

An aerial photograph of a forest landscape. The trees are mostly green, but many have turned yellow and orange, indicating autumn. The forest is dense, with some clearings visible. The text is overlaid on the image.

PINELAND FOREST

**Independent Forest Audit
April 1, 2012 – March 31, 2017**

Final Report

**ArborVitae Environmental
Services Ltd.**

February 9, 2018

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1.0 EXECUTIVE SUMMARY

This Independent Forest Audit (IFA) assessed the management of the Pineland Forest for the period April 1, 2012 to March 31, 2017, which encompasses the last four years of Phase I of the 2011-2021 FMP and the first year of Phase II. The audit also covers the development of the Phase II Planned Operations. This audit reviewed the performance of the SFL-holder, Pineland Timber Company Ltd., as represented by EACOM Timber Corporation (EACOM)¹, and the Ministry of Natural Resources and Forestry (MNR) Timmins District and Chapleau District. The audit was carried out by a team of four professionals, each with a wealth of experience in forest management.

The auditors conducted site inspections over the course of two days, and interviewed members of the Local Citizens Committee (LCC), Aboriginal community representatives and staff members of EACOM and the MNR. On average approximately 25% of the variety of forest operations implemented were reviewed. The exception to exceeding the IFAPP's minimum of 10% treatment by operation type was for natural regeneration (for which 9% of operations were included in the audit), however the abundance of good quality regeneration viewed on those sites that were inspected and others that were viewed incidentally addresses any concern associated with the slightly-less-than-mandated proportion of sites visited.

The Pineland LCC is composed of dedicated members and is conducting itself in a manner consistent with the requirements of the Forest Management Planning Manual. However, this audit found that the effectiveness of the committee could be improved by addressing a lack of training opportunities and materials for both new and existing members. Also, in regards to public input and representation, this audit found that the lack of a protocol between the MNR Chapleau District Manager and the Pineland and Timmins LCCs is contrary to the direction of the FMPM regarding circumstances in which there is such jurisdictional overlap. Findings are provided that address both these topics.

This audit found that all planning components related to the operational aspects required in Phase II plans were appropriately dealt with. More broadly however, this audit identifies a planning issue related to harvest levels and the likely attainment of related objectives. Because the FMP presents an 'optimistic' scenario of the future, as most FMPs do, it is highly unlikely that the planned harvest amounts will be achieved. Therefore it is also unlikely that several associated objectives will be met. Relatedly, there are opportunities for improvement in setting some objectives and targets, particularly those regarding ecological values.

The quality of operations on the forest was routinely found to be very high. The cut-to-length system employed by the company provides good results, minimizes the potential for site damage, and avoids the need for treatment of roadside slash. Silviculture operations were also well-implemented, with generally good results obtained. The only exception was that a number of sites treated with the herbicide Vision Max experienced varying degrees of damage to and mortality of planted and natural jack pine, as well as inconsistent effectiveness. EACOM is aware of this issue and is exploring options for addressing it.

¹ EACOM is contracted by Pineland Timber to manage the Pineland Forest – Pineland Timber itself has no employees,

Harvesting operations during the audit period were lower than expected due to a fire at the Timmins sawmill in 2012 and a decrease in demand for poplar and birch. Largely as a result of these factors, the level of harvesting on the forest was only approximately 32% of that planned for the period of the Phase I Plan. This led to lower-than-expected levels of silviculture treatments as well, but the levels of treatments were comparable to, or greater than, amounts consistent with the harvest level.

In general, the company's compliance record related to ecological values was good. However, there were two issues related to water-course management that have led to findings. The first related to a single instance of a severe washout that is in need of attention, and the second relates to the challenges in implementing a fair approach to dealing with problem beavers that satisfies both the company's concerns related to reasonable costs and trapper councils' perspectives and remuneration. There is a role for the MNRF in dealing with this latter issue.

Measures to protect tourism and cultural values were well implemented.

The audit team also draws attention to the fact that the term of the company's licence has not been extended – not fully reflecting the successful completion of the two most recent IFAs.

All forest audits identify findings or recommendations, and this audit is no different in that regard. However, the audit team notes that the number of issues identified for this forest is low relative to the current norm in Ontario, and relative to the challenges that the company has faced during the audit period. Furthermore, none of the findings represent highly serious issues for the forest. The overall results of this audit are favourable and the level of performance by the company and MNRF during the audit period was high.

The audit team concludes that management of the Pineland 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 Sustainable Forest Licence held by Pineland Timber Company Ltd. The forest is being managed consistently with the principles of sustainable forest management, as assessed through the Independent Forest Audit Process and Protocol. The audit team recommends the Minister extend the term of Sustainable Forest Licence #550816 for a further five years.



Chris Wedeles
Lead Auditor



2.0 TABLE OF AUDIT FINDINGS

Concluding Statement on Licence Extension	
<p>The audit team concludes that management of the Pineland 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 Sustainable Forest Licence held by Pineland Timber Company Ltd. The forest is being managed consistently with the principles of sustainable forest management, as assessed through the Independent Forest Audit Process and Protocol. The audit team recommends the Minister extend the term of Sustainable Forest Licence #550816 for a further five years.</p>	
Findings	
1.	There is a lack of training opportunities and materials for both new and existing LCC members.
2.	The Chapleau District MNRF has not maintained records of consultation with the LCC on all amendments issued over the audit period, and has not formalized its approach with the LCC regarding the automatic categorization of specific types of amendments (e.g. ORB adjustments and the addition of AEAs).
3.	There is no protocol in place between the MNR Chapleau District Manager and the Pineland and the Timmins local citizens committees.
4.	The actual harvest level has been well below the planned level in 2011 FMP period to date, which if it continues, is likely to limit the degree of achievement of 2011 FMP objectives and targets.
5.	During the audit period, there was inconsistent effectiveness of sites treated with the herbicide Vision Max, that included varying degrees of damage and mortality to planted jack pine.
6.	The washout on the branch road off Goose Range North Road (Audit Stop P14-738) is a safety hazard.
7.	Road maintenance may be threatened by the absence of a mutually-agreeable mechanism to control nuisance beaver.
8.	The Trend Analysis did not meet key requirements identified in the FMPM related to making recommendations for improvements in management of the forest.
9.	Contrary to direction in the CFSA, MNRF has not extended the licence to recognize the positive results of the previous audits.

3.0 INTRODUCTION

3.1 AUDIT PROCESS

The Crown Forest Sustainability Act (CFSA), and one of its Regulations (160/04), directs the Minister of Natural Resources and Forestry (MNRF) to conduct regular audits of each of the province's managed forests. These audits assess compliance with the CFSA, the Forest Management Planning Manual (FMPM), the forest management plan (FMP) and whether the licensee has complied with the terms and conditions of its Sustainable Forest Licence (SFL). The effectiveness of operations in meeting plan objectives and improvements made as a result of prior Independent Forest Audit (IFA) results are also to be evaluated. Consistent with the CFSA, the Independent Forest Audit Process and Protocol (IFAPP) requires the audit team to provide a conclusion regarding the sustainability of the Crown forest and a recommendation regarding extension of the term of the SFL.

An important characteristic of the IFAs is that they review the performance of both the MNRF and the SFL-holder, which is Pineland Timber Company Ltd. as represented by EACOM Timber Corporation (referred to as EACOM or 'the company'). The MNRF 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 covers the period April 1, 2012 – March 31, 2017 which spans the last four years of Phase I of the 2011-21 FMP and the first year of operations from the second five-year term. The audit examined all forest operations that occurred within that period as well as the process of developing Phase II of the FMP. ArborVitae Environmental Services Ltd. (AVES) undertook this IFA using a four-person team. Profiles of the team members, their qualifications and responsibilities, are provided in Appendix 6.

The IFAPP document provides direction regarding the scope and process of the audit. This year the IFA process was modified to include a screening of the risk associated with approximately 75 of the 170 audit procedures. Risk is considered as a composite of the likelihood that a procedure would have a finding associated with it and the impact of a non-conformance on the sustainability of the forest. As a result of this screening, four of the optional procedures were selected to be audited. Greater detail regarding how the audit process was followed, the approach used in the risk assessment and the results, and the operational sampling intensity can be found in Appendix 4.

The auditors interviewed several members of the Pineland Local Citizens Committee regarding the aspects of the committee's mandated identified in the FMPM. The auditors also received input from the Mattagami First Nation and Brunswick House First Nation.

3.2 MANAGEMENT UNIT DESCRIPTION

The Pineland Forest is located in north-central Ontario, roughly between Timmins and Chapleau. The forest is divided into two spatially separate portions: Foleyet and Gogama (Figure 1). The Foleyet portion of the Forest is located in the MNRF's Chapleau District and the smaller Gogama portion (the GMU) is in Timmins District. The Chapleau office acts as the administrative lead for the MNRF.

There are five First Nations that have indicated an interest in the Pineland Forest however there are no First Nation Communities located on the Forest. Two of the First Nations have communities in the MNRF Chapleau District – Chapleau Cree and Brunswick House. Michipicoten First Nation, located near Wawa, also has an interest in the Forest. From the Timmins side, Mattagami and Flying Post First Nations have identified interests. Flying Post was moved in the 1950's from the Pineland Forest area to Nipigon. The community is now taking steps to redevelop a presence in the Timmins district. Mattagami has a relatively large and diversified community located near Gogama. The Métis Nation of Ontario has asserted rights on the Forest

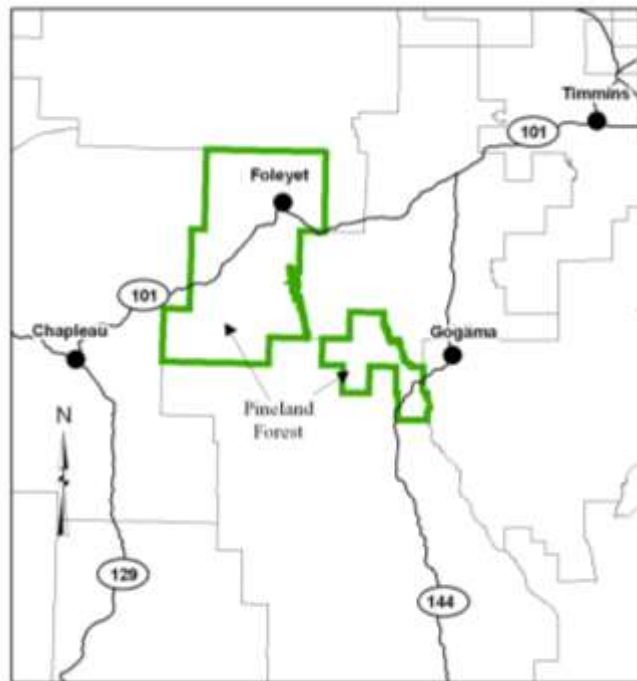


Figure 1. Map of the Pineland Forest.

Much of the area now encompassed by the Pineland Forest was originally licensed to the Pineland Timber Company in 1925. Through a series of corporate transactions including purchases, mergers, and divestments since the mid 1990's the Forest has been licensed to the J.E. Martel Lumber Corporation, E.B. Eddy, Domtar Inc, and now the Pineland Timber Company Ltd.

At approximately 370,000 ha of managed Crown land, the Pineland is one of the smaller tenured forests in the Province. Table 1 provides an area description of the Forest. It shows that most (94%) of the area within the boundaries of the forest is managed Crown land and that most of that land (85%) is productive forest.

Table 1. Area description of the Pineland Forest (From Table FMP-1, Phase I 2021 FMP)

Land Class	All Land Ownerships ^a (ha)	Managed Crown Land (ha)
Water	34,866	32,425
Non-forested	1,700	1,312
Non-productive Forest ^b	23,538	22,020
Productive Forest ^c	331,221	313,871
Total	391,325	369,628

a – includes Crown managed forest, parks, private, and Federal land

b – areas incapable of growing commercial trees, such as muskeg, rock, etc.

c – forest areas capable of growing commercial trees.

The area of the major forest units (FUs) is shown in Figure 2. At approx. 51,000 ha mixed coniferous-hardwood (MW2) is the most abundant FU with upland spruce (SF1), pure poplar (Po1), and lowland conifer (LC1) next, all with approximately 34,000 ha. The area of the forest by age class is shown in Figure 3. The youngest age class (0-20 yrs) is the most abundant with approx. 86,000 ha. The overall age-class distribution of the forest, showing an abundance of young ages reflects the era of industrial forest management since the early 1980's. The relative abundance of old forest reflects the success of fire suppression in recent decades as a 'natural' age-class distribution would contain considerably less older forest.

Harvest activity on the forest over the period covered by the audit was low. Only about 33% of the volume planned was actually harvested. This is attributed to two main factors – a fire at the Timmins sawmill in 2012 which resulted in considerable downtime for the mill, and the loss of markets for poplar and birch.

Being relatively close to Timmins – the major population centre in Northeastern Ontario - the forest has a relatively high level of recreational use. Hunting, fishing, snowmobiling and canoeing are all popular activities on the Forest. The Forest also has 32 Designated Tourism Lakes and 19 resource-based tourism establishments (according to the Phase I FMP).

The Pineland Forest has a history of good management, as revealed by the results of recent Independent Forest Audits. The most recent IFA contained only five recommendations, which is low in comparison to most IFAs, and all previous audits of the forest have found the forest to be sustainably managed and recommended extension of the Sustainable Forest Licence.

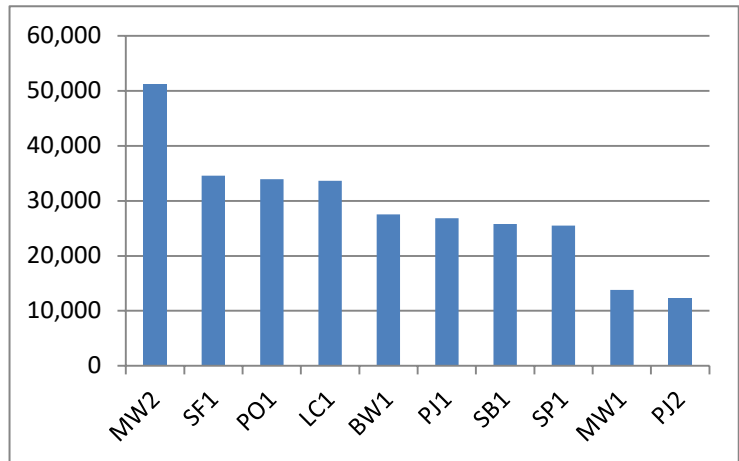


Figure 2. Area (in ha) of major forest units on the Forest (data from Table FMP-3, Phase 1 2021 FMP.)

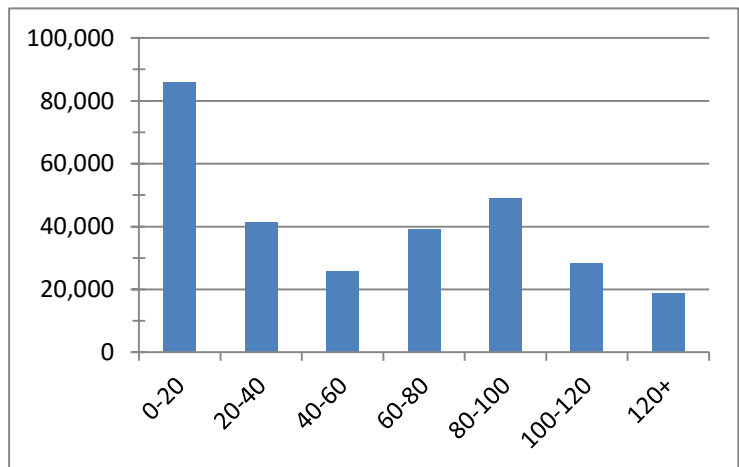


Figure 3. Area (in ha) of forest age-classes (in years) on the Forest. (data from Table FMP-3, Phase 1 2021 FMP.)

4.0 AUDIT FINDINGS

This audit provides several findings regarding issues of non-compliance and/or the need to improve the effectiveness of forest management. The findings are described in detail in Appendix 1.

4.1 COMMITMENT

The commitment principle of the IFAPP is deemed to be met since the Pineland Forest is certified under the Sustainable Forestry Initiative. The audit team had extensive engagement with Company and MNRF staff throughout the audit and found them to be highly committed and knowledgeable regarding provincial forest management requirements in general and management of the Pineland Forest in particular.

4.2 PUBLIC CONSULTATION AND ABORIGINAL INVOLVEMENT

Local Citizens Committee

The Pineland LCC, which is based in Chapleau, is currently comprised of 10 members who represent a broad spectrum of interests. Most members have participated on the LCC for some time, and while the group is currently functioning well, some LCC members interviewed noted that efforts regarding recruitment and promotion of the LCC will be required in the near future to ensure the continuation of a well-functioning LCC. In addition to the Chapleau-based LCC, the Timmins District LCC plays a role in representing local interests on the GMU.

Over the audit period, the LCC met 14 times, and quorum was met for a majority of these meetings. While some members expressed a desire for more frequent meetings, achieving quorum remains the biggest challenge in this regard. LCC members interviewed noted meetings were well-run, and several commended both EACOM and the MNRF on their support and the quality of information provided during meetings. The LCC fulfilled their mandate of reviewing AWS and Annual Reports presented by EACOM, discussing amendments, providing feedback on aspects of the implementation of the Phase II plan, and having a LCC representative participate on the Phase II Planning Team.

The LCC Terms of Reference was in place for this past planning cycle. The Terms of Reference included most required elements of the FMPM (Part A section 3.2.4), however, there were some minor requirements missing or requiring clarification, including the date of each member's appointment to the committee (b), key dates for the committee in preparation of the FMP (e), frequency of meetings (h), and the selection of alternates for the chair of the committee (h). These should be addressed in the next revision of the LCC Terms of Reference.

Despite the adequate functioning of the LCC, some LCC members interviewed expressed concern over the lack of training material provided to new and existing members that would facilitate their understanding of forest management concepts and technical terms. This is the subject of **Record of Finding # 1**. In addition, the audit team found that the MNRF has not formalized its approach with the LCC regarding the automatic categorization of specific types of amendments. Such procedures are commonly implemented in LCC's, but it should be formalized to ensure it is put into practice in an appropriate manner. This is addressed in **Record of Finding # 2**.

The audit team also noted that there is no protocol in place between the MNR Chapleau District Manager and the Pineland and Timmins LCC's. Such protocols are required by the FMPM

when management unit crosses MNR administrative boundaries. This is addressed in **Record of Finding # 3**.

Aboriginal Engagement

MNRF invited all five First Nations and two Métis organizations – the Métis Nation of Ontario and Chapleau Métis of Ontario – to participate in planning. All First Nations appointed a representative however their actual participation was limited. The two Métis organizations declined to participate on the planning team but asked to be kept informed of progress and any potential issues that might arise.

During the development of the Phase II Planned Operations for the Martel Forest (neighbouring Pineland and on the same plan schedule), a “Forest Management Planning 101” workshop was organized by Chapleau District MNRF in response to feedback from Aboriginal elders and leaders that the complex nature of the technical aspects of planning inhibited the participation of Aboriginal people. This workshop was well-received, and helped Chapleau Cree, Brunswick House and Michipicoten First Nations better understand the planning process and its technical content.

During the planning process, Chapleau Cree, Brunswick House, Mattagami First Nations reviewed the harvest allocations against their values and in each case, no conflicts were identified. However, more generally, the communities emphasized the role of the Forest in providing opportunities for hunting, fishing, gathering, and trapping, and concerns were expressed regarding harvesting in proximity to waterbodies, the use of herbicides, and the decline of moose populations.

The audit team reviewed the Condition 56 reports prepared annually by the Chapleau District MNRF². The formatting of these reports changed throughout the audit period, growing less informative and more difficult to read, and the guidance on report content coupled with changes in how MNRF delivers initiatives meant that many activities undertaken by other levels of the Ministry that contribute to achieving the goals of Condition 56 received little or no mention. The Condition 56 reports prepared by the Timmins District only covered interactions with Aboriginal communities regarding the Romeo Malette, Abitibi River, and Timiskaming Forests. This creates a gap in the reporting of any activities involving Mattagami and Flying Post First Nations on the Pineland Forest, that should be addressed by the MNRF.

Input into the audit from First Nations in response to invitations from the audit team was relatively limited. Input from First Nations Communities is described in Appendix 4.

4.3 FOREST MANAGEMENT PLANNING

The audit team reviewed the Phase II Plan in detail. In general the plan is well-written and meets the requirements as identified in the FMPM.

The FMP planning team reviewed the Silvicultural Ground Rules (SGRs) developed for the Phase I FMP and did not add or subtract any SGRs in Phase II. The preferred SGR for each FU remained unchanged – on most FUs, clearcutting was the preferred harvest approach. Careful logging around advanced growth (CLAAG) was planned for harvests on lowland sites

² In 2015, Declaration Order MNR-75 was passed, which meant that Condition 34 in the previous Declaration Order was amended and became Condition 56 in MNR-75. In years up to and including 2014-15, MNRF produced Condition 34 reports which described annual progress in meeting the condition; from 2015-16 onwards, these became known as Condition 56 reports.

and where there was abundant advanced regeneration, which supported the use of natural renewal on such blocks. The full application of the Stand and Site Guide (SSG)³ in Phase II necessitated additional planning for residual areas with harvest blocks.

Elements of the Phase II plan related to harvest and silviculture, including the conditions on regular operations (CROs), planned renewal, tending and protection operations, renewal support requirements, and forecasts of expenditures in 2016-2021 were in conformance with applicable planning requirements and were adequate to reflect the proposed 5 years of operations.

For ecological and social values, the Phase II FMP contains 67 Area of Concern (AOC) prescriptions, slightly more than the 63 included in Phase I. Most AOCs relate to environmental values – almost two-thirds are related to water/riparian values and wildlife values (primarily nests of different species of birds), with the rest relating to cultural features, infrastructure, or tourism values. The changes from Phase I to Phase II related mostly to refinements to bring the AOCs in-line with the SSG. In the Phase II FMP, many AOC prescriptions were rewritten to separate operational aspects from the planning aspects. The intent was to allow operations staff to focus on information relevant to the implementation of the prescription. This was a constructive revision. The audit team reviewed the AOC prescriptions and found them to be appropriate for the values they intend to protect.

The CROs related to environmental values are complete in terms of breadth of topic and content. In many/most instances the CROs' text is taken verbatim from, and in exactly the same style as, the direction in the SSG. Although this approach ensures that all relevant material is provided, it may forego opportunities to highlight aspects known to be of particular relevance or importance to the forest. This is not a serious flaw but refinement of the present style and approach may be worth considering in development of the next plan.

According to Table FMP-18 of the Phase I FMP, planned construction of primary and branch roads was 84.6 and 16.5 km respectively. During the Phase I period, which includes one year prior to the present audit term (2011-12) and excludes the last year of the present audit term (2016-2017), 45.1 km of primary road was constructed (53% of planned), and 4 km of branch road were constructed (24% of planned). These proportions are commensurate with the planned portion of harvest area that was actually achieved (32%, according to Table 5 of the Trend Analysis). However, given that it is unlikely that the harvest level will meet planned levels in Phase II, the audit team believes that the planned road construction for the second FMP term (53.1 km of primary road and 36.5 km of branch), which is based on full harvest of the AHA will also be considerably less than planned. There are no sustainability issues associated with this likely over-estimate of road construction, but it does contribute to the sense that the plan is more of an aspirational document than a realistic one.

There were six amendments submitted for the Phase I FMP; five were administrative and one was categorized as minor. The minor amendment was related to the addition of a primary corridor for the Jagger Road. MNRF consulted the LCC regarding the categorization of the amendment, and public and First Nations notifications related to the amendment met the FMPM consultation requirements (Part C section 6). As noted earlier, for the administrative amendments, the MNRF has not implemented a formal approach for dealing with LCC input. This is addressed in **Record of Finding # 2**.

³Ontario Ministry of Natural Resources. 2010. Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales. Toronto: Queen's Printer for Ontario. 211 pp.

4.4 PLAN ASSESSMENT AND IMPLEMENTATION

The Company conducts its harvest operation using the cut-to-length (CTL) harvest system on almost all blocks; this has been the practice on this Forest since 2005. The audit team concluded that the operations were conducted to a very high standard, with good utilization, boundary control, residual retention and avoidance of damage to the site and the retained live trees. The use of CTL avoids the accumulation of roadside slash and the need to manage it, however it does affect the approach taken to renew harvest areas.

The planned harvest area in Phase I of the 2011 FMP was 16,984 ha, or an annual average of almost 3,400 ha. The achievement during Phase I was 5,350 ha, or 32% of the planned area. The actual harvest volume was 33% of the planned level; the consistency of the area and volume figures suggest that the Company's yield curves are quite accurate in general. One factor that accounted for a large part of the shortfall was a fire at EACOM's Timmins sawmill, which resulted in the closure of the mill for 15 months and the shifting of harvest contractors off the Pineland onto other forests. The second key factor was the lack of hardwood markets, which continued from the previous plan term. The 2011 FMP incorporated adjustments to hardwood utilizations standards permitted by the NE Region, and the Company has generally avoided harvesting stands in the hardwood forest units or hardwood-dominated mixedwood stands. While the FMP anticipates that this hardwood utilization strategy will only be applied in the short-term, there are no evident catalysts for a meaningful increase in hardwood use, leading to **Record of Finding # 4**.

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 operations. The observed treatments were consistent with SGR's and associated silvicultural standards. During the audit period the Company planted approximately 4.8 million trees, consisting of jack pine, black spruce, white spruce, white pine, and red pine.

For the Phase I FMP term, the total area regenerated on the forest was 10,512 ha. This represented 64% of the planned five-year effort. However, the actual area harvested during FMP Phase I was only 32% of the planned area, thus the regeneration effort has more than kept pace with the level of harvesting during the period. For the first year of the Phase II Operating Plan five-year term, the reported area of total regeneration was 2,038 ha, which is greater than the area harvested during the previous 2 years; the regeneration effort for the Phase II Operations Plan term is therefore on track to keep pace with actual harvesting. The balance of natural and artificial treatments implemented during the audit period was consistent with planned proportions.

Site preparation was conducted on approximately 93% of artificial regeneration projects during the audit period. Site preparation treatments utilized a variety of mechanical equipment, including passive and powered disk trenchers, Bracke scarifier, and a brush rake, as well as chemical site preparation, depending on site conditions and associated silvicultural requirements. It is commendable that the Company has a variety of options available to deal with different site conditions.

Tending with herbicides had been conducted on appropriate sites in support of silvicultural objectives, and in most cases appeared to be effective. However, during the audit period, a number of sites treated with the herbicide Vision Max experienced varying degrees of damage to, and mortality of, planted and natural jack pine. The Company spent considerable resources

testing and implementing a number of measures intended to minimize this damage and mortality. Refer to **Record of Finding # 5** for a more detailed description of this issue.

The renewal support program was reviewed and found to be sufficient to support the Company's proposed tree planting program. Planned cone collection forecasts for Phase I were not achieved for all species, however the current seed inventory is adequate to support silvicultural needs for planting stock production for the next several years. Due to short supply and a lack of cone crops suitable for seed collection, the Company purchased a supply of suitable Zone 24 white pine seed from Clergue Forest Management Inc. in 2014.

AOCs and CROs for ecological values were well implemented, with values protected as intended in the vast majority of situations. However there were two instances of non-compliance during the audit period. One instance involved two occurrences of working outside the "working in water time period" on permanent streams. An administrative penalty was levied on the company in response to this. The other non-compliance related to a trespass into High Potential Sensitivity Stream (HPSS) and Moderate Potential Sensitivity Stream (MPSS) modified reserves. This resulted in a warning letter. Both instances were handled appropriately by the MNRF and acknowledged by the company.

As noted in Section 4.3, road construction was considerably less than planned. For the most part, the quality of roads was good and roads were maintained consistent with their intended use. However two issues related to stream crossings were apparent. The first relates to a specific instance of road failure. During the site inspection one particular recent washout was inspected which the audit team believes is a safety hazard. This is addressed in **Record of Finding # 6**. This is a relatively straightforward situation that should just involve some physical remedy. The second issue is somewhat more complex and relates to EACOM's dissatisfaction with the options available to it for dealing with nuisance beavers. This is addressed in **Record of Finding # 7**

4.5 SYSTEM SUPPORT

The human resources component of the System Support criterion is deemed to be met since the Pineland Forest is certified under the Sustainable Forestry Initiative. As part of the risk-based auditing process, the IFAPP procedure related to documentation and quality control was not audited in detail. However, incidental observations by the audit team lead to the observation that the high-level of performance of the company is supported by good systems for quality assurance and quality control.

4.6 MONITORING

The Company has developed and implemented a comprehensive system for monitoring silvicultural operations. This system includes field inspections conducted on all blocks within a year after harvesting. This provides the initial information needed to finalize decisions on silvicultural intensity and to verify Forest Operations Prescriptions (FOPs). Further surveys are conducted following site preparation to determine soil types, number of plantable spots, and the required mix of species to be planted. The Company uses a stock forecasting tool, which is based on SGR rule sets, to project stock growing requirements. The Company also conducts quality assessments during tree planting and site preparation activities.

The Company conducted field surveys for the assessment of tending needs and refinement of boundaries before treatment. Tending effectiveness surveys were also conducted on all treated blocks one year after treatment, to determine if any silvicultural follow up was required.

During the audit period, MNRF District staff at Timmins and Chapleau implemented SEM programs on core tasks according to direction from the MNRF Provincial Silvicultural Program and from the Northeast Region. Work was completed on required core tasks to an acceptable level. In general, there was good correspondence between the assessment results from MNRF and the Company. The Company and MNRF pooled results from their respective SEM programs to develop information that was used for reviewing SGRs during the preparation of the Phase II Operations Plan and will be valuable for use in future FMPs.

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. Maps and associated information on silvicultural treatments and free-to-grow assessments produced by the Company were found to be consistent with the actual conditions and treatment boundaries observed by auditors in the field.

Free-to-grow Assessment Results

The Company used GIS-based tools to identify and map areas requiring free-to-grow assessments every year, including areas that were scheduled for re-survey because they were determined to be not free-to-grow in a previous assessment. During the 2011-2021 FMP term to date term, the Company completed the assessment of 19,031 ha for free-to-grow status. This effort represented 78% of the forecast area of 24,605 ha. Silvicultural liability assessments that were conducted each year by the Company showed that there is currently no backlog of area requiring free-to-grow assessment on the Pineland Forest. GIS analyses conducted during the audit revealed that all of the areas classed as Category 2 Lands⁴ on the Pineland Forest have been declared free-to-grow.

Free-to-grow results from 2011-2016 indicate 100% regeneration success and that 74% of harvested areas had succeeded to the target forest unit or to an acceptable forest unit as per the SGRs (silvicultural success) at the time of survey. This is a reasonable result - it is expected that this proportion will increase over time as forest succession on these sites proceeds.

Annual reports prepared over the audit period included all required elements, were presented to the LCC and were completed on time. Levels of operational achievement and descriptions of compliance performance are well described. All required tables are provided, and the information presented is accurate.

The Company conducts a compliance program on the Pineland Forest, and the MNRF Chapleau and Timmins Districts handle MNRF compliance responsibilities on the portions of the Forest within each of the two Districts. Review of compliance records submitted by the company reveals that they are complete, and when compared to sites visited in the field by the auditors, they reflect on-the-ground circumstances well.

The Company prepared a thorough compliance plan as part of its 2011 FMP and the compliance approach was updated in the Phase II Planned Operations to reflect changes incorporated in the 2014 Compliance Handbook. The Phase II plan document made scant

⁴ Category 2 lands were harvested prior to April 1, 1994 and the SFL requires the Company to meet the silvicultural standards on those areas.

reference to the MNRF compliance program however FMPM requirements on this point are very general. The Ministry's Annual Compliance Operations Plans (ACOPs) were very basic throughout the audit period. District MNRF staff put a greater amount of information in the 2017-18 ACOP however the document does not discuss all of the topic areas identified in the Compliance Handbook. The MNRF should address this in the future.

During the audit period, the Company submitted 151 inspection reports to the FOIP system, and the MNRF prepared 55 reports. The compliance record was very good, with the Company reporting three non-compliances during the period and the MNRF 1, for a 98% compliance record. There were also three written warnings and one administrative penalty. The auditors did not find any unreported non-compliances during their field inspections, supporting the notion that the Company's compliance record is excellent.

The MNRF's inspection reports increased in number steadily during the audit period from 5 in 2012-13 to 18 in 2016-17. All of the MNRF inspections were undertaken by Chapleau District inspectors – there were no inspections undertaken by Timmins compliance staff. In part, the absence of inspections on the Timmins block reflects a relatively low level of activity there. The audit team was also informed that Timmins District had a shortage of compliance inspectors during much of the audit period and the Pineland operations were considered to be low risk by MNRF and were not audited. While this lack of inspections on the GMU portion of the Forest is a concern to the auditors, it was not considered serious enough to warrant a finding, in part because Timmins District is hiring more inspectors.

In summary, the Company and Chapleau District MNRF implemented an effective compliance program. There is room to improve in terms of better integrating the compliance effort on the part of the two MNRF Districts, which could be done effectively in an inter-district protocol, and documenting the MNRF compliance approach and plans.

4.7 ACHIEVEMENT OF MANAGEMENT OBJECTIVES & FOREST SUSTAINABILITY

The sustainability of the management of the Pineland Forest is assessed based on direction given in the IFAPP. The collective achievement of objectives, a comparison of planned versus actual levels of activities, and the rationale for activities and operations that are not achieving target levels are used to assess whether management followed the principles of sustainability. The auditors also consider the quality of operations inspected during the site visits and information provided by all parties interviewed during the course of the audit.

The Trend Analysis is a key document in assisting in understanding the history of operations on the forest and in assessing the extent to which plan objectives have been attained. The trends described in the report are consistent with those noted earlier in the report – with the generally declining proportion of planned harvest achieved, renewal and maintenance programs were conducted appropriately in proportion to the lower-than-planned harvest levels. Key conclusions of the document are that the forest is being managed sustainably and that the plan's objectives are likely to be achieved. This audit found the trend analysis to be a useful and informative document in a retrospective sense, and many of its analyses were used to inform this audit's reviews. However, the mandate of the Trend Analysis is that it also be forward looking and provide recommendations such as measures to improve effectiveness of operations, and more accurate assumptions used in modelling. In this regard, the Trend Analysis has not met the requirements of the FMPM, or the IFAPP and this has limited its utility somewhat. This is addressed in **Record of Finding # 8**.

The Trend Analysis concludes that the vast majority of the plan's objectives are being achieved. This is not dissimilar from this audit's assessment that found that most objectives and targets are on course to being achieved, with the notable exception of those whose achievement is linked to the actual level of harvesting. However, this audit's detailed assessment (Appendix 2) highlights a number of opportunities to improve the planned ecological objectives. For example, the target level of disturbance size distribution that includes 31-82% in disturbances of greater than 10,000 ha seems unrealistic given society's angst regarding very large clearcuts. In addition maintenance of habitat for species at risk is based only on a single species (olive-sided flycatcher), whereas several exist in the forest. Also, the target for road density is of little utility given that the upper range is greater by a factor of 40 compared to the lower range, and that there is no quantitative basis provided for the indicator.

In spite of these shortcomings in the framing of some objectives critical objectives and targets are being achieved, or on track to being achieved, including:

- maintenance of growing stock for key tree species;
- maintenance of productive forest area;
- full achievement of requirements related to free-to-grow assessments; and
- achievement of target compliance levels for almost all indicators.

One measure of management success required for inclusion by the IFAPP is a comparison of silvicultural success and regeneration success. Table 2, below provides this for the FMP period to date. As noted earlier, the total regeneration success is 100%, and the total silvicultural success is 74%. Silvicultural success was high for the THSH, PJ1, and PO1 units, reflecting their relatively simple nature. Silvicultural success was lower for LC1, MW1, reflecting their more complex nature.

Table 2. Regeneration Results by Forest Unit (2011-2016)

Forest Unit	Projected FU	Acceptable FU	Other FU	NSR Area	% Silv. Success	% Regen Success	% NSR	Total Area Assessed
BW1	1,248	182	464	0	76%	100%	0	1,894
LC1	1,136	136	1,575	0	45%	100%	0	2,847
MW1	420	283	511	0	58%	100%	0	1,214
MW2	1,546	757	519	0	82%	100%	0	2,822
PJ1	728	301	69	0	94%	100%	0	1,098
PJ2	416	112	156	0	77%	100%	0	684
PO1	1,610	817	203	0	92%	100%	0	2,630
PWRST	3	18	55	0	28%	100%	0	76
SB1	1,147	248	885	0	61%	100%	0	2,280
SF1	660	642	164	0	89%	100%	0	1,466
SP1	731	560	284	0	82%	100%	0	1,575
THSH	58	0	0	0	100%	100%	0	58
Nat. Dist.	147	148	92	0	76%	100%	0	387
Total	9,850	4,204	4,977	0	74%	100%	0	19,031

As noted throughout this audit report the quality of operations on the forest were high and the audit team is strongly of the opinion that the forest is being managed sustainably. This assessment is based on a variety of factors including:

- **Harvest Level:** the actual level of harvest during the audit period was well below the maximum amount determined to be sustainable in the FMP, indicating that the harvest is well within the forest's productive capacity;
- **Renewal Activities:** The extent of renewal activities is consistent with, or exceeds those required given the level of harvesting;
- **Accurate Yields:** The consistency between the actual vs. planned harvest and volume indicates that the timber yield projections in the FMP are generally accurate;
- **Silviculture Monitoring:** The company has implemented an excellent system of silviculture needs assessment and monitoring;
- **Free-to-Grow:** Over the period of the audit 100% regeneration success was achieved.
- **Compliance:** Over the period of the audit, the company achieved a high level of compliance in its operations.
- **Values Protection:** The AOCs and CROs were appropriate to protect the relevant values and were generally well-implemented in the field; and
- **Planning:** The Phase II FMP is a high-quality document and the AWSs and Annual Reports conform to the requirements of the FMPM.

The audit team notes that findings of sustainability are required to provide a recommendation for licence extension. The previous two IFAs have provided such a recommendation, but the company's licence has not been updated by the MNRF. This is addressed in **Record of Finding # 9**.

4.8 CONTRACTUAL OBLIGATIONS

The SFL imposes a number of requirements on its holder, and EACOM was found to have met all of the associated contractual obligations. EACOM's compliance is described in detail in Appendix 3. Key aspects of the company's performance relative to its contractual obligations include:

- The company met all its financial obligations related to trust accounts and Crown charges;
- Wood supply commitments as identified in the Licence were met, although the receiving mills were not consistently in need of the obligated supply;
- All planning, inventory, and monitoring commitments were appropriately addressed;
- There were no significant natural disturbances on the forest in the audit period, so no salvage harvesting or insect pest management was implemented.
- The company's silviculture standards and assessment program met its licence obligations;
- The contractual obligations with respect to operational compliance planning and monitoring were met. The Company prepared the required ten year and annual compliance plans, and updated the compliance approach in the Phase II Planned Operations.

4.9 CONCLUSIONS AND LICENCE EXTENSION RECOMMENDATION

This audit of the Pineland Forest for the April 1, 2012 – March 31, 2017 period resulted in nine findings. The audit results are based on extensive review of field operations, considerable research by the audit team based on a wide variety of forest management documents at its disposal, interviews with company and MNRF staff, and interviews with LCC members and input from two First Nations.

This audit finds that the Pineland Forest is being managed well and sustainably. Although the findings do address instances of non-conformance with the IFAPP, notable is the fact that none of the findings relate to systemic shortcomings of forest management operations. The audit team believes the forest is managed to a high level of professional integrity.

Although there is no strong pattern of the findings, three relate to the LCC; addressing the need for additional training, a more formalized process for categorizing amendments, and the need for a protocol addressing the overlapping jurisdictions of the Pineland and Timmins LCCs.

Three findings relate in some manner to forest operations – one addresses a specific instance of road failure, another is related to the need to develop an equitable approach to management of problem beavers and the other identifies the challenges associated with the use of the herbicide Vision Max. None of these issues are intractable and all are well within the company's means to address in the course of its normal forest management activities.

Two issues relate to planning or reporting. The first, and more noteworthy, is related to the low harvest levels relative to those planned on the forest. Although not a threat to sustainability, there are number of implications including the impact on attainment of some related objectives. The second issue relates to the Trend Analysis document and its failure to address some requirements to be forward-looking and not just retrospective.

The final finding identifies that the MNRF has not maintained the company's licence consistent with the requirements of the CFSA, and it now has a duration considerably less that it should given the successful conclusions to the two most recent IFAs.

The audit team concludes that management of the Pineland 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 Sustainable Forest Licence held by Pineland Timber Company Ltd. The forest is being managed consistently with the principles of sustainable forest management, as assessed through the Independent Forest Audit Process and Protocol. The audit team recommends the Minister extend the term of Sustainable Forest Licence #550816 for a further five years.

APPENDIX 1 – AUDIT FINDINGS

Record of Finding # 1
<p>Principle 2: Public Consultation and Aboriginal Involvement</p> <p>Procedure 2.1.2.1: LCC Purpose and Activities: Review and assess whether the LCC met the purposes and conducted its activities in accordance with the applicable FMPM. Include the following:</p> <ul style="list-style-type: none"> effectiveness of LCC involvement related to FMP values maps, desired forest and benefits meeting, management objectives, management strategy/long-term management direction, public consultation process; consider the LCC's statement of agreement or disagreement with the FMP or planned operations, LCC reports; effectiveness of the LCC at promoting the integration of all interests through participation in the evaluation of trade-offs and in resolution of problems, differences and conflicts that may arise during the FMP planning process including any issue resolutions...
<p>Background Information and Summary of Evidence: Over the audit period, the Chapleau Pineland LCC received several presentations regarding various forestry-related topics. These are generally informational, and updated the LCC members on specific subjects of interest related to the function of the LCC (e.g. spruce budworm, tenure reform etc.).</p> <p>Training for LCC members tends to be provided on topics related to the current position within the planning cycle (e.g. development of the LTMD, desired future benefits, etc.), or through the provision of rather generic information, such as the LCC Terms of Reference, LCC roles and responsibilities presentation or websites related to forest management planning. There were no training materials provided to new committee members.</p> <p>Several LCC members interviewed indicated there is a low level of understanding of the technical aspects of forest management among committee members, specifically related to complex terms and explanations. New members especially have found the learning curve to be steep and the content challenging. Members indicated some frustration with the lack of ongoing training while not in the planning cycle.</p> <p>Providing continued training was noted as a recommendation by the LCC in the Phase II plan (Supp Doc:8.9.8, Section 3.3.2). The LCC Terms of Reference indicates that the MNRF will provide assistance in education and training.</p> <p>Although outside the period of this audit, the LCC was provided forest unit training by EACOM in May, 2017, which was considered a successful and highly valuable activity by several LCC members. This, however, does not fully address the need for forest management specific training, especially for new members.</p>
<p>Discussion: Understanding both the content and context of material discussed at LCC meetings and tabled by MNRF and the company is imperative if the LCC is to be effective in fulfilling its mandate. All LCC members are volunteers and few are specialists in forestry, and therefore there is a need for initial and continuous training to ensure that members have an understanding of technical language, terms and forest management concepts so they can more actively participate in the planning process and fulfill the committee's mandate as identified in its Terms of Reference and in the FMPM.</p>
<p>Conclusion: Meaningful participation of the LCC in forest management planning requires that its members be appropriately trained and knowledgeable of relevant forest management terms and concepts. There is a need to provide additional training resources and materials to the LCC, notably for new members.</p>
<p>Finding: There is a lack of training opportunities and materials for both new and existing LCC members.</p>

Record of Finding # 2
<p>Principle 3: Forest Management Planning</p> <p>Procedure 3.13.1: Amendment process and rationale: Review the FMP or contingency plan amendment to assess whether adequate documentation existed for all amendments consistent with the applicable FMPM ...</p>
<p>Background Information and Summary of Evidence: There were six amendments made to the 2011 FMP submitted since April 1, 2012. Five amendments were administrative, and one was categorized as minor.</p> <p>Records of LCC input regarding the categorization of amendments were available for two of the six amendments. LCC categorization consultation on these two amendments occurred during LCC meetings in advance of the amendment decision by the MNRF. For the remaining four administrative amendments, the MNRF took a more informal approach to LCC consultation for categorization. Specifically, adjustments to Operational Road Boundaries (ORBs) or Aggregate Extraction Areas (AEAs) were automatically recognized as administrative amendments, and these were considered not to require consultation with the LCC in advance of the amendment decision. There was no record that this approach of automatic categorization was formalized by the LCC.</p>
<p>Discussion: Part of the LCC's role is to advise on the appropriate categorization of amendments, and this is clearly outlined in the LCC Terms of Reference. While two amendments were discussed during LCC meetings and categorizations were agreed upon, for the majority of the amendments over the audit period, there were no records available of LCC consultation regarding categorization. This automatic approach to categorizing some amendments as administrative, if not formalized in some respect by the LCC, is not aligned with FMPM requirements (section 2.2.1).</p>
<p>Conclusion: Records have not been maintained of LCC consultation for all amendment categorizations, and the approach to approving automatic administrative amendments for ORB/AEAs has not been formalized with the LCC.</p>
<p>Finding: The Chapleau District MNRF has not maintained records of consultation with the LCC on all amendments issued over the audit period, and has not formalized its approach with the LCC regarding the automatic categorization of specific types of amendments (e.g. ORB adjustments and the addition of AEAs).</p>

Record of Finding # 3

Principle 2: Public Consultation and Aboriginal Involvement

Procedure 2.1.1: LCC Establishment and Terms of Reference: Assess establishment of the LCC. This will involve a review of the Terms of Reference and LCC minutes, compared to the applicable FMPM requirements. It will also include examining whether:

- there is a single LCC covering the management unit or multiple LCCs or subcommittees exist; if the latter situation exists, determine whether a lead district has been established and whether the required protocol is effectively achieving its purpose ...

Background Information and Summary of Evidence: Chapleau District is recognized as the lead district for administering the Pineland Forest, and the Pineland LCC is based in Chapleau District and was established by the Chapleau District Manager. The Terms of Reference for the LCC state that it represents the public interest in all aspects of forest management on the Pineland Forest during planning and implementation. There is no mention of Timmins District or a Timmins LCC in these Terms of Reference.

Following the incorporation of the Gogama administrative area into the Timmins District administrative structure, the Gogama Area LCC was dissolved in 2014 and the mandate of the Timmins LCC was expanded to cover the entire District. As a result, the Timmins LCC is the only LCC constituted within the Timmins District and has a responsibility to perform the duties of the LCC on the entire managed Crown forest landbase in the Timmins District. Terms of Reference for the Timmins LCC have not been approved since 2014, however the draft ToR (dated May 2015) identify that the "Mandate of the committee will be to participate as an integral part for the Timmins District administrative area in the Forest Management Planning process ... and as support for other LCC's and Districts which have a portion of the Forest within Timmins District, but where Timmins is not the lead District", specifically including the Pineland Forest.

The 2009 FMPM states that when "a management unit crosses MNR administrative boundaries, the MNR District Manager from the lead district will establish the local citizens committee in consultation with the other MNR District Manager(s)." The 2009 FMPM continues by stating that when there are multiple local citizens committees with jurisdiction over a Forest, the MNR District Manager and the local citizens committee(s) will develop a protocol which describes how multiple local citizens committees ... will function." Such a protocol does not exist for the Pineland Forest.

Discussion: The key concern of the auditors is whether the local interests with respect to the Timmins portion of the Pineland Forest (known as the Gogama Management Unit or GMU) are being represented under the current arrangement. Involvement by the Timmins LCC has included a member attending the Phase 2 Review of Proposed Operations Information Centre on April 29, 2015 in Timmins, and a member participating in the field inspections on this audit. Since 2015, the Timmins LCC has received regular updates about goings-on on the Pineland Forest, and since 2016, presentations regarding the AWS and AR. While the GMU makes up only 4% of the Timmins District, it does constitute 17% of the forest in the Pineland Forest, which is a meaningful part of the Forest and a significant area that needs to have due consideration from local interests in its management.

It is not clear to the audit team how knowledgeable the Chapleau LCC members are regarding the Timmins District portion of the Pineland Forest and whether they are able to adequately represent local interests. A more considered and formalized process would ensure that adequate local representation occurs and there is no protocol in place between the District Manager and the two LCC's as required by the FMPM.

Conclusion: The role of the Timmins LCC on the Pineland Forest is not formally set out, as per their draft mandate and as directed in the 2009 FMPM for LCC's in this situation. The manner in which the two LCC's interact and participate in providing advice and input on the Pineland Forest could also be set out in a broader inter-district protocol, should the Chapleau and Timmins District Managers agree.

Finding: There is no protocol in place between the MNR Chapleau District Manager and the Pineland and the Timmins local citizens committees.

Record of Finding # 4

Principle 3: Forest Management Planning

Procedure 3.4.5.3: FMP Achievement of Checkpoint “Preliminary Endorsement of LTMD: 3. For the preliminary determination of sustainability ... assess:....whether it provides for the collective achievement of management objectives and progress towards the desired forest and benefits ...

Principle 4: Plan Assessment and Implementation

Procedure 4.1.1: In the conduct of the field audit, examine areas of the FMP that can be assessed in the field and assess whether the FMP was appropriate in the circumstances, Including consideration ofmodeling assumptions ...

Principle 7: Achievement of Management Objectives and Forest Sustainability

Procedure 7.2.2: In the audit report document the following... [evaluate attainment of objectives] and consider progress towards achievement of the selected management alternative/management strategy/LTMD ...

Background Information and Summary of Evidence: The actual harvest area in the Pineland Forest, as a proportion of the planned area, has trended downwards over the four plan periods reviewed in the Trend Analysis. In 1997-2001, the actual harvest was 78% of planned, and it was very similar during the 2001-06 plan period, which is something of an anomalous plan period because the FMP was for the combined Pineland and JE Martel Forests. During the 2006-11 period, the actual harvest area averaged 52% of the planned area, and it was 32% during Phase I of the 2011 FMP. The decline in actual harvest can be attributed to two major factors – a fire at the Timmins sawmill in 2012, which resulted in significant downtime for the mill, and, secondly, the lack of major consumers of poplar and birch from the Forest.

The loss of markets for the hardwood component of the wood supply began prior to the audit term, leading to reductions in the level of harvesting on the Pineland Forest. On September 9, 2006, Grant Forest Products closed its Timmins OSB plant and never re-opened and the plant has since been demolished. Domtar's pulp mill in Espanola has reduced the amount of hardwood it uses in its furnish. In November 2013, the True North Hardwood Plywood mill in Cochrane ceased operations and the Company that owned the mill formally declared bankruptcy on May 21, 2014. The closure deprived EACOM of a market for poplar veneer from the Pineland Forest for approximately two years; the mill was purchased by Rockshield Engineered Wood Products ULC and reopened in 2016 and takes a limited amount of poplar veneer.

While the mill fire was clearly an event that had a short-term impact on harvest levels, the hardwood markets do not have an evident catalyst for a major improvement. In these circumstances, it seems only realistic to assume that the future is likely to continue to be challenging for hardwood use. The auditors feel that going into the preparation of the 2011 FMP, there was little likelihood that hardwood markets would return to pre-2006 levels in the vicinity of the Pineland. In fact, hardwood markets only got worse during the audit period.

Discussion: While it is difficult to argue that lower-than-planned harvests will detrimentally affect the sustainability of the forest, underachieving the planned harvest affects many aspects of forest management, ranging from planning activity levels and budgets to achieving many of the FMP objectives. In particular, the future forest will not be as predicted according to the LTMD in the FMP, and many socio-economic benefits linked to harvest levels will be much less than planned. Objectives related to the creation of patches of young forest will also not be met, and future levels of old growth are likely to be higher than forecast. There is also an opportunity cost associated with not planning in such a way that will optimize the values and services provided by the forest. To a large extent this already happens – explicitly acknowledging it and planning for it would benefit the Company.

The underachievement of harvest targets is common throughout Ontario's tenured forests (data available in the MNRF 2012 State of the Forests Report and annual reports on forest management). The auditors recognize that a certain amount of flexibility associated with the planned harvest is desirable; a planned

harvest level in the range of 70-80% of the AHA would seem to provide a reasonable balance between providing flexibility and creating more realistic plans.

MNRF released a revised version of the FMPM, in March 2017. The revised FMPM speaks to the need to develop realistic and feasible levels of objective indicators, and also requires the planning team to undertake a risk assessment, which includes an investigation of recent wood utilization (i.e. the last ten years) and the implications for objective achievement. This modification suggests that there is a greater recognition within MNRF that FMP's would be better served if the planned harvest level was set at a realistic level, however the 2017 FMPM does not specify how the risk assessment will impact the plan, including the planned harvest level. Thus, there is no requirement that a planning team must adjust the planned harvest level based on the results of the risk assessment, and therefore the conclusion must be that FMP's prepared under the 2017 FMPM are not likely to have planned harvest levels significantly below the allowable level, especially since the 2017 FMPM no longer contains the surplus mechanism, which provided a relatively painless way of adjusting the planned harvest level to bring it closer to the AHA should harvesting be much stronger than anticipated.

Conclusion: Presenting an 'optimistic' scenario of the future, as current plans do, has some utility in that it provides a planning benchmark. However, FMP's such as the 2011 Pineland FMP would be more credible if they were based on realistic future harvests. Negative impacts associated with falling far short of planned harvest level include:

- Many plan objectives are linked to the harvest level and are unlikely to be achieved;
- The projected future forest depends on the level and location of disturbances and the projected outcome is unlikely to be achieved, which affects forest composition, structure, and wildlife habitat, among key factors,
- The opportunity is lost for someone else to use the allocated wood that is not cut; and
- Plans as a whole are less credible.

This situation is not confined to the Pineland Forest; rather this approach to forest planning is followed across Ontario.

Finding: The actual harvest level has been well below the planned level in 2011 FMP period to date, which if it continues, is like to limit the degree of achievement of 2011 FMP objectives and targets.

Record of Finding # 5

Principle 4: Plan Assessment and Implementation

Procedure 4.5.1: Tending and Protection: Assess whether the tending and protection treatments were ... appropriate and effective for the actual site conditions encountered.

Background Information and Summary of Evidence: During the audit period, a number of sites treated with the herbicide Vision Max experienced varying degrees of damage to, and mortality of, planted and natural jack pine. Testing of the Vision Max chemical was conducted on the Pineland Forest, and one of the test plantations was destroyed as a result of the treatment and had to be re-planted. The Company attempted to minimize damage and mortality by reducing the application rate by increasing dilution, but in some cases this resulted in inconsistent effectiveness of these tending treatments. Other approaches taken by the Company to try to minimize these problems were to alter helicopter configuration by using different nozzles, by implementing a more rigorous calibration program, and by increasing the use of chemical site preparation to reduce competition prior to planting.

The Company also observed that the phenology of jack pine crop trees appeared to be changing, possibly in response to climate change, with the result that a varying proportion of crop trees were hardening off later, in some years. This situation effectively narrowed the window of time available to conduct cleaning treatments, by requiring that the tending program be pushed progressively later and later in the season to avoid undue crop tree damage and mortality. This creates operational scheduling issues and may also increase the risk of reduced or patchy effectiveness.

Discussion: The exact causes of the damage, mortality, and patchy effectiveness of tending treatments using Vision Max are currently unknown, but may include changes made by the manufacturer to the formulation of the chemical, and increased susceptibility of crop trees (i.e., changing phenology and related hardiness, possibly in response to climate change). There are other herbicides and chemical formulations available on the market, but it is uncertain whether or not these will experience similar problems. Although the actual area involved was relatively small relative to the tending program as a whole on the Pineland Forest, indications are that the problems experienced to date may continue, if not addressed. The issue with Vision Max is not unique to the Pineland Forest and has been documented in a number of Ontario' SFLs.

Conclusion: Appropriate research to clarify causes and interactions of the problems experienced with the use of Vision Max, and similar testing of other chemicals and formulations may help to identify viable treatment alternatives and would facilitate future planning of the tending program. MNRF could provide a leadership role in this regard.

Finding: During the audit period, there was inconsistent effectiveness of sites treated with the herbicide Vision Max, that included varying degrees of damage and mortality to planted jack pine.

Record of Finding # 6**Principle 4: Plan Assessment and Implementation**

Procedure 4.71 Review and assess in the field the 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 site inspections, members of the audit team viewed a washout on an operational road off the Goose Range North Road (Audit Stop P14-738). The washout was brought to the attention of the audit team by a member of the public and was not previously known to the company and has not been the subject of a compliance inspection. The washout occurred on a portion of a causeway built across a low-lying area approximately 100-150 m wide. The single cross-drain that was installed to facilitate flow across the low-lying area became plugged and a portion of the road, approximately 3-4 m wide washed out leaving a steep drop of approx. 1-2 m on both sides of the washout.

The roadbed was constructed with fine, erodible material. The low area into which the roadbed material was deposited was not a fish-bearing stream and the poorly-defined watercourse did not lead to a lake or pond, so there are likely no/minimal ecological consequences of the washout.



Washout on branch road of Goose Range North Rd.

There had been use of the road by unknown parties since the washout occurred as tire tracks were evident through the washout, although the drops on either side of washout are rather precipitous.

Discussion: The audit team is concerned that the washout is a safety hazard. It is normal to have imperfections in the surface of forestry roads, and minor ones are accepted as a fact of life. However this hazard was the most severe of those encountered by the audit team. A vehicle hitting the washout at normal driving speed on the branch road could be damaged and potentially have an accident. The audit team believes there are three remedial courses of action available to the company 1) fix the washout and install more robust cross drains to avoid future washouts; 2) install signage or some warning immediately before the washout providing notice of the hazard; or 3) close the road for now and re-open it when it is needed again. The company expressed that it was not of the opinion that remedial action was necessary.

Although there is a sign posted where the road network departs the highway several kilometers from the hazard that advises users to use the road at their own risk, the audit team does not believe it addresses the safety concerns of this hazard located several kilometers away from the sign.

Conclusions. The hazard created by the washout is a safety issue that should be remedied.

Finding: The washout on the branch road off Goose Range North Road (Audit Stop P14-738) is a safety hazard.

Record of Finding # 7

Principle 4: Plan Assessment and Implementation

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

- ...use management (maintenance, access control, any decommissioning or reclamation provisions);
- 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: As with all SFLs in Ontario, circumstances exist in the Pineland Forest where beavers block culverts, creating issues for road maintenance. During the field portion of the audit, two circumstances were viewed in which beaver are causing issues with road maintenance that may become serious operational and safety issues if not attended to.

In extreme circumstances sections of road may be washed out, and in less significant occurrences, removal of beaver material is an ongoing nuisance. On the Pineland Forest, company staff note that there have been instances where the existing mechanism to remove nuisance beaver is unsatisfactory to both the company and trappers who may remove the beaver. The circumstances are complicated as the company is obliged to use trappers with registered traplines in the affected area to remove the beaver, but has not had an opportunity to have input into the remuneration structure for trappers. Furthermore, the company has experienced problems in getting some trappers to respond in a timely manner to circumstances that require prompt attention.

EACOM would like flexibility to address the problem without being obligated to use the trappers with rights in the specific affected areas if necessary. The rights of trappers with registered traplines are identified in Ontario Regulation 667/98 under the Fish and Wildlife Conservation Act.

MNRF has been active in discussions and working with local trappers to provide timely responses for getting an area trapped upon request from EACOM. Although this involvement is constructive, it does not fully address EACOM's concerns, nor does it consistently lead to rapid resolution of problem sites.

Discussion: EACOM has a basis for its concerns regarding its desire to pay what it sees as a reasonable amount for removal of nuisance beaver, and is looking for the opportunity to be more involved in the business negotiations with trappers, especially when time is of the essence. EACOM is troubled by the present structure in which it is forced to contend with what it perceives as a monopolistic situation in which it has no input into the identification of rates for trappers' remuneration for the removal of problem beaver. However, as beaver cause issues with water crossings throughout Ontario, there are obviously precedents and successful mechanisms for dealing with the issue.

Conclusions: A fair and economically reasonable solution is needed to deal with nuisance beaver.

Finding: Road maintenance may be threatened by the absence of a mutually agreeable mechanism to control nuisance beaver.

Record of Finding # 8

Principle 7: Achievement of management objectives and forest sustainability

Procedure 7.1.1: Year ten annual report (AR)/trend analysis report. Examine the Year Ten AR for the term of the audit and assess whether the text, tables and maps including digital information is an accurate and complete compilation of information contained in previous annual reports for the FMP term. For those items not covered by subsequent procedures in this criterion assess whether the report has been prepared in accordance with the applicable FMPM requirements. Determine whether the associated deadlines have been met.

Background Information and Summary of Evidence: The Trend Analysis provided to the audit team was a helpful and insightful document in summarizing the state of the forest management efforts undertaken through the present, and previous plan terms. In essence, the Trend Analysis is a useful retrospective document. However, the document does not meet a number of the requirements of the FMPM that are forward looking. The document does not address the following requirements:

- In the analysis of forest disturbances, the document does not provide recommendation to be considered in the planning of future forest disturbances (FMPM Section E, Requirement 4.2);
- In the analysis of renewal and tending activities the document does not include recommended changes to improve the effectiveness of renewal and tending operations (Section E, Requirement 4.3); and
- In the review of assumptions in modelling, the document does not compare assumptions and projections in the model with actual operations and results as reported in annual reports and identify recommendations for modifications and refinements (Section E, Requirement 4.4).

Discussion: The lack of this forward-looking content limits the utility of the Trend Analysis. Content regarding recommendations for improvement would be of use to the audit team, and would be of use to the company as it looks down the road to begin preparation of the next (2021) FMP. Having just invested substantial effort in preparing the Trend Analysis, the company would likely have been very familiar with the details and nuances of operational aspects of the forest and in a good position to identify opportunities for improvement through recommendations related to the sections noted above.

Fortunately the opportunity to identify improvements is not lost. The company will be preparing year seven Annual Report in Oct/Nov 2018 and a year ten AR in Oct/Nov 2021. The forward-looking components identified above are required in both of these documents. However the lack of capturing these points in the Trend Analysis is out of conformance with the FMPM's requirements and limits its utility for use in this Audit.

Conclusions: While a thorough retrospective document, the Trend Analysis did not meet the FMPM requirements for making recommendations for improvements in a number of key areas.

Finding: The Trend Analysis did not meet key requirements identified in the FMPM related to making recommendations for improvements in management of the forest.

Record of Finding # 9

Principle 8: Contractual Obligations

Procedure 8.1.9 Audit Action Plan and Status Report...

2. Review the audit action plan and status report and assess whether:
 - action plans were effective in addressing the audit findings use management (maintenance, access control, any decommissioning or reclamation provisions);
3. Review the audit action plan from the second land audit and determine whether...
 - the actions were implemented and
 - the actions were effective in addressing the audit findings

Background Information and Summary of Evidence: Both of the two previous audits of the Pineland Forest (2002-2007, and 2007-2012) concluded that the forest was managed in compliance with the legislation, regulations and policies that were in effect during the term of the audit, and recommended that the term of the licence be extended for a further five years. The recommendations are acknowledged in the action plans for each of the two audits.

In spite of the recommendations, the licence has not been renewed so that it is up-to-date with the results of the previous audits. The licence references the 2002-2007 audit and contains somewhat equivocal wording regarding the term of the licence based upon the audit's finding but does not definitively extend the licence. (Although, e-mail correspondence from the MNRF's Timber Allocation and Licensing Section to EACOM does provide notice that the license should be interpreted as to have an extended term based on the audit's results). The licence makes no reference to the findings and recommendation of the 2007-2012 audit and has not been extended based on that audit's positive findings.

The most recent version of the licence notes that it was amended on June 29, 2009, but it contains a note and the signature of the Director of Operations Branch dated May 29, 2013, so presumably it was also reviewed at that time.

Discussions with a representative of MNRF's Timber Allocation and Licensing Section confirmed MNRF's intention to address the license extension in late 2018.

Discussion: EACOM is concerned that its licence for the forest is nearing expiry and does not clearly recognize the results of the two previous IFAs. The term of the licence is considerably less than the benchmark of 20 years referred to in Section 26, subsection 4.1 of the Crown Forest Sustainability Act.

Given that this audit recommends extension of the licence for a further five year period, consistent with the direction of the IFAPP, the licence should be amended so that its expiration date is made current with the recommendation.

Conclusions: The SFL for the Pineland Forest is considerably out of date. The term of the licence should be extended to recognize the results of the previous two IFAs and the recommendation of this audit.

Finding: Contrary to direction in the CFSA, MNRF has not extended the licence to recognize the positive results of the previous audits.

APPENDIX 2 – ACHIEVEMENT OF FMP MANAGEMENT OBJECTIVES

Achievement to date of 2011 Pineland Forest FMP Objectives and Targets

No.	Objectives& Indicators	Auditor Assessment	Explanation/Comments
<i>Conserving Biological Diversity in Ontario's Forests</i>			
1	<p>Move toward a distribution of disturbances that more closely resembles the expected natural disturbance template</p> <p><u>Indicator 1</u>: Area distribution of NDPEG forest disturbances</p> <p><u>Indicator 2</u>: Frequency distribution of NDPEG forest disturbances.</p>	<p>The 2011 FMP states that one of the intents of harvest planning, regarding the size and layout of harvest blocks, is to mimic fire. Fire was chosen because it is the dominant stand-replacing disturbance in the boreal forest and it has been suppressed for decades. The targets acknowledge that it is expected to take some time to meet the objective, given the existing state of the forest and the planned level of harvesting.</p> <p>At plan start (2011), the area by disturbance size class was over-represented in the forest for size classes from 11-100 ha to 1001-5000 ha, was at the desired level for the 5001-10,000 ha size class, and was grossly under-represented for the > 10,000 ha size class (actual % of area in this size class was 0% versus a desirable level of 45%).</p> <p>In terms of the frequency of disturbances by size class, the 2011 values were close to the template for most of the size classes except the 101-200 ha class and the 1001-5000 ha class.</p> <p>Given the low level of harvest versus planned, and the relative absence of natural disturbance during the plan period, there is unlikely to have</p>	<p>The FMP references the disturbance template associated with NDPEG – the boreal landscape guide was not available at the time of plan production.</p> <p>The auditors feel that there is little chance that the forest manager will be permitted to have 45% of the disturbance area in the forest in disturbances that are larger than 10,000 ha. While large fires might create such large disturbed areas, the average annual available harvest area is 3,383 ha during the 2011 plan term. Creating a 1000 ha disturbance area would entail having a significant proportion of the annual harvest as a single block (or clustered blocks), and creating a 5000 ha or 10,000 ha disturbance patch is implausible. In the view of the auditors, annual harvest planning to meet this part of the disturbance template seems to be very unrealistic.</p>

No.	Objectives& Indicators	Auditor Assessment	Explanation/Comments
		been any appreciable progress towards the desired levels of either indicator.	
2	<p>Move towards or maintain the area of forest cover types that would occur naturally on the PF, similar to the expected natural landscape dynamics</p> <p><u>Indicator 3:</u> Area of forest in landscape classes and conifer NE classes</p>	<p>The rationale for this objective is to move the forest closer to its condition under a natural fire regime. The landscape classes are expressed in terms of development stages and given the lower than planned level of harvesting, there will be less pre-sapling stage area created during the plan period, and less area removed from the older classes, so that while the forest may be above the target levels, the shifts in area by age class will be less than forecast. The objective is being achieved however the planned values are not being achieved.</p>	<p>Setting a target that the area in each class must exceed the lower range or the lower quartile by Term 16 is not very constraining.</p>
3	<p>To move towards or maintain a forest age class structure in over-mature ecosystem conditions, similar to the expected natural landscape dynamics.</p> <p><u>Indicator 4:</u> Area of forest unit/habitat unit in an over-mature state by term.</p>	<p>For this objective, the target was to achieve at least 50% of the null run level for terms 2-11, which was achieved in the LTMD. This target was constraining for a number of forest units. Due to the lower than planned level of harvest, the forest manager is expected to be overachieving on the targets and meeting the objective during the current plan term. The objective is being achieved.</p>	
4	<p>To move towards or maintain the growing stock of specific conifer species to more closely reflect the expected natural landscape dynamics</p> <p><u>Indicator 5:</u> Total jack pine growing stock</p> <p><u>Indicator 6:</u> Total black and white spruce growing stock</p> <p><u>Indicator 7:</u> Total white and red pine growing stock</p>	<p>The targets for this objective are to increase the amount of growing stock in each of the three indicator species groups over a 90 year period. The FMP does not provide an expected pathway of the indicator values during the first 90 years – once again, the lower than planned harvest level is likely accelerating the achievement of this objective. The objective is being achieved.</p>	

No.	Objectives& Indicators	Auditor Assessment	Explanation/Comments
5	<p>To maintain wildlife habitat for forest-dependent provincial and locally featured species on the Pineland Forest.</p> <p><u>Indicator 8:</u> Area of preferred wildlife habitat for the selected species by term</p> <p><u>Indicator 9:</u> Area of over-mature forest-dependent preferred wildlife habitat for the selected species by term.</p> <p><u>Indicator 10:</u> Compliance with wildlife provincially and locally featured AOC prescriptions</p>	<p><u>Indicator 8:</u> For Indicator 8 target levels are 60% of null run; desired levels are to achieve the levels of the null run. Assessments of the desired and target levels in the FMP and Trend Analysis are based only on values predicted by modeling. As the models are constrained to meet the target levels, they are achieved for all the indicators, and the assessment is somewhat tautological. The desired levels are rarely achieved for four of the five species included in this indicator. The target levels are achieved</p> <p><u>Indicator 9</u> Similar to Indicator 8, assessments in the FMP and Trend analysis are based on values predicted by modelling. The target levels are achieved.</p> <p><u>Indicator 10:</u> The target is zero percent significant non-compliance. There were no instances of non-compliance related to wildlife AOCs. The target is being achieved</p>	<p><u>Indicator 8</u> Assessment of this indicator is not very useful given that the model is constrained to achieve target levels. Given that harvest levels were considerable less than planned (and those modeled), the actual levels achieved in the plan may have been less than those targeted for species that use young habitat (i.e. moose browsing habitat), but are likely greater for those that use mature and overmature habitat.</p> <p><u>Indicator 9</u> Actual performance has likely exceeded the target levels given the lower-than-planned harvest levels.</p> <p><u>Indicator 10:</u> Compliance rates on the forest are good as identified in Section 4.6 of this report.</p>
6	<p>To maintain 10% to 20% of the forest, which has the capability to produce marten habitat, in suitable conditions in core area.</p> <p><u>Indicator 11:</u> Percent of capable marten habitat in suitable condition in cores.</p>	<p>Target levels for marten core area are 10-11% for the period 2011-2071. Target core areas were included in the Phase I modelling, and no harvesting has occurred in the core areas. The target levels are being achieved.</p>	<p>No harvest occurred within any of the selected marten core areas in the Phase I of the plan and in the audit term.</p>
7	<p>To maintain wildlife habitat for forest-dependent, wildlife species at risk</p>	<p><u>Indicator 12:</u> Assessment of this indicator in the Trend</p>	<p><u>Indicator 12:</u> Because of the diverse habitat requirements of the species at</p>

No.	Objectives& Indicators	Auditor Assessment	Explanation/Comments
	<p>with known occurrence in the Pineland Forest.</p> <p><u>Indicator 12:</u> Area of preferred wildlife habitat for the selected species at risk by term (Olive-sided flycatcher)</p> <p><u>Indicator 13:</u> Compliance with wildlife species at risk AOC Prescriptions</p>	<p>Analysis states that <i>“the Olive-sided flycatcher... is the only species at risk with a known occurrence on the Pineland Forest.”</i> This is not correct and not consistent with the FMP which includes a list of 12 SAR known to occur on the forest. Assessment of this indicator is based on a single species – Olive-sided flycatcher, as this is the only species for which habitat supply was incorporated into the Phase I modelling. The indicator was to achieve at least 60% of the null run. The target is being achieved</p> <p><u>Indicator 13</u> Through reference to AOC prescriptions, this indicator recognizes the greater number of SAR on the forest compared to Indicator 12. There were no non-compliances associated with SAR AOCs in the audit term. The target is being achieved.</p>	<p>risk, it is not reasonable to conclude that the habitat needs of all species are met based on olive-sided flycatcher.</p> <p>In future plans, the company in collaboration with the MNRF should consider developing habitat models for a broader range of species, or develop more useful indicators to assess the impact of forest management on SAR.</p> <p>The target of achieving 60% of the null run was achieved for Olive-sided flycatcher – this is the same target for all other modelled species, so it is not clear what extra consideration was accorded to the species given its special status as a species at risk. In future plans the company in collaboration with the MNR should consider if higher target levels should be accorded to species at risk.</p>
<i>Maintaining and Enhancing Ontario’s Framework for Sustainable Forest Management</i>			
8	<p>To ensure that enough roads are in place to allow for effective and efficient forest operations</p> <p><u>Indicator 14:</u> Kilometers of road per square kilometer of the forest</p>	<p>The target level for this indicator is “to achieve an average road density of between 0.05 and 2.0 km/km². The actual level reported in the Trend Analysis is 0.58. Therefore the target is achieved</p>	<p>The target level for this indicator (between 0.05 and 2.0 km/km²) includes a range of 40 times the value between the lower and upper limits. This range of values does not make for a very useful indicator. Further, the desired level of “to provide the levels to adequately carry out forest operations on the Pineland Forest” lacks practical utility as it is not quantitative.</p> <p>Subsequent FMPs should provide a more</p>

No.	Objectives& Indicators	Auditor Assessment	Explanation/Comments
			useful indicator related to road density.
9	<p>To ensure the successful renewal of harvested stands</p> <p><u>Indicator 15:</u> Percent of areas harvested assessed for FTG status.</p> <p><u>Indicator 16:</u> Percent of area harvested assessed for FTG status that is deemed to be FTG</p>	<p>The Company has fully kept up with requirements for free-to-grow assessments. Silvicultural liability assessments conducted each year by the Company show that there is no backlog of area requiring free-to-grow assessment on the Pineland Forest. During the audit period, 100% of area assessed for free-to-grow status was determined to be free-to-grow. Field inspections of areas assessed for free-to-grow status that were conducted during the audit did not reveal any issues with the accuracy of Company results. QA assessments conducted by MNRF as part of the Districts' SEM program on areas declared to be free-to-grow by the Company also supported this conclusion.</p> <p>The objective is being achieved.</p>	
10	<p>To reduce the use of pesticides while maintaining forest productivity.</p> <p><u>Indicator 17:</u> Area of pesticide application.</p>	<p>The target is to reduce the area forecasted by SFMM for treatment with herbicides over a ten-year period to 15,397 ha, in order to have a level that represents a reasonable trade-off between reducing pesticide use while maintaining forest productivity. For the 2011-2021 FMP, the ten-year forecast area for aerial herbicide application was 12,324 ha.</p> <p>The actual area treated with herbicides for the six-year period from 2011 to 2017 was 7,287 ha, or 59% of the 10-year forecast. Actual treatment area is thus on track to be at or below the planned level.</p> <p>The objective is being achieved</p>	
Predictable and Continuous Flow of Economic and Social Benefit			

No.	Objectives& Indicators	Auditor Assessment	Explanation/Comments
11	<p>Implement forest operations in a manner that minimizes conflicts with non-timber resource users, and protects non-timber values, in order to provide the opportunity to benefit from the forest.</p> <p><u>Indicator 18</u>: Compliance with prescriptions for the protection of natural resource features, land-use or values dependent on forest cover.</p> <p><u>Indicator 19</u>: Compliance with prescriptions for protection of resource-based tourism values.</p>	<p>There were no non-compliances associated with the values identified for either of these indicators.</p> <p>The objective is being achieved</p>	<p>In addition to the compliance record, the audit team saw no instances of non-compliance in its site assessments.</p>
12	<p>To provide a continuous predictable, and economical supply of quality timber products required by wood processing facilities that receive wood from the Forest.</p> <p><u>Indicator 20</u>: Modeled long-term annual harvest area by forest unit.</p> <p><u>Indicator 21</u>: Modeled long-term annual harvest volume by species group.</p> <p><u>Indicator 22</u>: Forecast annual harvest area by forest unit</p> <p><u>Indicator 23</u>: Forecast annual harvest volume by species group</p> <p><u>Indicator 24</u>: Planned 1st 5-year harvest area by forest unit</p> <p><u>Indicator 25</u>: Planned 1st 5-year harvest volume by species group</p>	<p>This objective has six indicators associated with it that are based on the LTMD and four indicators that are based on the operational performance during the plan period. The targets for four of the first six indicators are achieved – targets for white birch and cedar are not achieved.</p> <p>The actual harvest levels are well below planned so that Indicators 26 and 27 have not been met. Because indicator 28 is percentage based, it is not affected by the low harvest per se, but it is affected by decisions taken by the mill managers, which are outside of the sphere of influence of EACOM. There were no non-compliance incidents related to utilization. The majority of indicators (6 of 10) were achieved however four were not.</p> <p>The objective is partially achieved.</p>	

No.	Objectives& Indicators	Auditor Assessment	Explanation/Comments
	<p><u>Indicator 26</u>: Actual harvest area by forest unit.</p> <p><u>Indicator 27</u>: Actual harvest volume by species group</p> <p><u>Indicator 28</u>: Percent of forecast volume utilized by mill.</p> <p><u>Indicator 29</u>: Number of forest operations inspections in non-compliance for wasteful practices.</p>		
13	<p>To minimize the impact for forest operations on known cultural heritage values</p> <p><u>Indicator 30</u>: Compliance with prescriptions for cultural heritage values</p> <p><u>Indicator 31</u>: Compliance with prescriptions for identified Aboriginal values.</p>	<p>There was one instance of non-compliance that occurred when approx one ha within a high potential cultural heritage AOC was site prepared. No damage to values was observed however the non-compliance means that the desired level of indicator 30 was not met (although the target (> 95% compliance) was met), while Indicator 31 was achieved. Overall, the objective was partially achieved.</p>	
Forest Soil and Water Resources			
14	<p>To undertake all forest management operations using sound environmental practices such that any negative environmental impacts are avoided or minimized</p> <p><u>Indicator 32</u>: Number of forest operations inspections in significant non-compliance as a result of forest management activities causing site damage and loss of forest productivity.</p>	<p>There were no non-compliances with site damage or forest productivity</p> <p>The objective is being achieved</p>	<p>In addition to the compliance record, the audit team saw no instances of non-compliance in its site assessments.</p>

No.	Objectives& Indicators	Auditor Assessment	Explanation/Comments
15	<p>To ensure the maintenance of riparian zones, water quality and habitat for fisheries resources adjacent to water bodies where forest management activities occur.</p> <p><u>Indicator 33:</u> Compliance with prescriptions for forest management activities on riparian zones</p>	<p>There were instances of non-compliance during the audit period. One instance involved two occurrences of working outside the “working in water time period” on permanent streams. This instance of non-compliance resulted in an administrative penalty. In another non-compliance a contractor trespassed into HPSS and MPSS modified reserves. This resulted in a warning letter.</p> <p>The desired level for this indicator is full compliance, and the target level is zero percent significant, and < 5 percent moderate non-compliance.</p> <p>The objective is not achieved.</p>	<p>The company has a good overall record of compliance, in spite of these two instances of non-compliance. The company provided evidence that it had addressed the causal factors and no finding is necessary.</p>
Accepting Society's Responsibility			
16	<p>Maintain the area of Managed Crown Productive Forest available for timber production at the highest possible level by minimizing the conversion of managed crown forest area to non-forest land</p> <p><u>Indicator 34:</u> Managed Crown productive forest area available for timber production</p>	<p>There was little loss of forest land observed. Some amount of area was converted to roads and landings, including right-of-ways. The desirable and target levels were both set at 2% or less of block area, which the audit team felt was being achieved. The use of the cut-to-length harvesting system meant that there was no accumulation of roadside slash, which reduced loss of productive area to that factor.</p> <p>The objective is being achieved.</p>	
17	<p>To provide opportunities for First Nation involvement in forest management planning activities</p> <p><u>Indicator 35:</u> Formal dialogue with FN communities with known interest in the Pineland Forest.</p>	<p>This objective would be met by following the FMPM requirements for Aboriginal engagement, which were met during the Phase II planning process. The 2012 IFA report stated that notification was provided to five First Nations 6 months prior to planning and there was continued engagement by four First Nations through the Chapeau Area Aboriginal Resource</p>	<p>The 2012 IFA suggested that First Nations desired to have different opportunities and manners of participating in the benefits provided by Forest Management Planning, and that EACOM and MNRF should discuss how these concerns could be addressed. There was little uptake of this suggestion.</p>

No.	Objectives& Indicators	Auditor Assessment	Explanation/Comments
		Team (CAART), indicating that the indicators were met during Phase I planning. For Phase II planning, the five First Nations and two Métis organizations were contacted at least 6 months prior to planning and all five First Nations participated in planning. Chapleau Cree, through the Northeast Superior regional Chiefs Forum, requested a customized consultation process which included training and community meetings. The objective, as defined by the indicators, was achieved.	
18	To encourage and support the participation of the LCC in the development of the FMP for the PF. <u>Indicator 36.</u> Comparison between LTMD and Draft Plan, of the average score of LCC members that indicated that they met the evaluation criteria.	This objective was met during Phase 1 development.	The LCC self-evaluation was developed and completed for the Phase 1 plan, and a net positive score was achieved.
Forest Ecosystem Condition and Productivity			
19	To improve forest operations compliance for the PF. <u>Indicator 37:</u> Number of forest operations inspections in non-compliance as a result of forest management activities.	During the audit period, there were 206 FOIP reports submitted and 5 non-compliances were reported. This is a very good result, however it is slightly less good than the compliance record during the previous audit term. Strictly speaking, neither the desired level (100% compliance) and the target (improved performance) were met. Overall, however the intent of the objective is being achieved.	The compliance record reported in the previous audit was very good, with a total of four non-compliances being reported in 409 inspections reports filed by the MNRF and EACOM.

APPENDIX 3 - COMPLIANCE WITH CONTRACTUAL OBLIGATIONS

Licence Condition	Licence Holder Performance
Payment of Forestry Futures and Ontario Crown charges	In general, the Company has kept up with its payments for Crown charges and payments to the Forestry Futures Trust in a timely fashion. At the end of the audit period, March 31, 2017, MNRF records indicated that the Company was in arrears with regard to Crown charges by an amount of \$247,303.41, and in arrears to the Forestry Futures Trust Fund by \$28,919.21. However, a cheque from the Company that was received by MNRF and was credited to the respective accounts on the following day, April 1, 2017, paid these amounts in full.
Wood supply commitments, MOAs, sharing arrangements, special conditions	The current version of the Pineland SFL, which was approved for transfer in the summer of 2010, contains three wood supply commitments. One of these is to supply up to 165,877 m ³ /year of non-veneer quality poplar and 35,000 m ³ /yr of non-veneer white birch to the Timmins mill owned by Grant Forest Products. This mill closed in 2006 and has since been demolished, and Grant was purchased by Georgia-Pacific. The Phase II FMP states that EACOM was informed in Sept 2011 that the commitments to Grant were rescinded by the Minister. A second supply agreement to Niska North for cedar and up to 3,000 m ³ /year of red and white pine has not been acted on since Niska North's mill has not operated during the audit period. Niska also has a conditional supply commitment for up to 11,0000 m ³ of white birch which it has not sought during the audit period. The final commitment is to provide Rockshield Engineered Wood Products with up to 182,505 m ³ of poplar veneer over five years. This mill was formerly a Norbord mill. Just over 4,000 m ³ was provided in 2014-15, the first year in the audit period in which veneer moved to the Cochrane mill. There are no special conditions in the licence.
Preparation of FMP, AWS and reports; abiding by the FMP, and all other requirements of the FMPM and CFSA	EACOM has prepared the Phase II Planned Operations document (2016-2021), Annual Work Schedules and Annual Reports as required, and have generally followed the intent of the 2011 FMP during the audit period. This condition has been upheld.
Conduct inventories, surveys, tests and studies; provision and collection of information in accordance with FIM	<p>The Company has developed and implemented a comprehensive system for monitoring of silvicultural operations. This system includes field inspections conducted on all blocks within a year after harvesting. This provides the basic information needed to finalize decisions on silvicultural intensity and to verify FOPs. Further surveys are conducted following site preparation to determine soil types, number of plantable spots, and the required mix of species to be planted. The Company uses a stock forecasting tool, which is based on SGR rule sets, to project stock growing requirements. The Company also conducts quality assessments during tree planting and site preparation activities.</p> <p>Field surveys were conducted for the assessment of tending needs and refinement of boundaries before treatment. Tending effectiveness surveys were conducted on all treated blocks one year after treatment, to determine if any silvicultural follow up was required.</p>

Licence Condition	Licence Holder Performance
	<p>The Company used GIS-based tools to identify and map areas requiring free-to-grow assessments every year, including areas that were previously assessed and scheduled for re-survey because they were determined to be not free-to-grow. During the 2011-2016 FMP term, the Company completed the assessment of 19,031 ha for free-to-grow status. This effort represented 78% of the forecast area of 24,605 ha. Silvicultural liability assessments that were conducted each year by the Company showed that there is currently no backlog of area requiring free-to-grow assessment on the Pineland Forest. The Company has also fully completed its survey obligations for Category 2 Lands.</p> <p>During the audit period, MNRF District staff at Timmins and Chapleau implemented SEM programs on core tasks according to direction from the Provincial Silvicultural Program and from the respective MNRF Regions. Work was completed on all required core tasks to an acceptable level. In general, there was good correspondence between the results from MNRF and the Company. The Company and MNRF pooled results from their respective SEM programs to develop information that was used for updating SGRs during the preparation of the Phase II Operations Plan.</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 MNRF in accordance with the appropriate FIM standards.</p> <p>This licence obligation has been met by the Company.</p>
Wasteful practices not to be committed	<p>The Company's utilization of timber was not wasteful, however the Company operated under the Northeast Region Operations Guide for Marketability Issues (2013), which relaxes the utilization requirements for hardwoods when there is little demand for some or all of the hardwood products. This was the case on the Pineland Forest throughout the audit period, when there were periodic markets for poplar veneer and occasional but very brief opportunities to sell OSB quality poplar to Georgia-Pacific at Englehart. The Company's utilization of conifer was efficient; the audit team did not observe instances of poor utilization in its field inspections and there were no non-compliances issued due to poor utilization.</p>
Natural disturbance and salvage SFL conditions must be followed	<p>There was no salvage harvesting on the Pineland Forest during the audit period.</p>
Protection of the licence area from pest damage, participation in pest control programs	<p>No insect pest management was undertaken or required during the 2012-2017 audit period.</p>

Licence Condition	Licence Holder Performance
Withdrawals from licence area	This audit procedure was determined to be low risk and was not audited.
Audit action plan and status report	The 2012 IFA Audit Action Plan and Status Report for the Management Unit was prepared, submitted and endorsed by the MNR Region in a timely manner. Although the Provincial Status Report which is applicable to Recommendation #3 of the previous IFA (related to reviewing the recommended practice of regenerating black spruce through advanced growth in rich swamps) has not yet been completed, it is not identified as a finding in this audit as the audit team was able to assess the recommendation through field observations and interviews with company staff, without the status report.
Payment of forest renewal charges to Forest Renewal Trust (FRT)	In general, the Company has kept up with its payments to the Forest Renewal Trust in a timely fashion. At the end of the audit period, March 31, 2017, MNRF records indicated that the Company was in arrears to the Forest Renewal Trust Fund by an amount of \$201,630.71. However, a cheque from the Company that was received by MNRF and was credited to the Renewal Trust account on the following day, April 1, 2017, paid this amount in full.
Forest Renewal Trust eligible silviculture work	Auditors reviewed in the field a total of 3,686 ha of area that was mechanically site prepared, planted and tended in 2015-2016, representing 17.2% 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.
Forest Renewal Trust forest renewal charge analysis	Renewal rate analyses were conducted annually by MNRF and company representatives. Renewal rate adjustments that were made during the audit period have adequately addressed silvicultural program costs.
Forest Renewal Trust account minimum balance	Forest Renewal Trust account balances have been above the minimum balance at March 31 of each year throughout the five-year audit period.
Silviculture standards and assessment program	<p>For the 2011-2016 FMP term, the total area regenerated on the forest was 10,512 ha. This represented 64% of the planned five-year effort, based on the FMP forecast area of 16,544 ha. However, the actual area harvested during the 2008-2012 FMP term was only 32% of the planned area, thus the regeneration effort has more than kept pace with the level of harvesting during the period. For the first year of the 2016-2021 FMP term, the reported area of total regeneration was 2,038 ha, which is greater than the area harvested during the previous 2 years. The regeneration effort for the Phase II Operations Plan term is therefore on track to keep pace with actual harvesting. 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.</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>
Aboriginal Opportunities	The Chapleau District MNRF invited five First Nations communities and two Métis organizations with interests in the Pineland Forest to participate on the planning team for the Phase II Planned Operations. The First Nations all

Licence Condition	Licence Holder Performance
	<p>nominated representatives however attendance at the planning team meetings was limited. The Métis representatives declined participation but asked to be kept informed, which they were with regular mailings and notifications. One of the most beneficial events during the planning process was a “Forest Management 101” workshop at which Brunswick House, Chapleau Cree and Michipicoten First Nations participated.</p> <p>Timmins District undertakes the required consultation with Flying Post First Nation however MNRF’s experience is that forestry is not a high priority at this time, as the community is working to obtain a reserve in the Timmins area, and is presently located in Nipigon. Timmins has a greater degree of involvement with Mattagami First Nation, and there has been expanded values collection associated with the development of the 2021 FMP, coordinated with other forest units (e.g. Romeo Malette) and other districts.</p>
Preparation of compliance plan	The Company prepared a Ten-Year Compliance Plan as part of its 2011 FMP, which was evaluated in the previous IFA and did not generate any recommendations in that audit. The Company prepared annual compliance plans in each of its AWS throughout the audit period and also reviewed and revised the Ten-Year Compliance Plan in the Phase II Planned Operations to reflect changes in the Forest Compliance Handbook introduced in 2014. This licence obligation was met satisfactorily.
Internal compliance prevention /education program	The Company pays a great deal of attention to ensure that its operations are compliant with plans and regulations, as can be seen from its high level of compliance during the audit period. The Company hosts annual meetings of its contractors and sub-contractors usually in April of each year that review the previous year’s compliance record and provide particular emphasis /education regarding areas where issues were encountered or risks were considered to be high. When a non-compliance is reported, a root cause analysis is undertaken and adjustments are made to systems or processes to reduce the likelihood of recurrence, This licence obligation was met satisfactorily.
Compliance inspections and reporting; compliance with compliance plan	The Company filed a total of 151 FOIP reports during the audit period, and reported four instances of non-compliance, which is a very good record. The amount of inspections was appropriate to the level of activity on the forest. The program that was carried out was consistent with the compliance plans, after making adjustments for the much lower level of harvest undertaken than was planned. This licence obligation was met satisfactorily.
SFL Forestry operations on mining claims	This audit procedure was determined to be low risk and was not audited.
Obligations on Category 2 lands.	GIS analyses conducted during the audit revealed that all of the area in Category 2 Lands on the Pineland Forest has been declared free-to-grow, thus these obligations have been met in full. Clauses related to obligations on Category 2 Lands could therefore be removed from future versions of the SFL licence document.

APPENDIX 4 – AUDIT PROCESS

Overview

The Crown Forest Sustainability Act (CFSA) directs the Minister of Natural Resources and Forests 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 laid out in the 1994 Class EA decision, subsequently confirmed in the 2003 Declaration Order⁵. Regulation 160/04 under the CFSA 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 170 individual audit procedures. The IFAPP, which is reviewed and updated annually by the MNRF, states that the objectives of the audits are:

- *“assess to what extent forest management planning activities comply with the CFSA [Crown Forest Sustainability Act] and the Forest Management Planning Manual;*
- *assess to what extent forest management activities comply with the CFSA and with the forest management plans, the manuals approved under the CFSA, and the applicable guides;*
- *assess, using the criteria established for the audit, the effectiveness of forest management activities in meeting the forest management objectives set out in the forest management plan;*
- *compare the planned forest management activities with the activities actually carried out;*
- *assess the effectiveness of any action plans implemented to remedy shortcomings identified in a previous audit;*
- *review and assess a licensee's compliance with the terms and conditions of the forest resources licence; and*
- *provide a conclusion stating whether or not the forest is being managed consistently with the principles of sustainable forest management.*

The procedures, which are the basis for assessing the auditees' compliance and effectiveness, are laid out in the IFAPP 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 finding.

The audit team may develop findings and best practices. The term ‘finding’ is not used in Regulation 160/04 which empowers the MNRF to commission Independent Forest Audits. Rather, the regulation requires audit reports to provide *“recommendations based on the evidence identified during the audit...”* The 2017 IFAPP states that *“The regulatory requirement for the audit to provide recommendations in the IFA Ontario Regulation 160/04 will be satisfied by the statement of audit findings”*. The IFAPP defines audit finding as *“result of the evaluation of collected audit evidence against the audit criteria. Findings will indicate non-conformity with the audit criteria....”*

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.

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

Risk-based Auditing Approach

In 2017, the auditing process was changed to incorporate some aspects of risk management. Specifically, the auditors are asked to review evidence related to approximately 75 of the total of 170 audit procedures to evaluate risk of negative impacts. If, after initial review, the procedures were found to be of minimal or tolerable risk, they were not subject to the level of investigation typically expended for normal audit procedures.

In this analysis, for each audit procedure, risk was assessed based on considerations of both probability of a non-conformance occurring, and the severity of a non-conformance, should it occur. The results of these assessments were compared to a pre-determined risk tolerance matrix. If the products of probability and severity were determined to be acceptable within the tolerance matrix, the procedure was not audited further.

Using this process, it was identified that 4 of the optional procedures should be audited. The assessment of risk was reviewed and approved by the Forestry Futures Committee. The optional procedures to be included in this audit are:

- 2.3.1 – Issue resolution. Given the multiple-use nature of the forest, this procedure was selected to be audited.
- 6.1.1 – MNR Compliance Plans. Information regarding the extent to which the plans were implemented was not readily available during the screening process, so this procedure was audited.
- 6.2.1.4 – SFL forest management oversight through the compliance plan. The reported rate of compliance is very high, however it was felt at the time of review that some inspections may yet have issues pending and the audit team was not able to delve into the audit information in sufficient detail.
- 8.1.16 – Obligations related to compliance planning. Related to previous compliance topics.

Audit Implementation

The audit commenced with the preparation of a detailed audit plan⁶, which described the results of the risk assessment, set out the audit schedule, described the procedures to be used during the audit and assigned responsibilities to members of the Audit Team. A pre-audit teleconference was held with the lead auditor, the Company and the MNRF. The primary purposes of the meeting were to familiarize the auditees with the audit process, review the Audit Plan, and review the 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 maintain an appropriate proportional representation of sites related to the extent of operations.

⁶ ArborVitae Environmental Services Ltd. Plan for the Independent Forest Audit of the Pineland Forest, August 24, 2017.

Table 2. Audit procedures by principle and risk assessment outcome.

Principle	Optional			Mandatory	Comments
	Applicable (#)	Selected (#)	% Audited	Audited (#) (100% Audited)	
1. Commitment	2	0	0	0	The forest is certified to a third-party standard and procedures associated with the principle were determined to be low risk
2. Public Consultation and Aboriginal Involvement	5	1	20	3 (100)	Four optional procedures were determined to be low enough risk that they were not audited. The optional procedure audited related to Issue Resolution, as described earlier.
3. Forest Management Planning	16	0	0	14 (100)	Preliminary review of planning documents concluded tolerable risk associated with all planning procedures. Note that procedures specifically relevant to Phase I plans are not included.
4. Plan Assessment & Implementation	3	0	0	9(100)	Preliminary review of planning documents concluded tolerable risk associated with all planning procedures.
5. System Support	2	0	0	0	The forest is certified to a third-party standard and procedures associated with the principle were determined to be low risk
6. Monitoring	12	2	16	6 (100)	Additional information was required for two optional procedures, so they were audited.
7. Achievement of Objectives and Forest Sustainability	0	N/A	N/A	15(100)	All procedures are mandatory and were audited.
8. Contractual Obligations	6	1	17	18	Optional procedures were related to contractual obligations that were either not applicable or for areas assessed as acceptable risk. One procedure related to compliance was audited.
Totals	46	4	9	62	

Due to scheduling complications the audit site visit took place over two separate weeks. Site inspections occurred on Oct. 16 and 17, and the office-based portion during which document review and interviews with company and MNR staff were conducted took place on Nov. 29, 30, and Dec. 1.

Draft Findings were provided by the Audit Team on December 13 and formal closing meeting for the audit took place on December 15 by teleconference. At the closing meeting the Draft Findings were presented by the Audit Team. Comments on the Draft Findings were provided by EACOM, MNRF and the Forestry Futures Committee by Dec 22.

Sampling and Sample Intensity

The IFAPP requires that at least 10% of each major activity be sampled. Table 4 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. The audit met or exceeded the minimum sample size specified in the IFAPP for all activities with the exception of natural regeneration for which only 9.1% of the area was inspected during the audit. The audit team does not consider this a serious oversight as no issues were identified with the treatment on the sites inspected, and this treatment rarely is the source of issues in IFAs.

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 2015/16 fiscal year. The audit team inspected 17.2% of eligible activities for that year.

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, planted, and tended, and those for which natural regeneration treatments were prescribed.

Table 3. Sampling intensity of the field operations, by key feature investigated.

Feature	Total in Audit Period	Total Sampled	Sample Intensity %
Harvest (ha)	7,038	1390	19.8
Mech Site Preparation (ha)	2,361	662	28.0
Chem Site Preparation (ha)	176	73	41.5
Natural Regeneration (Clearcut)	3,759	342	9.1
Planting (ha)	2,740	786	28.7
Thinning (ha)	402	171	42.5
Aerial Tending (ha)	5,301	931	17.6
Free-to-Grow Assess (ha)	13,751	1407	10.2
2015/2016 FRT Areas (ha)	3,686	636	17.2
AOCs ¹	63	10	15.9

1 – For AOCs the numbers of different types of AOCs, rather than the area encompassed by AOCs were used as the sample measure.

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, site preparation, and regeneration activities may all have been inspected. In addition, 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 into the Audit from Indigenous Communities

The audit team contacted by telephone and e-mail all five of the First Nations that are identified as having an interest in the Pineland Forest. Input was provided by representatives of Mattagami First Nation and Brunswick House First Nation.

A representative of Mattagami First Nation informed the audit team that Mattagami was considerably involved in the development of the Phase II plan and were satisfied with the nature of their involvement and that there was a good rapport with EACOM.

The audit team heard from a representative of Brunswick House First Nation late in the audit process. The representative noted that there are only a small number of the community's members who go into the Pineland Forest and who have values or interests there. The representative also noted that there had been little interaction between the First Nation and EACOM or the MNRF regarding the Pineland Forest or economic opportunities. Regarding communication with the MNRF, in the last year the First Nation reported that they were provided with a copy of the AWS, but there were no presentations or community meetings about it. The First Nation does not have a forester on staff, which makes it more difficult for the community to actively participate.

Input into the Audit from LCC members

Generally, LCC members interviewed were of the opinion that the LCC was functioning in accordance with their mandate, and the LCC was noted as being very dedicated and functional. Specific issues that were highlighted by LCC members interviewed include:

- Lack of presence of the District Manager at LCC meetings over the past 10 years;
- Desire for more frequent meetings as a means to maintain the momentum of the LCC outside of planning processes;
- Flow of information between meetings could be improved, especially considering the length of time between meetings. It would be helpful to get meeting minutes of the previous meeting sooner than just before the next meeting;
- Both EACOM and MNRF are very good at following up on questions and action items identified during meetings. Any information the LCC requests, they receive;
- LCC members are expected comment on things they don't know about, and there is a low level of understanding of technical aspects;
- New and existing members have a hard time understanding technical terms. More simplified terms and explanations would be helpful;
- There should be some kind of pre-determined qualifications of what a member will bring to the table other than an appetite to engage. There is so much information to understand;
- There is a lack of ongoing training to help keep members current while not in the planning cycle;
- There is a need for a web-based learning module for the LCC or some kind of training materials. These would assist in better understanding and decision-making;
- MNRF does not recruit or promote the LCC. Instead, it is based on word of mouth only. There should be information about LCCs on the MNRF website as a means to inform, promote and assist with recruitment;
- Members would be able to do a great job advocating for the LCC if was a more attractive package;

- Most people are volunteers. Lunch/dinner provided is appreciated, but members do not need more hats. Some kind of stipend would possibly encourage more members to join.
- Key issues on the forest identified by LCC members include: aerial spraying, accessibility, moose decline, and lack of older age-classes.

Input through Public Comment

In an attempt to solicit public input into the audit, a notice inviting comment was placed in the local newspapers (Timmins Times and Chapleau Express). In addition, the auditors developed an on-line questionnaire which was distributed through the LCC and MNRF. In spite of these efforts only two responses were received. However, one of the responses was very helpful and an audit site was added to the field trip (that ultimately led to **Record of Finding # 6**) as a result of a concern expressed by the respondent.

APPENDIX 5 – LIST OF ACRONYMS

ACOP	Annual Compliance Operations Plan
AOC	Area of Concern
AR	Annual Report
AWS	Annual Work Schedule
CFSA	Crown Forest Sustainability Act
Class EA	Class Environmental Assessment for Timber Management on Crown Lands in Ontario
CROs	Conditions on Regular Operations.
FIM	Forest Information Manual
FMP	Forest Management Plan
FMPM	Forest Management Planning Manual
FOP	Forest Operations Prescription
FRI	Forest Resource Inventory
FTG	Free-to-Grow
FRT	Forest Renewal Trust
FU	Forest Unit
GIS	Geographic Information System
ha	Hectares
HPSS	High Potential Sensitivity Stream
km	Kilometres
IEA	Individual Environmental Assessment
IFA	Independent Forest Audit
IFAPP	Independent Forest Audit Process and Protocol
LCC	Local Citizens Committee
m ³	Cubic meters
MNRF	Ontario Ministry of Natural Resources and Forestry
MOA	Memorandum of Agreement
MNO	Métis Nation of Ontario
MPSS	Moderate Potential Sensitivity Stream
MROL	Ministry Recognized Operating Level
NDPEG	Natural Disturbance Pattern Emulation Guide
NER	Northeast Region
RPF	Registered Professional Forester
RPFO	Report of Past Forest Operations
SAR	Species at Risk
SEM	Silvicultural Effectiveness Monitoring
SFL	Sustainable Forestry Licence
SGR	Silvicultural Ground Rules
SOP	Standard Operating Procedure
SSG	Stand and Site Guide
SSM	Sault Ste. Marie

APPENDIX 6 – AUDIT TEAM MEMBERS AND QUALIFICATIONS

Auditor	Role	Responsibilities	Credentials
Mr. Chris Wedeles	Lead Auditor, Wildlife Ecologist, Roads Auditor,	<ul style="list-style-type: none"> • overall audit coordination; • oversee activities of other team members; • liaise with Company & MNRF; • lead preparation of audit report • review and inspect Areas of Concern Documentation and Practices; • review and inspect aspects of forest management related to environmental practices; • review and inspect access and water crossings 	B.Sc., M.Sc. (Wildlife Biology); Associate member of the OPFA; 30 years wildlife and forest ecology and experience in Ontario; completed more than 40 previous independent forest audits; certified as an auditor by the Quality Management Institute.
Dr. Jeremy Williams.	Lead Auditor, Harvest, Wood Supply and Aboriginal Engagement Auditor	<ul style="list-style-type: none"> • 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 • Assess the Aboriginal engagement 	B.Sc.F., Ph.D. (Forest Economics), R.P.F. More than 22 years consulting experience in Ontario related to forest management, planning, wood supply modeling, and forest economics; participated in more than 40 previous IFA assignments; 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.
Ms. 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.