite and use real-time video transmission to show the MNRF person the issue and discuss how to resolve it. At present, industry must wait for the MNRF person to come to the site in person – an endeavour which might take a whole day of MNRF staff time and be difficult to schedule. The auditors are sure there are technological options available that they are not even aware of – MNRF should be much more proactive in seeking ways to become more efficient.

Conclusion: The Wawa and Nipigon MNRF Districts are encouraged to be more proactive in seeking ways to function more effectively and have a meaningful presence on the Forest by assessing how it can best mitigate the factors that are causing current challenges. The audit team wishes to emphasize that the recommendation provided below is intended to be forward-looking.

Recommendation: Wawa and Nipigon District MNRF shall explore the implementation of approaches to more efficiently undertake organization responsibilities, including attendance at meetings, stakeholder outreach, and compliance and other in-field inspections.

Recommendation # 11

Principle 5: System Support

System support concerns resources and activities needed to support plan development and implementation so as to achieve the desired objectives. The organization’s human resources and information management systems must support sustainable forest management.

Note: The IFAPP allows audit teams to develop recommendations to address situations where they perceive a critical lack of effectiveness in forest management activities, even though no non-conformance with law or policy has been observed.

Background Information and Summary of Evidence: There are challenges for MNRF associated with managing the PRF because it spans two MNRF Districts and two MNRF Regions. These challenges also impact the Company because there are different standards and approaches followed by Wawa and Nipigon Districts with respect to aspects such as water crossings and lands issues, including aggregate pit permitting and Land Use Permit applications.

The potential for there to be different approaches to management on the Pic River Forest is magnified by the potential for there to be different approaches followed in the Northeast and Northwest Regions. For example, the two Regions have taken a different tack with regard to hardwood utilization where markets are not available for the full range of hardwood products created during timber harvesting operations.

Discussion: Some 85% of the amalgamated PRF and the Big Pic Forest will be located within Wawa District and the NE Region. From the perspective of the audit team, it makes sense to consolidate management responsibilities within Wawa District and the Northeast Region where feasible. The consolidation of administrative responsibility would have two principal benefits:

- It would reduce the need for Wawa and Nipigon District to spend time coordinating and liaising regarding management of the Forest; and
- It would provide a greater level of consistency in approach and standards across the Forest compared to what exists now.

In the view of the audit team, the preferred solution is to move the Nipigon portion of the PRF into Wawa District. The audit team recognizes that this would be unlikely to occur. The next best solution is to develop a protocol outlining how responsibilities will be managed and shared between the two Districts. This has been done between other pairs of adjoining Districts and would be appropriate here. The dual objectives of such a protocol should be:

- a) to provide a defined process and remove confusion and duplication of effort between the two Districts where possible, and
- b) to make processes more efficient for NFMFC.

Unlike other situations where protocols have been developed between two Districts, the PRF and the amalgamated Big Pic and PRF also cross into two MNRF administrative regions, and this needs to be recognized in any protocol that is developed. The audit team also appreciates that this recommendation may be viewed as being inconsistent with **Recommendation # 1**, however the net effect is expected to be a reduction in workload.

Conclusions: The audit team concludes that the management of the forest would be improved and streamlined, both for MNRF and NFMFC, if a protocol was developed that outlined a division of responsibilities between the Nipigon and Wawa Districts for the PRF, and a process to be followed where the participation of both Districts (and potentially both Regions) was required. The protocol should be developed so that it can be readily adapted to apply to the combined PRF-Big Pic Forest.

Recommendation: The Wawa and Nipigon MNRF Districts shall develop a protocol or agreement which provides for the efficient organization of MNRF’s management and administrative responsibilities on the Pic River Forest.

Recommendation # 12

Principle 6: Monitoring

Procedure 6.3: Silviculture Standards and Assessment Program – Direction: The entire cycle from SGRs, FOPs, field operations, regeneration assessment surveys to FRI update must be assessed. Assessing and reporting on the achievement of regeneration efforts to ensure standards are met is required in accordance with the FOSM, FIM, and FMPM.

- Review annual reports, including maps, to determine if areas to be assessed and results of the surveys have been identified and for consistency with records of the assessments and results of the field audit including whether the reports and records are consistent with the location and results as seen in the field (cross-reference to criteria 4.4- 4.6).

Background Information and Summary of Evidence:

During field inspections for activities implemented in the years 2011-2013, auditors noted mapping errors on 5 sites inspected in the field. These errors included incorrect treatment boundaries and incorrect designation of treatment types. No errors were noted for the other years of the audit period.

Discussion: This time period corresponds to the period following the GWT bankruptcy, when multiple contractors were responsible for silvicultural mapping and there was no single organization responsible for quality control. Depending on the extent of the issue, several hundred hectares of area and multiple silvicultural treatments types may be inaccurately mapped and reported for these years.

Conclusions: The extent and potential impact of this issue should be assessed, and appropriate action taken to ensure that map data is corrected as required and included in the 2019 FMP planning inventory.

Recommendation: NFMC shall assess the extent of mapping errors for the period 2011-2013 and take appropriate action to ensure that map data is corrected as required and included in the planning inventory for the next FMP (expected in 2019).

Recommendation # 13

Principle 7: Achievement of Management Objectives and Forest Sustainability

Procedure 7.2.1: In the audit report document the following:

- for the current plan, which is the subject of the audit, summarize in text form the auditor's assessment of the progress towards achieving the objectives...

Background Information and Summary of Evidence: The targets set for a number of ecological objectives are defensible, however for some, they seem to provide little or no direction for forest management and are therefore of little utility. Following are three examples:

1. The target level for suitable marten habitat in the Black River portion of the forest is 6% of the total capable area, and the desirable level is 10-20%. Table FMP-9 indicates that the 5.3% of the capable forest is in suitable condition – this figure peaks at 6% 40 and 60 years from plan onset. The 2009 FOP (pg A-38) notes that: *“The desirable level is a measurable amount...for an indicator to be achieved and maintained over time”* (Pg A-36), and *“The target will be consistent with the desirable level of the indicator, or the target will be established to encourage movement towards the desirable level.”* (Pg A-38). The fact that there is virtually no progress in moving to the desirable level over 60 years of plan implementation, raises the question of the utility of having a desirable level so far beyond what is intended to be achieved through plan implementation.
2. The FMP targets and desirable levels for indicators related to road density are *“to monitor the number of kilometres of SFL-responsible roads per km2 of Crown forest land over time.”* A non-quantitative target for a very quantitative indicator is of little utility. There can be no assessment of whether the density of roads is meeting any intent if the target is simply ‘to monitor’.
3. Achievement of the objective of ‘no net loss of identified habitat for species at risk in Ontario’ cannot realistically be assessed for some species at risk that rely on forest ecosystems, such as Canada warbler and common nighthawk. Table FMP 9 implies that AOC prescriptions will suffice to attain this objective, but this is not the case as there are no effective AOC prescriptions for these species. Really attaining no net loss would entail making quantitative predictions of the amount of habitat available in the future (i.e. habitat supply modeling).

Discussion: Some objectives included in the plan are not practical or useful. They may have been included in the plan as a means of addressing planning requirements or policy benchmarks. In some instances the targets or desirable levels are not realistic, and the plan does not attempt to move towards the desirable level, and for others there is no meaningful way of assessing whether progress is being achieved.

Conclusions: More effort is required to identify meaningful objectives for the suite of values that are required to be addressed by the plan.

Recommendation: The planning team for the 2019 FMP shall include realistic and measurable targets for all ecological indicators in the next FMP.

APPENDIX 2 – ACHIEVEMENT OF FMP MANAGEMENT OBJECTIVES

Achievement to date of the 2013 Pic River Forest FMP Objectives

No.	Objectives& Indicators	Achievement	Explanation/Comments																								
1	<p>Forest Diversity: To provide forest diversity in a manner that emulates a natural landscape pattern and frequency distribution.</p> <p>Indicator 1.1: Percent frequency distribution of forest disturbances by size class.</p>	<p>This indicator is based on direction provided in the Forest Management Guide to Natural Disturbance Pattern Emulation (NDPEG) supplemented with advice from MNR Regional staff. The indicator is the natural range of frequencies of disturbance by size class. The table below shows the forest condition at 2013 and the ranges which are the desirable and target levels.</p> <table border="1" data-bbox="743 769 1318 1024"> <thead> <tr> <th>Size Class</th> <th>Target (%)</th> <th>2013 Level</th> </tr> </thead> <tbody> <tr> <td>11 – 100</td> <td>56 – 66</td> <td>52</td> </tr> <tr> <td>101 – 200</td> <td>14 – 21</td> <td>19</td> </tr> <tr> <td>201 – 500</td> <td>2 – 7</td> <td>14</td> </tr> <tr> <td>501 – 1000</td> <td>0 – 6</td> <td>9</td> </tr> <tr> <td>1001 - 5000</td> <td>6 – 12</td> <td>5</td> </tr> <tr> <td>5001 – 10000</td> <td>2 – 4</td> <td>1</td> </tr> <tr> <td>> 10000</td> <td>1 – 4</td> <td>1</td> </tr> </tbody> </table> <p>The targets are peculiar in that the range is very low for the 201 – 500 and 501 – 1000 ha size classes, and higher for the 1001-5000 ha class.</p> <p>There have been no natural disturbances on the forest of any size and harvest levels are at approx 22% of planned during the audit period. It is difficult to estimate what areas will move out of the disturbed category during the plan period, however it is unlikely much progress has been</p>	Size Class	Target (%)	2013 Level	11 – 100	56 – 66	52	101 – 200	14 – 21	19	201 – 500	2 – 7	14	501 – 1000	0 – 6	9	1001 - 5000	6 – 12	5	5001 – 10000	2 – 4	1	> 10000	1 – 4	1	<p>The template and direction for this objective will shift as the recent Boreal Landscape Guide provides updated direction regarding disturbance frequency.</p>
Size Class	Target (%)	2013 Level																									
11 – 100	56 – 66	52																									
101 – 200	14 – 21	19																									
201 – 500	2 – 7	14																									
501 – 1000	0 – 6	9																									
1001 - 5000	6 – 12	5																									
5001 – 10000	2 – 4	1																									
> 10000	1 – 4	1																									

No.	Objectives& Indicators	Achievement	Explanation/Comments
		made towards meeting the indicators where the current level of disturbance is below the target range. Little progress has been made towards meeting this objective during the first three years of the FMP.	
2	<p>Forest Diversity: To maintain the biological diversity of the Pic River Forest while providing habitat for forest-dependent provincially and locally featured species and species at risk in Ontario</p> <p>Indicator 2.1.1: Percent of suitable marten habitat arranged in core areas in Crown productive forest on the Black River portion of the forest.</p> <p>Indicator 2.1.2: Percent of suitable marten habitat arranged in core areas in Crown productive forest on the Pic River Ojibway portion of the forest.</p> <p>Indicator 2.2.1: Area of preferred habitat for forest-dependent provincially and locally featured species in Ontario.</p> <p>Indicator 2.2.2: Area of habitat for forest-dependent species at risk on Ontario.</p> <p>Indicator 2.2.3: Area of preferred habitat for woodland caribou in Ontario.</p>	<p>2.1.1 Target is 6% of the total capable forest in suitable condition within marten core areas, but desirable is 10-20%. At the end of 100 years, the proportion is predicted to have increased from 5.3% to 6%, an increase of approximately 1,500 ha. Target is achieved.</p> <p>2.1.2 Target is 10%% of the total capable forest in suitable condition within core areas; desirable is 10-20%. At plan start level is 18%. Projected level declines to 10% by 2023 and remains there through the projection. Target is achieved.</p> <p>2.2.1 Target of achieving 75% of Natural Benchmark achieved for all species. Target is achieved.</p> <p>2.2.2 Target of no net loss predicted to be achieved through use of habitat management and AOCs is not due to be assessed until Year 7 AR. No assessment possible.</p> <p>2.2.3. Indicator addresses non-spatial habitat, with target to exceed 90% of observed natural benchmark. Target is met in each time step during which it is evaluated.</p> <p>The targets that could be assessed were achieved, indicating achievement of the objective.</p>	<p>2.1.1 Although the desirable level is 10-20%, there is virtually no movement towards it over the simulated 100 year projection.</p> <p>The target is achieved, however the desirable level is not, given that there is virtually no movement toward the desirable level, its utility is questionable. This is addressed in Recommendation # 13.</p> <p>2.1.2. The minimum amount of desired level is maintained, the utility of identifying a range of desirable levels seems of little value.</p> <p>2.2.1 Although the target is achieved, levels of habitat for all species except ruffed grouse decline</p>

No.	Objectives& Indicators	Achievement	Explanation/Comments
3	<p><u>Forest Diversity.</u> To provide forest structure, composition and abundance that is representative of the forest condition under a natural disturbance regime and similar to the historic forest condition.</p> <p>Indicator 3.1.1: Total area of Crown productive forest by forest unit.</p> <p>Indicator 3.1.2: Total area of Young Crown productive forest by forest unit.</p> <p>Indicator 3.1.3: Total area of immature Crown productive forest by forest unit.</p> <p>Indicator 3.1.4: Total area of Crown productive Mature forest (as defined by seral stage) by forest unit.</p> <p>Indicator 3.1.5: Total area of Crown productive Old Growth forest (as defined by seral stage) by forest unit.</p>	<p>This complex objective has numerous indicators, all expressed by forest unit. Natural succession and harvesting would produce changes in area of each forest unit.</p> <p>For all forest units except MW2, the area of young forest was below the target level. Little progress is expected in meeting this indicator. In contrast, the area of mature forest by FU exceeds the targets for all FU – the low harvest level has not much helped the Company move towards this indicator. Six of ten FUs have more old growth than the target ... little movement is likely towards the old growth part of the objective.</p> <p>As with objective 1, since there have been no natural disturbances on the forest of any size and, since harvest levels are at approx 22% of planned during the audit period, it is unlikely much progress has been made towards meeting this objective.</p>	
4	<p><u>Social and Economic:</u> To provide for a sustained level of harvest over the planning horizon.</p> <p>Indicator 4.1.1: Long-term projected annual available harvest area (SFMM) by forest unit for the Black River sub-unit.</p> <p>Indicator 4.1.2: Long-term projected annual available harvest area (SFMM) by forest unit for the Pic River Ojibway sub-unit.</p>	<p>Indicators 1-6 and 9 & 10 are planning outcomes whereas indicators 7 & 8 and 11 & 12 consider the proportion of planned activity achieved. The plan-based indicators are of little utility since they were either adjusted during plan development so that they were feasible (in which case they are no longer targets) or, in the case of indicators 3 & 4, the desired level was to maximize the volume available for harvest.</p> <p>The planning team decided to have a high available harvest area (AHA) in the 2013 FMP period (3,941 ha/yr), declining to 3,200 ha/yr by</p>	<p>The FMP does not state clearly where the target values were derived from for many of the indicators. The auditors assume that commitment levels and perhaps OFAAB levels provided the target levels in these cases.</p> <p>It is not clear what purpose there is to having separated indicators and target for the two sub-units in the Forest – these will disappear when the Pic River and Big Pic Forests are amalgamated.</p>

No.	Objectives& Indicators	Achievement	Explanation/Comments
	<p>Indicator 4.1.3: Long-term projected annual available harvest volume (SFMM) by major species group for the Black River sub-unit.</p> <p>Indicator 4.1.4: Long-term projected annual available harvest volume (SFMM) by major species group for the Pic River Ojibway sub-unit.</p> <p>Indicator 4.1.5: Available and planned harvest area by forest unit in the Black River sub-unit.</p> <p>Indicator 4.1.6: Available and planned harvest area by forest unit in the Pic River Ojibway sub-unit.</p> <p>Indicator 4.1.7: Planned and actual harvest area by forest unit in the Black River sub-unit.</p> <p>Indicator 4.1.8: Planned and actual harvest area by forest unit in the Pic River Ojibway sub-unit.</p> <p>Indicator 4.1.9: Available and planned harvest volume by major species group in the Black River sub-unit.</p> <p>Indicator 4.1.10: Available and planned harvest volume by major species group in the Pic River Ojibway sub-unit.</p> <p>Indicator 4.11.1: Planned and actual harvest volume by major species group in the Black River sub-unit.</p>	<p>2033 and 2,720 ha/yr by 2053. The AHA gets back above 3,000 ha/yr by 2093. This significant drop in the planned harvest makes it more difficult to meet the indicators in this objective.</p> <p>For the indicators based on the actual harvest level, the targets were to maximize the actual harvest volumes and have the mills take 90% of their planned volume.</p> <p>The actual harvest has been so low that indicators based on actual cut will not be very well achieved, and the long-term harvest levels have likely suffered due to the relatively high harvest planned in 2013.</p> <p>It is again unlikely that many of the indicators associated with this plan objective are been realized, hence achievement of this objective is modest at best.</p>	

No.	Objectives& Indicators	Achievement	Explanation/Comments
	<p>Indicator 4.1.12: Planned and actual harvest volume by major species group in the Pic River Ojibway sub-unit.</p> <p>Indicator 4.1.13: Percent of planned volume used by mills.</p>		
5	<p><u>Silviculture</u>: To maintain and enhance the forest ecosystem condition and productivity through silvicultural practices.</p> <p>Indicator 5.1.1: Percent of harvested area assessed as free-to-grow by forest unit.</p> <p>Indicator 5.1.2: Planned and actual percent of harvest area treated by silvicultural intensity.</p> <p>Indicator 5.1.3: Planned and actual percent of area successfully regenerated by projected forest unit by forest unit.</p> <p>Indicator 5.2.1: To increase the area of conifer-dominated forest units (SB1, LC1, PJ1, PJ2 and SP1) through forest management activities, within the Coastal Continuous Caribou Zone over time.</p>	<p>The audit team’s review of a sample of silvicultural treatments indicated that the prescriptions implemented by the Company were appropriate for the site conditions, were generally of good quality, and appeared to have been effective.</p> <p>No free-to-grow assessments were completed during the first three years of the FMP term.</p> <p>It is too early to assess this indicator, given the low levels of harvesting during the startup period for NFMC, but the rate of regeneration (i.e., the ration of actual / planned area) is similar to the rate of harvesting to date in the FMP term.</p> <p>There have been no free-to-grow assessments completed during the first three years of the FMP term. Free-to-grow assessments completed during the previous FMP term indicated an overall regeneration success rate of 77%, and a silvicultural success rate of 69%, which are good results in the context of Provincial and Regional average success rates.</p> <p>There is insufficient data to assess this indicator, given the low levels of harvesting and renewal within the Coastal Caribou Conservation Zone during the first three years of the FMP term.</p>	<p>There is as yet insufficient data to adequately assess this objective, given the low levels of harvesting and renewal that have been conducted during the first three years of the FMP term, however, preliminary results show reasonable progress.</p>

No.	Objectives& Indicators	Achievement	Explanation/Comments
6	<p><u>Forest cover:</u> To contribute to a healthy forest ecosystem and to ensure the protection of natural resources and non-forest values by minimizing the potential for adverse effects from forest management practices.</p> <p>Indicator 6.1.1 Percent of annual forest operation inspections in compliance ... etc.</p> <p>Indicator 6.1.2 Percent of annual forest operation inspections in compliance and percent of non-compliance in forest operations inspections with prescriptions developed for the protection of resource-based and road-based tourism values.</p> <p>Indicator 6.1.3 Percent of annual forest operation inspections in compliance and percent of non-compliance in forest operations inspections with prescriptions developed for the protection of known cultural heritage value(s).</p> <p>Indicator 6.1.4 Percent of annual forest operation inspections in compliance and percent of non-compliance in forest operations inspections with prescriptions developed for the protection of archeological potential area cultural heritage value(s).</p>	<p>6.1 .1 – 6.1.4 There were no instances of non-compliance during the audit period, although 6 operational issues were identified related to road planning (3), unhailed timber from the winter harvest (2) and an unauthorized crossing of a creek by a skidder. None of the issues remain outstanding.</p> <p>Targets achieved, and therefore objective achieved, as expressed by targets.</p>	

No.	Objectives& Indicators	Achievement	Explanation/Comments
7	<p><u>Social and Economic</u>: To maintain the area of Crown productive forest that is managed for timber production.</p> <p>Indicator 7.1.1: Managed Crown productive forest available for timber production.</p>	<p>The total area of Crown productive forest has changed little during the audit period, as there were few roads built and little other change to the area of Crown productive forest. This objective has been met to date on the Forest.</p>	<p>It may be that the new inventory, with its revised assessment of productive and non-productive forest, might lead to an apparent change in the area of Crown productive forest in excess of the intended levels. If this should happen, it is an artefact of the inventory process and should not be construed as a failure to meet the objective.</p>
8	<p><u>Social and Economic</u>: To manage SFL- responsible forest access roads on the Pic River Forest.</p> <p>Indicator 8.1.1: Kilometers of SFL- responsible forest access roads per square kilometer of Crown forest land.</p> <p>Indicator 8.1.2: Kilometers of SFL- responsible forest access roads per square kilometer of Crown forest land located outside the Coastal Continuous Caribou Zone.</p> <p>Indicator 8.1.3: Kilometers of SFL- responsible forest access roads per square kilometer of Crown forest land located inside the Coastal Continuous Caribou Zone.</p>	<p>8.1.1 – 8.1.3. The targets for all these indicators indicate that they will be addressed by monitoring the density of access in the forest.</p> <p>The audit team was not able to make an assessment of the three indicators.</p>	<p>8.1.1. The definition of a target in the FMPM is: “A target is a measurable amount (i.e., specific number, range, or trend), for an indicator to be achieved within a specific timeframe.”</p> <p>These indicators are not useful, and are addressed in Recommendation # 13.</p>
9	<p><u>Social and Economic</u>: To provide Aboriginal communities opportunities for involvement in plan development through Aboriginal consultation, planning team participation and incorporation of Aboriginal values. Develop a consultation approach with Aboriginal communities that will</p>	<p>This objective and indicator are geared towards Aboriginal involvement in planning. Timely notifications were provided, opportunities to participate on the Planning Team were also provide, and the ABIR’s were updated. Thus, this objective was achieved as measured by the indicators.</p>	<p>While the indicators for this objective are expressed in terms of providing opportunity, there was also relatively good Aboriginal participation in planning. Of the 31 Planning Team minutes available (minutes from one meeting could not be located), there was Aboriginal participation at 23 meetings,</p>

No.	Objectives& Indicators	Achievement	Explanation/Comments
	<p>provide opportunities for participation in forest management plan development and implementation.</p> <p>Indicator 9.1.1: Provide Aboriginal communities with opportunities for involvement in the development o the forest management plan,</p>		<p>usually from Pic River or Pic Mobert. Representatives from Ginoogaming also participated from time to time, and very occasionally, someone from Pays Plat attended.</p>
10	<p><u>Social and Economic</u>: To provide opportunity for community well-being.</p> <p>Indicator 10.1.1: Opportunities for involvement provided to the general public and local stakeholders in plan development.</p> <p>Indicator 10.2.1: LCC member`s participation in the self-evaluation assessment.</p> <p>Indicator 10.2.2: LCC member`s self-evaluation of their effectiveness in plan development of the survey`s participants.</p>	<p>The public notifications were issued as appropriate during the process of planning for the 2013 FMP, and consultation opportunities were also provided in association with the BRF contingency plan and the second (2012-13) plan extension on the PROF.</p> <p>The LCC self-assessment was completed by five LCC members. There were between 9 – 11 members at this time, implying a participation rate of between 45 and 55%, well below the desired level of 75%.</p> <p>Three of the five respondents felt they had meaningful involvement while two did not respond. One could say 100% of the respondents felt they had meaningful impact however one could also argue that only 60% felt their involvement was meaningful.</p> <p>The objective was partially achieved.</p>	<p>The objective is very broad but the indicators are very narrow, so that achievement of the indicators should not by itself be taken as providing community well-being.</p>

APPENDIX 3 - COMPLIANCE WITH CONTRACTUAL OBLIGATIONS

Licence Condition	Licence Holder Performance
1. Payment of Forestry Futures and Ontario Crown charges.	NFMC is up-to-date with all of its payments to the Forestry Futures Trust and Ontario government for Crown timber dues charges.
2. Wood supply commitments, MOAs, sharing arrangements, special conditions	<p>An Available Wood Report dated July 14, 2016 shows two commitments on the Forest. The largest, in terms of volume is to AVTB for 269,700 m³/yr of SPF, and there is also a commitment to The Levesque veneer mill in Hearst for 6,700 m³/yr of poplar veneer. During the last three years (2013/14-2015/16), AVTB has received an average of 62,372 m³/yr of pulpwood and 83,104 m³/yr of pulpwood and biofibre. There is also an agreement in place between AVTB and White River Forest Products that allows sawlogs to go to White River in exchange for chips. Levesque received all of the poplar veneer from the forest, averaging 3,500 m³/yr during the last three years.</p> <p>The Wood Supply Competition resulted in the offer of an additional 1,800 m³/yr of poplar veneer to the Levesque facility and 10,000 m³/yr to Smoke Signals, a firewood producing outfit in Pays Plat. To date, no wood has gone to Pays Plat and the forest has not supplied enough veneer such that Levesque is close to its original wood commitment amount.</p> <p>The licence contains a special condition to make 16,800 m³/yr of timber available to the Ojibways of Pic River First Nation for harvesting. In February, 2016, a new harvesting contracting company started by the Ojibways of Pic River began harvesting on the PROF and the harvest rate is in excess of 16,800 m³/yr. In prior years, Pic River did not have the capacity to harvest timber on a commercial basis.</p> <p>This licence obligation has been met by the Company.</p>
3. Preparation of FMP, AWS and annual reports; abiding by the FMP, and all other requirements of the FMPM and CFSA	<p>Preparation of the FMP met most of the requirements of the FMPM, with the exception of:</p> <ol style="list-style-type: none"> 1) the omission of the detailed description of the historic forest condition within the 2013 PRF FMP; 2) the 2014 AWS was not presented to the LCC. <p>Contingency Plans and Plan Extensions met the requirements of the FMPM.</p>
4. Conduct inventories, surveys, tests and studies; provision and collection of information in accordance with FIM	<p>NFMC has developed and implemented a comprehensive system for monitoring of silvicultural operations. This system includes field inspections conducted on all harvest blocks either during or before harvesting, post-cut assessments conducted to verify and/or to refine Forest Operations Prescriptions, installation and assessment of plantation survival plots, field inspections for the assessment of tending needs and refinement of boundaries before treatment, tending effectiveness surveys conducted one year after treatment, and regeneration and competition assessments conducted 4 years after treatment, to determine if any silvicultural follow up is required. Reporting of natural regeneration areas in annual reports has not kept up with FMP forecasts, as indicated by the low rate of natural regeneration reported for both the 2006</p>

Licence Condition	Licence Holder Performance
	<p>and 2013 FMP terms. This issue is addressed by Recommendation # 6.</p> <p>During the audit period, MNR District staff at Wawa and Nipigon implemented SEM programs on core tasks according to direction from the Provincial Silvicultural Program and from the respective MNR Regions. Although not all targets were met in full, work was completed on all required core tasks to an acceptable level, especially considering the changes in management responsibility of the PRF during the audit period. Work has accelerated in the latter part of the audit period since NFMC has become the forest manager.</p> <p>During the 2006-2013 FMP term, the Company completed the assessment of 13,630 ha for free-to-grow status. This effort represented 65% of the forecast area of 20,905 ha. No free-to-grow assessments have been reported for the first three years of the 2013-2018 FMP term.</p> <p>There is a backlog of area requiring free-to-grow assessment on the PRF of approximately 25,000 ha. Unfortunately, free-to-grow assessment data that was acquired in 2007 on 2,172 ha was lost following the bankruptcy of GWT, since the information could not be located. This has contributed to the backlog of area requiring assessment. NFMC has a Silvicultural Liability Plan in place which addresses completing assessments on the backlog free-to-grow area, as well as other aspects of the SEM program for the forest. In addition, NFMC is collaborating with MNR to implement an intensive, ground survey-based SEM pilot project. Coincident with this project, NFMC is in process of implementing a large ground-based survey program which will complete assessment of most or all of the backlog area by the end of the FMP term.</p> <p>The company does a good job of inventory updating in preparation for forest management planning, including the data management of harvesting, silvicultural and free-to-grow records. During the audit period, digital maps and associated information on silvicultural treatments and free-to-grow assessments were provided to MNR in accordance with the appropriate FIM standards.</p> <p>Digital imagery to be used in the production of an updated eFRI was acquired by MNR in the years 2007 and 2008. In 2009, this imagery was made available for use in operational planning. The completed eFRI was delivered to NFMC and District MNR in May 2016.</p> <p>This licence obligation has been met by the Company.</p>
<p>5. Wasteful practices not to be committed</p>	<p>There were no wasteful practices observed by the audit team nor were there non-compliances or operational issues identified with respect to utilization /wasteful practices. This licence obligation has been met by the Company.</p>
<p>6. Natural disturbance and salvage</p>	<p>There were no significant natural disturbances on the forest during the audit period and no salvage</p>

Licence Condition	Licence Holder Performance
SFL conditions must be followed	harvesting took place. This licence obligation has been met by the Company.
7. Protection of the licence area from pest damage, participation in pest control programs	There was no pest control required during the audit period.
8. Withdrawals from licence area	There is no clause related to withdrawals in the Forest Resource Licences issued to the Company.
9. Audit action plan and status report	<p>There were recommendations issued in both of the 2011 IFA's (for the Black River and PROF Forests) directing that the Action Plans and Status Reports be prepared on time. The Action Plans for the BRF and PROF IFA's were signed off by the Company and District MNRF staff within the two month period after the date that the audit reports were accepted (Jan 27, 2012 and Feb 1, 2012, respectively). Corporate signatures took longer to get – the Action Plans each had on them six MNRF signatures, including two by the Policy and Operations ADM's. The number of MNRF approvals required seems excessive.</p> <p>The PROF Status report was prepared within the two year time frame and the BRF Status Report was completed several months after the two year period, which is acceptable considering the amount of change underway at the time. This licence obligation has been met by the Company and supported by MNRF.</p>
10. Payment of funds to Forest Renewal Trust	NFMC is up-to-date with all of its payments to the Forest Renewal Trust,
11. Forest Renewal Trust eligible silviculture work	Auditors reviewed in the field a total of 1,189 ha of area that was mechanically site prepared, planted and tended in 2014-2015, representing 76% of eligible silviculture work that was charged to the Forest Renewal Trust for that year. There was no free to grow assessment completed in 2014-2015. Field inspections of these activities determined that maps were accurate and that work was completed as invoiced to the FRT per the Specified Procedures Report.
12. Forest Renewal Trust forest renewal charge analysis	Although there is no specific requirement to conduct renewal charge analysis included in the FRLs for the Pic River Forest that were in force during the audit period, renewal rate analyses were conducted annually by MNRF and company representatives. Renewal rate adjustments for conifer species that were made during the audit period have adequately addressed silvicultural program costs and have struck a good balance between addressing repayment of the deficit in the Forest Renewal Trust while at the same time ensuring viable harvest costs.
13. Forest Renewal Trust account minimum balance	<p>Forest Renewal Trust account balances have been below the minimum balance throughout the audit period. This was due to the bankruptcy of GWT at the beginning of the audit period, and the subsequent decision by MNRF to utilize funds from the FRT to pay for eligible silvicultural costs, in order to safeguard the existing silvicultural investments and to minimize any silvicultural liability arising from the situation.</p> <p>Under the combined eSFL (Pic River – Big Pic) it is proposed that the licence holder (NFMC) will have 5</p>

Licence Condition	Licence Holder Performance
	<p>years to restore the traditional minimum balance (i.e., the total of the minimum balances for the two forests) to allow for addressing legacy silvicultural liabilities. It should be noted that the amount of the deficit has been decreasing annually since 2011 from approximately \$1.1 million in 2011 to \$300,000 in 2016. Thus NFMC is well on the way to meeting this goal within the five-year time frame.</p>
<p>14. Silviculture standards and assessment program</p>	<p>For the 2006-2013 (extended) FMP term, the total area regenerated on the forest was 9,771 ha. This represented 57% of the planned seven-year effort, based on the FMP forecast area of 17,205 ha. However, the actual area harvested during the 2008-2012 FMP term was only 54% of the planned area, thus the regeneration effort kept pace with the level of harvesting during the period. For the first three years of the 2013 FMP term, regeneration is again on track to keep pace with actual harvesting, since actual / planned regeneration area was equal to 13%, compared with actual / planned harvesting equal to 14%.</p> <p>The audit team's review of a sample of these treatments indicated that the silvicultural prescriptions implemented by the Company were appropriate for the site conditions, were generally of good quality, and appeared to have been effective. There are no outstanding silvicultural treatments or survey obligations with respect to Class Y and Z Lands on the Pic River Forest.</p> <p>For the above reasons, the auditors believe that the Company has met its contractual obligations with regard to the silvicultural standards and assessment program.</p>
<p>15. Aboriginal opportunities</p>	<p>There is no relevant requirement in the Forest Resource Licences issued to the Company.</p> <p>It is noted that one of the objects of NFMC is "<i>To provide for economic development opportunities for aboriginal peoples</i>" and the NFMC has acted on this in a number of ways, as discussed in the main audit report.</p>
<p>16. Preparation of compliance plan</p>	<p>The 10-year compliance plan was included in the 2013 Phase I FMP as required and contained all the elements required. In addition, annual components of the compliance plan were included in each year's AWS as required.</p>
<p>17. Internal compliance prevention/ education program</p>	<p>Compliance training prior to the assumption of management responsibility by NFMC is difficult to document, however since 2013, the implementation of compliance training and education has been consistent with Section 4.7.1.4 of the FMP, that includes activities related to:</p> <ul style="list-style-type: none"> • compliance plan preparation and updates; • certification of compliance inspectors; • identification of individuals with responsibilities for prevention, monitoring and reporting, • identification of individuals with responsibilities for corrective actions and follow-up; • representation of the SFL holder for compliance matters; and

Licence Condition	Licence Holder Performance
18. Compliance inspections and reporting; compliance with compliance plan	<ul style="list-style-type: none"> • annual training for staff related to all aspects of compliance. <p>Compliance inspections were carried out according to the priorities identified in the compliance plan, modified to take into account the actual type and extent of operations implemented. The total number of compliance inspections was appropriate given the relative proportion of operations implemented relative to those planned. Compliance reports were suitably detailed.</p>

APPENDIX 4 – AUDIT PROCESS

Overview

The Crown Forest Sustainability Act (CFSA) directs the Minister of Natural Resources and Forestry to conduct a review of each tenure-holder every five years to ensure that the licensee has complied with the terms and conditions of its licence. The Independent Forest Audit (IFA) contributes to this mandate, as well as complying with the direction to the Ministry set out in the 1994 Class Environmental Assessment decision, subsequently confirmed in the 2003 Declaration Order⁵. Regulation 160/04 under the CFSA prescribes the minimum qualifications required by the audit team and sets out direction related to the timing and conduct of IFA's, the audit process and reporting.

The Independent Forest Audit Process and Protocol (IFAPP) sets out in detail the scope and process requirements of an IFA, and contains approximately 190 individual audit procedures. The IFAPP, which is reviewed and updated annually by the MNRF, states that the purpose of the audits is to:

- *“assess to what extent forest management planning activities comply with the Forest Management Planning Manual and the [Crown Forest Sustainability] Act;*
- *assess to what extent forest management planning activities comply with the Act and with the forest management plans, the manuals approved under the Act, and the applicable guides;*
- *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;*
- *compare the forest management activities carried out with those that were planned;*
- *assess the effectiveness of any action plans implemented to remedy shortcomings revealed by a previous audit;*
- *review and assess a licensee's compliance with the terms and conditions of the forest resources licence; and*
- *provide a conclusion regarding the sustainability of the Crown forest”*

There are two key types of audit findings – recommendations and best practices. A recommendation is explained in the IFAPP as: *“a high level directional approach to addressing [a] non-conformance. In most cases, recommendations follow from the observation of material non-conformances. In some instances, however, auditors may develop recommendations to address situations where they perceive a critical lack of effectiveness in forest management activities, even though no non-conformance with law or policy has been observed.”*

Recommendations can be directed towards the Company and/or at the appropriate administrative level of the Ministry of Natural Resources (District, Region or Corporate). Auditees must address all recommendations through follow-up actions.

If the Audit Team feels that an aspect of forest management is exceptional it may be identified as a best practice. The IFAPP states that *“Highly effective novel approaches*

⁵ Declaration Order regarding MNR's Class Environmental Assessment Approval for Forest Management on Crown Lands in Ontario, approved by Order in Council 1389/03 on June 25, 2003.

to various aspects of forest management may represent best practices. Similarly, applications of established management approaches which achieve remarkable success may represent best practices.” In contrast, *“situations in which forest management is simply meeting a good forest management standard”* do not qualify.

Audit Procedures and Sampling

The IFAPP describes each of the components of the audit process and contains the audit protocol, which constitutes the main framework for the audit. The procedures, which are the basis for assessing the auditees' compliance and effectiveness, are organized according to eight principles. A positive assessment of the procedures under each principle results in the principle being achieved. A negative assessment of a procedure typically leads to a recommendation.

The IFAPP segregates the procedures into three classes based on the risk to forest sustainability should the management aspect covered by the procedure not be achieved:

- “low risk” – procedure is strictly administrative in nature;
- “moderate risk” – procedure has an administrative component but also a bearing on sustainability; and
- “high risk” – procedure is related to sustainable forest management.

For each principle, the audit team is required to sample 20 – 30% of the procedures identified as low risk, 50 – 75% of the procedures considered to be moderate risk and all the procedures identified as high risk. This risk-based approach is intended to reduce auditor and auditee workload and focus the audit on more significant issues. The table below identifies, for each principle, the number of procedures in each risk class, the number audited, and the proportion that were audited. Because the Pic River Forest had not been certified to a third-party certification standard at the time of the audit, the IFAPP requires the IFA to assess compliance with Principle #1 (commitment) and the Human Resources part of Principle 5 (System Support).

The audit commenced with the preparation of a detailed audit plan⁶, which described the procedures to be used during the audit and assigned responsibilities to members of the Audit Team. A pre-audit meeting of the lead auditor, the Company and the MNRF was held in Marathon. The primary purposes of the meeting were to familiarize the auditees with the audit process, review the Audit Plan, and make a preliminary selection of sites to inspect in the field during the audit. Subsequently, some adjustments were made to the selected sites due to access issues, to improve the balance of operations and sites, and attain an appropriate proportional representation of sites related to the extent of operations.

The focus of the audit was an intensive five-day site visit (September 19-23, 2016), which included document review, interviews and inspections of a variety of sites throughout the Forest where activities had been undertaken during the audit period. There was a reasonable amount of follow up during the preparation of the draft audit report.

⁶ ArborVitae Environmental Services Ltd. Pic River Forest Audit Plan, August 4, 2016.

Table 4. Audit procedures by principle and risk category.

Procedures Audited, by Risk Category								
Principle	Low Risk			Medium Risk			High Risk	Comments
	Applicable (#)	Selected (#)	% Audited	Applicable (#)	Selected (#)	% Audited	Audited (#) (100% Audited)	
1. Commitment	0	N/A	0	2	1	50	0	This principle was audited because the Forest had not been certified to a third-party standard at the time of the audit.
2. Public Consultation and Aboriginal Involvement	0	N/A	N/A	6	4	66	2	We opted not to assess whether public notices of inspections were issued, since MNRF usually ensures that this is done properly. There were no requests for individual EA's and that procedure was not assessed. All aspects of Aboriginal Involvement were audited.
3. Forest Management Planning	7	2	28	14	7	50	43	Many procedures in this principle were not relevant as they apply only to Phase II FMPs. Low risk procedures regarding the SEV briefing note and the plan contributors page and index were not assessed. Medium risk procedures not assessed related to plan certification, amendment and revision documentation, and changes to AOC's and FOP's made during FMP implementation.
4. Plan Assessment & Implementation	1	1	0	1	1	100	9	All procedures under this principle were audited.
5. System Support	0	N/A	N/A	1	1	100	1	Criterion 5.1 was audited because the Forest had not been certified to a third-party standard at the time of the audit.
6. Monitoring	2	1	50	5	3	80	11	One low risk procedure related to submission of FOIP reports was not audited. Medium risk procedures not audited related to annual report review and methodology for field collection of indicator data.
7. Achievement of Objectives and Forest Sustainability	0	N/A	N/A	0	N/A	N/A	15	All procedures are high risk and so were addressed.
8. Contractual Obligations	0	N/A	N/A	5	3	67	8	Two medium risk procedures on lands withdrawn from the licence and directives from the previous IFA's action plan status reports were not assessed.
Totals	10	6	40	34	20	59	90	

After the draft report was submitted and reviewed by audit participants, a key conference call was held to go over the comments and provide an opportunity for discussion and debate. The lead auditor also presented the draft findings to the LCC. The draft final report was submitted and was again reviewed, although there were far fewer comments this time. Based on these comments, the final audit report was prepared.

Sampling and Sample Intensity

The IFAPP requires that at least 10% of each major activity be sampled. **Table 5** shows the total amount of each key activity that took place during the audit period, and the sample size and sampling intensity in the IFA. Most sites were pre-selected during the pre-audit meeting although a small number were added ad hoc during the field visits.

For all entries or area managed in the table, the data are extrapolated to five years, as only four years of information are available, given that the annual report for the final year of the audit has not yet been produced, consistent with the mandated schedule for its production. Due to the low level of activity on the Forest, the audit handily exceeded the minimum sample size specified in the IFAPP for all activities, with the overall level of sampling ranging from 45 to 100% for key activities.

The IFAPP directs the auditors to verify in the field at least 10% of the areas reviewed in a specified procedures assessment undertaken by KPMG for the 2014/15 fiscal year. We verified in the field 58% of the eligible silvicultural activities undertaken by NFMC and its contractors.

Examples of operations were examined in each major forest unit present on the Forest, representing a range harvest years, season of operation, and silvicultural treatment packages. A number of sites where renewal activities had been conducted during the audit period were visited to evaluate the appropriateness and quality of these treatments and to perform an initial evaluation of their effectiveness. These included sites that were site prepared, seeded, planted, and tended, and those for which natural regeneration treatments were prescribed.

Table 5. Sampling intensity of the field operations, by key feature investigated.

Feature	Total in Audit Period	Total Sampled	Sample Intensity %
Harvest (ha)	4,300	2,232	52
Natural Regeneration (ha)	116	116	100
Site Preparation (ha)	1,408	1,235	88
Planting (ha)	2,769	2,126	77
Seeding (ha)	0	0	N/A
Aerial Tending (ha)	4,920	2,202	45
Free-to-Grow Assess (ha)	9,480	5,528	58
2014/2015 FRT Areas (ha)	2,058	1,189	58
Primary & Branch Roads (km)	8	5	63

The table is intended to portray an approximate level of effort only. There are several factors which preclude too-precise an interpretation of the figures presented in the table. Although we viewed many individual harvest and/or treatment blocks during the field inspection portion of the audit, more than one aspect of forest management was inspected at some sites. For example, at sites where harvesting had taken place,

harvest practices, compliance issues, road construction, Area of Concern (AOC) protection, site preparation, and regeneration activities may all have been inspected. Finally, of the area figures shown above, it should be noted that we did not inspect every hectare of the blocks we visited – such a level of effort would be infeasible.

Input to the Audit from First Nations Communities

The audit team met with representatives from three First Nations: Ojibways of Pic River, Pic Mobert and Ginoogaming. All representatives discussed community concerns regarding declining moose populations and the impacts of herbicide on the forest. The representatives from Pic River and Pic Mobert expressed moderate satisfaction with their experience in the planning team but felt that the planning team was not particularly responsive to many of their concerns, which is why Pic River sent a letter to MNRF towards the end of the planning process outlining three major concerns.

The representatives also commented on the challenge of participating in a planning team where the discussion is often highly technical and the MNRF and Company participants are generally very adept at working with that information. The large number of forest planning processes, not to mention processes from other sectors, is also a challenge to address. The representative from Ginoogaming expressed frustration at a lack of communication with NFMC, however the audit team is unsure of how to interpret these comments since NFMC documented a number of efforts to contact and engage with Ginoogaming.

Input to the Audit from LCC members

The audit team individually interviewed 3 current LCC members and 1 former LCC member. Additionally, the audit team met with 5 LCC members during an LCC meeting in Manitowadge. Topics raised by the LCC included:

- Challenges in meeting quorum and maintaining LCC membership during the Buchanan bankruptcy and MNRF transition;
- Desire for increased LCC member recruitment in communities outside of Manitowadge;
- Optimism around NFMC's role in forest management, and collaboration in the planning process;
- Satisfaction around the new LCC Terms of Reference (2016), and potential for new 'subgroup' model for the LCC;
- Need for increased support by MNRF;
- Concerns regarding future amalgamations of the Pic River/Big Pic Forest post 2019, and what that may mean for local community representation on the LCC;
- Appreciation for the current LCC members, including their knowledge, commitment and contribution to the social perspective of the forest management planning process and forestry in general.

Input through Public Comment

No responses were received to the public outreach conducted by the audit team.

Input from MNRF

The audit team had many discussions and interviews with staff of the MNRF, principally staff from the Wawa and Nipigon Districts. Topics raised by MNRF staff included:

- Management collaboration between the MNRF and NFMC;

- The low levels of forestry operations over the term of the audit;
- Challenges associated with all of the changes that took place during the audit period;
- Challenges associated with the bankruptcy of GWT;
- Challenges dealing with distances on the management unit;
- The difficulties experienced by the LCC over much of the audit period, and the recent improvements;
- Challenges associated with entraining First Nations participation;
- Staff turnover within the MNRF;
- Commentary on many of the individual issues raised during the audit.

Input from NFMC

Staff from NFMC were very involved in the audit as co-hosts for the audit team during the audit week and serving as guides during the field inspections. Over the course many discussions were held with NFMC staff some of the key topics included:

- Challenges associated with the start-up of the Company;
- Challenges associated with retrieving data from the previous licensee and the need to conduct its own assessments and develop action plans to address legacy issues;
- The challenges of MKWA Forestry Corp's start-up and how NFMC was providing assistance since it is very important that the Company be successful;
- Discussions with MNRF and the requirements that MNRF is demanding must be met before an SFL will be issued;
- Levels of harvesting and silviculture over the audit term;
- Silviculture treatments for different forest units;
- Interaction with and support for the LCC;
- Road management and transfer of responsibility to the MNR for some roads;
- Updating of values information;
- The data collection and analysis apps that the Company is developing; and
- Commentary on many of the individual issues raised during the audit.

APPENDIX 5 – LIST OF ACRONYMS

ABIR	Aboriginal Background Information Report
ADM	Assistant Deputy Minister
AHA	Allowable Harvest Area
AOC	Area of Concern
AR	Annual Report
AVES	ArborVitae Environmental Services Ltd
AVTB	AV Terrace Bay (Company that owns the Terrace Bay mill)
AWS	Annual Work Schedule
BRF	Black River Forest
BW1	White Birch 1 Forest Unit
CCP	Caribou Conservation Plan
CFSA	Crown Forest Sustainability Act
Class EA	Class Environmental Assessment for Timber Management on Crown Lands in Ontario
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CRO	Conditions on Regular Operations
DCHS	Dynamic Caribou Habitat Schedule
DEG	Degraded Lands Forest Unit
DM	MNRF District Manager
eFRI	Enhanced Forest Resource Inventory
ESA	Endangered Species Act
FIM	Forest Information Manual
FMP	Forest Management Plan
FMPM	Forest Management Planning Manual
FMU	Forest Management Unit
FOIP	Forest Operations Inspection Program
FOP	Forest Operations Prescription
FOSM	
FRI	Forest Resource Inventory
FTG	Free-to-Grow
FRL	Forest Resource Licence
FRT	Forest Renewal Trust
FU	Forest Unit
GM	General Manager
GWT	Great West Timber Corp
ha	hectares
km	kilometres
IFA	Independent Forest Audit
IFAPP	Independent Forest Audit Process and Protocol
LC1	Lowland Conifer 1 Forest Unit
LCC	Local Citizens Committee
LFMC	Local Forest Management Corporation
LTMD	Long-Term Management Direction
m ³	cubic meters
MNRF	Ontario Ministry of Natural Resources and Forests
MOA	Memorandum of Agreement
MW1	Mixedwood 1 Forest Unit (has jack pine component)
MW2	Mixedwood 2 Forest Unit (negligible jack pine)

NDPEG	Forest Management Guide to Natural Disturbance Pattern Emulation
NESMA	Northeast Seed Management Association
NFMC	Nawiinginokiima Forest Management Corp
OFAAB	Ontario Forest Accord Advisory Board
OLL	Overlapping Licensee
OSB	Oriented Strandboard
PJ1	Jack Pine 1 Forest Unit
PJ2	Jack Pine 2 Forest Unit
PO1	Poplar 1 Forest Unit
PRF	Pic River Forest
PROF	Pic River Ojibway Forest
PRPCC	Pic River Public Consultation Committee
ROD	Regional Operations Division
RPF	Registered Professional Forester
SB1	Black Spruce 1 Forest Unit
SEM	Silvicultural Effectiveness Monitoring
SFL	Sustainable Forestry Licence
SGR	Silvicultural Ground Rules
SF1	Spruce Fir 1 Forest Unit
SP1	Spruce Pine 1 Forest Unit
SPF	Spruce – Pine – Fir
SSG	Stand and Site Guide
ToR	Terms of Reference

APPENDIX 6 – AUDIT TEAM MEMBERS AND QUALIFICATIONS

Auditor	Role	Responsibilities	Credentials
Dr. Jeremy Williams, R.P.F.	Lead Auditor, Aboriginal Involvement, Harvest and Wood Supply Auditor	<ul style="list-style-type: none"> • overall audit coordination; • oversee activities of other team members; • liaise with Company & MNR; • review and inspect harvesting records and practices; • review aspects of forest management related to forest economics and social impacts; • reviews FMP modeling inputs and activities • review Aboriginal consultation and overall Aboriginal liaison 	B.Sc.F., Ph.D. (Forest Economics), R.P.F. More than 25 years consulting experience in Ontario related to forest management, planning, wood supply modeling, and forest economics; participated in 41 previous IFA assignments (lead on 22); certified as an auditor by the Quality Management Institute.
Rob Arnup	Silvicultural Auditor	<ul style="list-style-type: none"> • Review and inspect silvicultural practices and related documentation; • Review renewal /silvicultural success and FTG assessment; • review and inspect selected environmental aspects of forest management. 	B.Sc. Senior forest ecologist with 35 years' experience in silviculture, forest management applications and environmental consulting in boreal Canada and elsewhere. Completed 27 IFAs. Associate member of the OPFA.
Christine Korol	Planning & LCC Auditor	<ul style="list-style-type: none"> • review FMP and related documents to ensure compliance with FMPM and other regulations; • review plan development process for conformity with FMPM; • review the performance of the LCC 	B.Sc., M.F.C. Approved lead forest management auditor under the FSC system, and has conducted over 30 FSC forest management audits and evaluations, including 20 as the lead auditor. This is her first IFA.
Chris Wedeles	Wildlife, Roads & Compliance Auditor	<ul style="list-style-type: none"> • review and inspect Areas of Concern Documentation and Practices; • review and inspect aspects of forest management related to environmental practices and wildlife management integration; • review and inspect access and water crossings • review compliance monitoring program 	B.Sc., M.Sc. (Wildlife Biology); Associate member of the OPFA. 25 years wildlife and forest ecology and experience in Ontario; completed 40 previous independent forest audits; certified as an auditor by the Quality Management Institute.