

**Northshore Forest**  
**Independent Forest Audit**  
**2012 – 2017**

**Arbex Forest Resource Consultants Ltd.**

**November, 2017**



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## 1.0 Executive Summary

This report presents the findings of an Independent Forest Audit (IFA) of the Northshore (NF) conducted by Arbex Forest Resource Consultants Ltd. The audit utilized a risk-based approach based on the 2017 Independent Forest Audit Process and Protocol (IFAPP). The audit covers the 5-year period from April 1, 2012 to March 31, 2017. The audit scope includes the implementation of years 3-7 of the Phase1 FMP, and the development of the 2010 Phase II FMP.

Procedures and criteria for the IFA are specified in the 2017 IFAPP. The audit field site examinations were completed by helicopter and truck in October/November 2017.

The Northshore Forest (NF) SFL (# 542521) is managed by Northshore Forest Inc. (NFI). EACOM acts as an agent for NFI to administer the forest management program of the SFL. The NF is located within the MNRF Sault Ste. Marie (SSM) and Sudbury Districts. The MNRF administers the Forest out of its Blind River Area Office. There are twenty-five independent licensees that carry out logging operations through Overlapping Licenses (OL) issued by the MNRF.

A high-quality forest management program was delivered by NFI and the MNRF. The forest management planning process and the implementation of the FMPs met all legal and regulatory requirements which resulted in the production of an excellent quality Phase II FMP and the implementation of an effective silviculture program with a good compliance record.

It is our assessment that NFI did a credible job managing harvest allocations and operations given the inherent challenges associated with managing a significant number of operators (25) with preferences to harvest within traditional areas and/or cut certain species.

We do identify a concern related to the frequency of Resource Management Advisory Committee (RMAC) meetings and questioned whether the infrequent schedule of meetings was affecting the ability of the Local Citizens Committee (LCC) to satisfactorily meet its terms of reference (Finding # 1). We also found that the Annual Reports need improvement, as they contained confusing text, inaccuracies and omissions (Finding # 3). In Finding # 5, we note that contrary to provisions in the Crown Forest Sustainability Act (CFSA) that SFL # 542521 has not been extended beyond 2023.

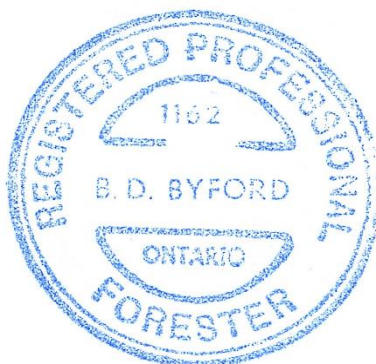
We are also concerned with the poor quality of the forest resource inventory information delivered for the preparation of the 2020 FMP (Finding # 2). The acquisition of photography required three years to complete, which resulted in in problems related to the identification of depleted areas. There were also several issues with respect to the quality of the data.

The audit team concludes that forest management was planned and implemented in accordance with the Crown Forest Sustainability Act (CFSA) and the FMP targets are

consistent with the achievement of plan objectives and forest sustainability. We concluded that Northshore Forest Inc. is managing the Northshore Forest in compliance with the terms and conditions of its sustainable forest licence. Forest sustainability as assessed through the 2017 Independent Forest Audit Process and Protocol is being achieved

The audit team recommends the Minister extend the term of the Sustainable Forest Licence # 542521 for a further five years.

*Bruce Byford*  
Bruce Byford R.P.F.  
Lead Auditor



## 2.0 Table of Findings

Table 1 Findings

<b>Concluding Statement on Licence Extension:</b>
<p>The audit team concludes that forest management was planned and implemented in accordance with the Crown Forest Sustainability Act (CFSA) and the FMP targets are consistent with the achievement of plan objectives and forest sustainability. We concluded that Northshore Forest Inc. is managing the Northshore Forest in compliance with the terms and conditions of its sustainable forest licence. Forest sustainability as assessed through the 2017 Independent Forest Audit Process and Protocol is being achieved.</p> <p>The audit team recommends the Minister extend the term of the Sustainable Forest Licence # 542521 for a further five years.</p>
<b>Findings</b>
<p><b>Finding # 1:</b></p> <p>The infrequent meetings of the Northshore Resource Management Advisory Committee prevent it from meeting the intent of the FMPM or the direction of its Terms of Reference.</p> <p><b>Finding # 2:</b></p> <p>There were a considerable number of inaccuracies and inconsistencies in the eFRI inventory data and information.</p> <p><b>Finding # 3:</b></p> <p>The Annual Reports contain confusing text as well as errors and omissions.</p> <p><b>Finding # 4:</b></p> <p>The MNRF did not consistently meet Compliance Handbook timelines for the submission of reports in the FOIP system.</p> <p><b>Finding # 5:</b></p> <p>The term of Sustainable Forest Licence # 542521 has not been extended.</p>

### **3.0 Introduction**

This report presents the findings of an Independent Forest Audit (IFA) of the Northshore (NF or the Forest) conducted by Arbex Forest Resource Consultants Ltd. for the period of April 1, 2011 to March 31, 2017. The audit utilized a risk-based approach based on the 2017 Independent Forest Audit Process and Protocol (IFAPP). The audit scope covers 5 years (April 1, 2012 to March 31, 2017), and includes the implementation of FMP years 3-7<sup>1</sup>. The scope also includes the development of the 2010 Phase II FMP.

The Northshore (NF) is managed by Northshore Forest Inc. (NFI) under Sustainable Forest License (SFL) # 542521. The NF is located within the Ministry of Natural Resources and Forestry (MNR) Sault Ste. Marie and Sudbury Districts. The MNR administers the Forest out of its Blind River Area Office. There is one Local Citizens Committee (LCC); the Northshore Forest Resource Management Advisory Committee (RMAC).

The Forest is certified by the Forest Stewardship Council (FSC).

#### **3.1. Audit Process**

The Crown Forest Sustainability Act (CFSA) requires that all Sustainable Forest Licences (SFLs) and Crown Management Units (CMUs) be audited every five to seven years by an independent auditor. The Independent Forest Audit Process and Protocol (IFAPP) provides guidance in meeting the requirements of Ontario Regulation 160/04 made under the CFSA and further required in the Conditions of MNR's Class Environmental Assessment Approval for Forest Management on Crown Lands in Ontario (MNR-75). The scope of the audit is determined by the MNR in specifying mandatory audit criteria (Appendix A of the IFAPP). The auditors finalize the audit scope by conducting a management unit risk assessment and identifying optional audit criteria from Appendix A to be included in the audit. The final audit scope is accepted by the Forestry Futures Trust Committee (FFTC) with any subsequent changes to the audit scope requiring agreement between the FFTC, MNR and the Lead Auditor.

The procedures and criteria for the delivery of the IFA are specified in the 2017 IFAPP. The audit generally assesses licence holder and MNR compliance with the Forest Management Planning Manual (FMPM) and the CFSA in conducting forest management planning, operations, monitoring and reporting activities. The audit also assesses the effectiveness of forest management activities in meeting the objectives set out in the Forest Management Plan (FMP). The audit further reviews whether actual results in the field are comparable with planned results and determines if the results were accurately reported. The results of each audit procedure are not reported on separately but collectively provide the basis for reporting the outcome of the audit. The audit provides the opportunity to improve Crown forest management in Ontario through

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<sup>1</sup> 2010 FMP Phase I Implementation, 2010 Phase II FMP Development, 2010 Phase II FMP Implementation.



adaptive management. Findings of “*non-conformance*” are reported. A “*Best Practice*” is reported when the audit team finds the forest manager has implemented a highly effective and novel approach to forest management or when established forest management practices achieve remarkable success.

Arbex Forest Resource Consultants Ltd. conducted the IFA in October 2017, utilizing a three-person team. Profiles of the audit team members, their qualifications and responsibilities are provided in Appendix 6. Details on the audit processes implemented are provided in Appendix 4.

### **3.2. Management Unit Description**

The NF is situated entirely within the Northeast Region of the MNRF, and the Forest’s geographic location is shown in Figure 1. The Forest is an amalgamation of the former Mississagi and Spanish River management units which resulted in a division of MNRF responsibilities between the Sault Ste. Marie and Sudbury Districts. The MNRF administers the Forest out of its Blind River Area Office

Northshore Forest Inc. manages the SFL on behalf of its shareholder companies<sup>2</sup>, with EACOM acting as an agent for NFI to administer the forest management program of the SFL. There are twenty-five independent licensees that carry out logging operations through Overlapping Licenses (OL) issued by the MNRF.

There is one LCC associated with the NF; Northshore Forest Resource Management Advisory Committee (RMAC).

The Forest is certified by the Forest Stewardship Council (FSC).

There are five Indigenous communities associated with the NF: the Sagamok Anishnawbek, Mississauga FN, Serpent River FN, Whitefish River FN and Thessalon FN. The Métis Nation of Ontario and the Bar River Métis also have an interest in the Forest. A portion of the Forest (former Kirkwood Forest) is located within the Thessalon First Nation Land Claim Area.<sup>3</sup>

The Forest supports a diversity of wildlife due to the variety of habitats associated with transition zone ecosystems. Thirty-three Species at Risk (SAR) are known or thought to occur including the wood turtle, Blandings turtle, short-eared owl, olive-sided flycatcher and the least bittern.

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<sup>2</sup> Shareholders include Domtar Inc., EACOM Timber Corporation, Midway Lumber Mills Ltd and the Northshore Independent Forestry Association Inc.

<sup>3</sup> In 2017, a net area of 164 ha of harvest allocations were deferred within the Claim Area.

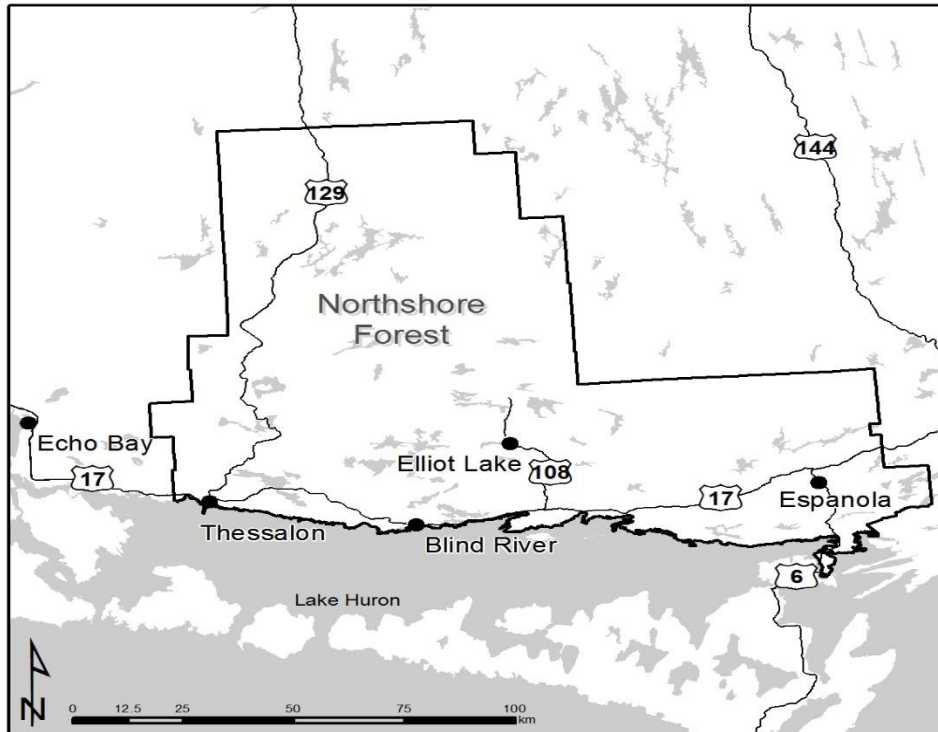


Figure 1 Location of the Northshore

The NF is used extensively for recreation and tourism. There are over 5,000 inland lakes which support sport fishing, bait fisheries and tourism operations. It contains approximately 10% of Ontario's lake trout lakes (275 lakes) and supports 70 base lodges, over 100 fly-in outpost camps and 80 bear management areas.

The NF encompasses a total Crown managed land area of 11,329 km<sup>2</sup> (Table 2). Much of it is in the transition zone between the Great Lakes-St. Lawrence Forest Region (55%) and the Boreal Forest Region. Tree species composition is typical of the transition zone with the most common being poplar, white birch, jack pine, white pine, red pine and maple. Silvicultural harvest methods include the selection, shelterwood and clearcut systems.

The age class area distribution of the Forest is skewed to mature to older age classes. Many of the stands within these age classes are fire origin stands from the 1948 Mississagi Fire.

Table 1. Area of Crown Managed Land by Land Type (Ha)

Managed Crown Land Type	Area (Ha)
Non-Forested	114,190
Non-Productive Forest	61,190
Protection Forest <sup>4</sup>	14,112
Production Forest <sup>5</sup>	
Forest Stands	694,573
Recent Disturbance	17,715
Below Regeneration Standards <sup>6</sup>	22,084
<b>Total Production Forest</b>	<b>734,372</b>
<b>Total Forested:</b>	<b>809,674</b>
<b>Total Crown Managed:</b>	<b>923,864</b>

Source: Table 1 2010 FMP

## 4.0 Audit Findings

### 4.1 Commitment

The Commitment Principle is deemed to be met since the Forest is certified by the Forest Stewardship Council (FSC).

### 4.2 Public Consultation and Aboriginal Involvement

#### Indigenous Involvement in Forest Management Planning

Our sample of documents indicated that for the development of the 2010 Phase II FMP the MNRF met all Forest Management Planning Manual (FMPM) requirements for notices and invitations to Indigenous communities to participate in the process. Offers

<sup>4</sup> Protection forest land is land on which forest management activities cannot normally be practiced without incurring deleterious environmental effects because of obvious physical limitations such as steep slopes and shallow soils over bedrock.

<sup>5</sup> Production forest is land at various stages of growth, with no obvious physical limitations on the ability to practice forest management.

<sup>6</sup> Areas where regeneration treatments have been applied but the new forest stands have yet to meet free-to-grow standards

were made for information sessions and community meetings. Aboriginal Background information and updated values information was available for the planning process.

Our review of Term and Condition 34 and Condition 56 requirements indicated that all format and reporting requirements had been met. Indigenous communities and individuals are well represented in operations on the Forest. For example, the Robinson –Huron Forestry Company has an overlapping licence, Sagamok Anishnawbek and ten First Nations have allocations and the Thessalon First Nation Biocentre has supplied trees from its tree nursery.

There is also an Aboriginal Task Team, created for FMP planning support and advice that has become a permanent committee that NFI continues to engage. The Task Team continues to be used by NFI for support and advice and as a conduit for the exchange of information with Indigenous communities.

#### Local Citizens Advisory Committee

There is one Local Citizens Committee (LCC) associated with the Forest, the Northshore Forest Resource Management Advisory Committee (RMAC). This is a standing committee with members appointed by the MNR District Manager. The membership represents a broad range of community interests including Indigenous representation. Audit interviews with members indicated there is a good relationship with both the MNR and NFI. Meeting minutes indicate that the Committee is involved in a range of natural resource management issues (i.e. fisheries planning) in addition to its forest management responsibilities and functions. The Terms of Reference for the LCC were updated in May 2017.

Interviewed members expressed a concern that, as a result of infrequent meetings (average 4 per year), it was difficult to remain current and provide knowledgeable input into activities on the Forest (Finding # 1).

Our assessment is that this is a very capable LCC that fully meets the requirements and intent of the Forest Management Planning Manual (FMPM).

### **4.3 Forest Management Planning**

We found the planning for the 2010-2020 Phase II FMP met FMPM requirements. For the development of a Phase II FMP, the 2009 FMPM requires that the Year 3 Annual Report (AR 2012-2013) include an analysis of the validity of basing Phase II planning on the Phase I FMP Long Term Management Direction (LTMD). The LTMD was appropriately endorsed as being “*substantially valid*”.

Phase I FMP background information was reviewed and confirmed for use in the production of the Phase II plan. Appropriate modifications to operational prescriptions for Areas of Concern (AOC) were made to ensure consistency with the *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* (Stand and Site Guide). The Silviculture Ground Rules (SGRs) in the Phase II FMP were

updated and revised to provide more operational flexibility for silvicultural operations (e.g. tending, site preparation). Operational planning for Phase II harvest areas considered the most current values information, relevant guidelines and public input.

The Available Harvest Area (AHA) was allocated to each of the traditional licencees (OLs) operating on the Forest in accordance with a calculated harvest share.<sup>7</sup> The forecast areas in excess of the harvest share are designated as “unassigned” and are available to licencees with a demonstrated capacity to harvest additional areas. Overall, the Phase I AHA was not exceeded for any forest unit. It is our assessment that NFI did a credible job managing harvest allocations and operations given the inherent challenges associated with managing a significant number of operators (25) with preferences to harvest within traditional areas and/or cut certain species.

Values maps were updated. Public input with respect to values protection was documented, verified and where appropriate added to values maps. We completed a random sample of AOC prescriptions (15) and confirmed that they conformed to the appropriate MNRF guidelines. MNRF staff indicated that there was adequate funding to collect values information in the development of the FMPs. Our assessment is that values identification and AOC prescriptions fully met all FMPM requirements.

Species at Risk (SAR) listed under the Endangered Species Act (2007) were appropriately considered during planning with the majority of SAR species protected under FMP AOC prescriptions.

We note that there was a strong commitment to the protection of resource based tourism values in the FMPs. The SFL appropriately followed the *Management Guidelines for Forestry and Resource-based Tourism* and developed specific prescriptions with the tourist operators for the protection of values. Four existing Resource Stewardship Agreements (RSAs) were maintained in the Phase II plan. Other tourism values were maintained by AOC prescriptions.

There were no requests for Individual Environmental Assessments (IEAs) or issue resolution for Phase II planning.

The planning inventory for the next FMP was prepared during the audit term. Inventory imagery was flown over a three-year period beginning in 2007 with the inventory received by NFI in December 2016. There are significant inaccuracies and inconsistencies in the data which has required considerable time and effort on the part of the SFL holder to correct (Finding # 2).

The content of Annual Work Schedules (AWS) conformed to FMPM requirements and the proposed forest management activities were consistent with those outlined in the relevant plans.

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<sup>7</sup> The area allocated to each OL is an area equivalent to their traditional harvest share to the extent possible in their traditional operating areas and traditional species mix. The proportion of the harvest was developed by the MNR prior to the development of the 2000 FMP and is based on the area allocated in the 1995 FMP prior to the formation of the SFL (Source: 2010 FMP).

## 4.4 Plan Assessment and Implementation

The full implementation of the FMPs was negatively impacted by the economic downturn in Ontario's forestry sector. Lower than planned harvest levels resulted in the underachievement of planned targets for post-harvest silvicultural treatments. Our field assessments confirmed that Silvicultural Ground Rules (SGRs), Silvicultural Treatment Packages<sup>8</sup> (STPs) and Forest Operations Prescriptions (FOPs) were appropriate for the forest cover types and site conditions.

### Harvest

Audit term harvest levels were below planned (~ 56%) due principally to the economic downturn in the forestry sector and harvest contractor capacity. The planned harvest was distributed amongst 25 OLS. Wood supply for receiving mills is grouped into MNRFC Commitments, Shareholder Agreements and Open Market. MNRFC commitments are satisfied first, followed by Shareholder Agreements and the recognition of other traditional users on the open market.

All harvest operations utilized the clearcut (5,067 ha), selection (312 ha) and shelterwood (3,937 ha) silvicultural systems during the audit term. Red pine thinning occurred on 1,036 ha. All areas depleted by clearcut were consistent with the requirements of the Natural Disturbance Pattern Emulation Guide (NDPEG). All harvests were consistent with the directions in the Annual Work Schedules (AWS). Certified tree markers conducted tree marking operations for the delivery of selection and shelterwood harvests. All tree marking prescriptions (i.e. Forest Operations Prescription) were appropriately approved by a Registered Professional Forester (R.P.F.).

Shelterwood marking in white pine forest unit stands focused on the controlled removal of the overstory and/or mid-story to improve light availability to promote the regeneration of pine. Prevailing site and stand conditions on the NF offer significant challenges to the successful implementation of the harvest system due to factors such as competition from other vegetation, and in some instances low initial stand densities of pine. Our assessment of the inspected shelterwood harvest sites was that these management challenges were being met. Satisfactory stocking levels of renewal (through natural ingress and in-fill planting) were achieved and there was little evidence of damage to residual trees within the inspected cut blocks.

We visited red pine plantations on the former Kirkwood Forest where commercial harvests for sawlogs and poles had been completed. There was no visible damage to residual trees. The pine management program began in the late 1920-30s and these stands have supported four harvests with some of the final cuts occurring in this plan

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<sup>8</sup> A Silvicultural Treatment Package is the path of silvicultural treatments from the current forest condition to the future forest condition. STPs include the silvicultural system, harvest and logging method(s), renewal treatments, tending treatments and regeneration standards.

term. The quality of the red pine timber is testament to effective forest management through the timely delivery of silviculture (i.e. thinning).

Fifty-one percent of the planned volume was harvested. Conifer utilization levels exceeded hardwood utilization levels. Table 3 presents the planned vs. actual harvest area by forest unit for the audit term. Table 4 presents a summary of the planned vs. actual volume utilization between 2012 and 2017.

Salvage harvest operations were undertaken to recover timber damaged by blowdown (840 ha). SFL conditions for salvage operations were met.

Our site inspections found that harvest operations were properly implemented. All inspected harvest blocks were approved for operations in the AWSs. There was little evidence of site damage arising from harvest operations. AOC prescriptions in, or adjacent to, harvest blocks were properly implemented.

### Slash Management

Slash management operations are principally associated with areas logged under the full tree harvest method. Slash management activities included piling, piling and burning, dispersing the slash back into the harvest areas, on-site mechanical processing or the removal of debris as biomass.

FMP targets for slash management<sup>9</sup> were exceeded with approximately 85% of the total harvest area treated. We did encounter localized instances where slash had not been piled. The requirement to pile debris is not a condition of an OL, rather NFI negotiates a price with the harvest contractor to undertake the work. If an agreement on price cannot be reached logging debris are spread over the landing rather than piled<sup>10</sup>. We do not make a finding on this issue since FMP slash management targets were exceeded and the affected areas were not extensive.

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<sup>9</sup> SFL target is for slash management on 80% of the total harvest area.

<sup>10</sup> Three contractors did not have arrangements with NFI to pile slash.

Table 2 Actual vs. Planned Harvest Area by Forest Unit (2012-2017)

Forest Unit <sup>11</sup>	Planned 5 Year Harvest Term 1 (Ha)	Actual 5 Year Harvest Term 1 (Ha)	Actual vs Planned % 5 years
BW1	2,100	471	22
HDMIX	3,500	2,088	60
HDSEL	8,905	274	3
HDUS	5,435	3,021	56
HECE	1,480	71	5
MW1	3,500	1,576	45
MW2	1,500	868	58
PJ1	2,500	1,232	49
PJSB	4,500	1,976	44
PO1	3,170	1,102	35
PR1	185	214	115
PR1THIN	1,170	1,036	86
PWMIX	2,960	712	24
PWUS4	2,300	1,199	52
SBLC	570	136	24
SFIR	710	447	63
<b>TOTAL</b>	<b>44,485</b>	<b>16,423</b>	<b>37</b>

<sup>11</sup> Forest Units are as follows: BW1=White birch, HDMIX=Hardwood Mixed, HDSEL=Hardwood Selection, HDUS=Hardwood Shelterwood, HECE=Hemlock Cedar, MW1=Mixedwood – Poor, MW2=Mixedwood-Rich, PJ`1=Jack Pine, PJSP=Jack Pine – Spruce, PO1=Poplar, Pr1=Red Pine, PWMIX=White Pine Mixed, PWUS4=White Pine, SBLC=Black Spruce – Lowland Conifer, SFIR=Spruce - Fir



Table 3 Actual vs. Planned Volume (000's m<sup>3</sup>) (2012-2017)

Species Group	Planned Volume (000 m <sup>3</sup> )	Actual Volume (000 m <sup>3</sup> )	% of Planned
PW/PR	510,780	336,410	66
SPF	1,226,305	804,902	66
OC	69,100	4,675	7
<b>Total Conifer</b>	<b>1,806,185</b>	<b>1,146,005</b>	<b>63</b>
PO	778,975	314,169	40
BW	455,510	158,403	35
Other Hardwood	233,350	26	0
<b>Total Hardwood</b>	<b>1,895,365</b>	<b>748,360</b>	<b>38</b>
Bio - Fibre	0	8,192	
<b>TOTAL</b>	<b>3,701,550</b>	<b>1,894,365</b>	<b>51</b>

### Area of Concern Management

Our sampling of FMP AOC prescriptions confirmed that they were in accordance with MNRF guidelines, and that they were appropriate for the protection and/or maintenance of the identified values. It is noteworthy that harvest operators are trained in the identification and reporting of SAR and carry Flash Cards to help identify SAR and other Area of Concern (AOC) values (e.g. stick nests). Our field site investigations confirmed that the prescriptions were properly implemented.

### **Renewal, Tending and Protection**

#### Site Preparation (SIP)

During the audit term, SIP treatments achieved 28% of the planned FMP targets due to the lower than planned harvest level (Table 5). Site preparation was accomplished by power disk trencher or straight blades. The inspected areas exhibited good mineral soil exposure and there was no evidence of site damage arising from the operations.

Chemical site preparations were not planned but were implemented on 468 ha where there was a requirement to control site competition prior to artificial renewal.

Table 4 Area (Ha) of Actual vs. Planned Site Preparation (2012-2017)

Site Preparation Treatments	Planned Ha	Actual Ha	Actual vs Planned %
Mechanical SIP	15,810	3,913	25
Chemical SIP	0	468	0
<b>SIP Total</b>	<b>15,810</b>	<b>4,381</b>	<b>28</b>

### Renewal

During the audit term 11,375 ha of artificial renewal and 28,780 ha of natural renewal was planned (Table 6). FMP renewal targets were not achieved due to the lower than planned harvest, but the area renewed exceeded the area harvested. Regeneration assessments indicate that an effective renewal program was implemented with a regeneration success rate of 100% and a silviculture success rate of 81% (See Section 4.6).

All renewal treatments observed in the field were consistent with the SGRs. Natural renewal was implemented on 32% of the planned area and comprised 58% of the overall area renewed. Our site inspections of harvest blocks managed for natural renewal found the blocks were typically well-stocked to the desired species.

Artificial renewal treatments were less frequently adopted, reflecting the suitability of sites for natural renewal. In-fill planting was frequently utilized to augment natural renewal in pine stands managed by shelterwood cutting. Our site inspections found planted areas to be well stocked with both planted trees and natural ingress.

The area treated by seeding achieved 34% of the planned forecast area. Our site inspections found that areas seeded exhibited high stocking levels to the desired conifer species.

Table 5 Area (Ha) of Actual vs. Planned Renewal Treatments (2012-2017)

Renewal Treatments	Planned Ha	Actual Ha	Actual vs Planned %
Natural Clearcut	10,690	5,067	47
Natural Shelterwood Cut	7,710	3,937	51
Natural Selection cut	10,380	312	3
<b>Total Natural Renewal</b>	<b>28,780</b>	<b>9,316</b>	<b>32</b>
Plant	9,625	6,065	63
Seed	1,750	595	34
<b>Total Artificial Renewal</b>	<b>11,375</b>	<b>6,650</b>	<b>58</b>
<b>Total Renewal</b>	<b>40,155</b>	<b>15,976</b>	<b>40</b>

### Tending

Our audit of the effectiveness of the chemical tending program was difficult as leaf drop had occurred prior to the field audit<sup>12</sup>. Treatments were implemented on 5,853 ha (Table 6). The lower than planned level is indicative of the reduced area harvested and issues related to the contracting of aerial spray services (i.e. late season arrival of service providers) and/or weather conditions. Some candidate areas for aerial spray were also deferred due to FN concerns with respect to the use of herbicides.

Tending treatments were delivered by aerial spray or ground spray applications (i.e. air blast skidder or back pack sprayer). As a general observation, we found ground spray treatments provided more effective chemical control than the aerial treatments.

Our interviews and document reviews revealed that there was an issue with banding<sup>13</sup> on sites treated by the aerial spray program in 2015 arising from the inexperience of the spray contractor. NFI completed an aerial survey of these areas (2016) to determine the extent of the problem and assess requirements for remedial work. It was determined that the herbicide banding did not present an issue with respect to loss of crop trees or for the long-term sustainability of the forest. We concur with this assessment and do not issue a finding related to the 2015 aerial spray program.

<sup>12</sup> The tender for the 2017 IFA was re-issued which resulted in audit field work commencing in late fall.

<sup>13</sup> Banding was strips of untreated competition due to incorrect nozzle alignment (no overlap of the spray application) during the spray operation.

Table 6 Area (Ha) of Actual vs. Planned Tending Treatments (2012-2017)

Tending Treatments	Planned Ha	Actual Ha	Actual vs Planned %
Tending Aerial	8,130	4,949	61
Tending Ground	3,055	519	17
Tending Manual	0	385	0
Pre-Commercial Thinning	1,750	0	0
<b>Total Tending</b>	<b>12,935</b>	<b>5,853</b>	<b>45</b>

Manual spacing operations were completed on 385 ha by a First Nations contractor. No pre-commercial thinning operations occurred due to a lack of sites suitable for the treatment.

#### Protection

No protection programs other than monitoring functions were implemented during the audit term.

#### **Access Planning and Management**

Access was planned and constructed in accordance with the FMPs, AWSs and relevant forest management guidelines. Road construction and maintenance responsibilities are assigned to individual OLs. During the audit term road construction was lower than planned due to the low level of harvest with 51.8 kilometers (kms) of primary road and 68 kms of branch roads being constructed.

NFI implements best management practices in road construction and maintenance. In general, primary access roads were well-built and maintained. Surface conditions on secondary roads were somewhat more variable reflecting the lack of operations in some areas inspected and/or a reduction in maintenance due to economic conditions. No instances of environmental damage or public safety concerns related to access or water crossing installations were observed. Our review of FOIP records confirmed this finding.

Decommissioning of roads and landings is a requirement of the current FMP to reduce the loss of productive land and/or to prevent access into protected areas.

Decommissioning activities included signage, water crossing removals and berm construction. Our interviews indicated that the decommissioning efforts were generally successful in preventing vehicle traffic.

Ninety-five water crossings were constructed, and twelve Rock Support bridges were retrofitted with engineering supports during the audit term. Our field inspections found that, on balance, culvert installations were well-constructed. We did encounter some localized issues with respect to culvert perching. At these locations the culverts had

been installed in areas where bedrock was at or near the surface, so a finding was not issued.

During the field audit, we visited a sample of aggregate pits (25 pits) that were either opened or rehabilitated during the audit term. FMP operational standards for forestry aggregate pits were typically met and there were few operational issues observed. At most sites, pit rehabilitation work was exemplary, as it was often difficult to ascertain whether or not aggregate had been extracted from the location.

## **Renewal Support**

NFI is a member of the Northeast Seed Management Association (NESMA) which is responsible for establishing and maintaining tree orchards and other tree improvement initiatives. Planned renewal support programs are documented in the FMPs and were sufficient to meet planned silviculture program requirements.

Renewal support activities included tree seed collection, planting stock production and tree improvement work.

## **4.5. System Support**

NFI met 2017 IFAPP Human Resources Principle criterion through its FSC certification.

## **4.6. Monitoring**

Both MNRF and NFI are effectively tracking and monitoring forest management activities on the NF. NFI prepared a compliance plan in accordance with the Guidelines for Industry Compliance Planning. The annual inspection targets were appropriate for the extent of harvesting and other forest management activities.

Based on the Trends Analysis, NFI and the MNRF completed 941 FOIPs with 13 non-compliances resulting in a 95 percent compliance rate. The MNRF conducted approximately 10 percent of the inspections. We reviewed a random sample of 30 industry FOIPs and 15 MNRF FOIPS to assess adherence to Compliance Handbook content and timing requirements. Northshore submissions generally met all requirements. Six of the fifteen MNRF reports (40%) did not comply with the timing requirements (Finding # 4).

### Monitoring of Silvicultural Activities

Silviculture assessments and other monitoring functions were in accordance with the direction in the FMP. Monitoring activities completed by the MNRF and NFI included; plantation survival assessments, regeneration and post-tending assessments and Free-to-Grow (FTG) surveys. We concluded that an effective monitoring program was implemented.

### Free to Grow Survey (FTG)

During the audit term, FTG surveys took place on 12,087 ha (2012-2016) representing 42% of the planned target. Although the area surveyed is below planned levels, a backlog is not accumulating due to the low level of harvest. Our field sampling (visual assessments) of FTG survey blocks generally substantiated the stand descriptions and the reported forest unit designations.

### Silviculture Success

Regeneration is considered a “*silviculture success*” when all the standards contained in the SGR applied to that stand have been met and the projected forest unit is achieved. A “*regeneration success*” occurs when the regeneration meets all the standards of an SGR, but the stand has regenerated to a forest unit other than the projected unit. A high level of regeneration success (100%) and silviculture success (81%) was achieved. The high rate of silviculture success can be attributed in part, to the fact that movement between forest units was consistent with the post renewal successional pathways modeled in the Sustainable Forest Management Model (SFMM).

### Silvicultural Effectiveness Monitoring (SEM)

The previous audit identified a shortcoming with respect to the delivery and reporting of the MNRFS SEM program. In response to the recommendation the SSM District implemented a district-wide SEM strategy and included SEM targets as a component of staff targets.

The SEM program was implemented during all years of the audit term. District SEM results were reported in a format which effectively describes the Core Task results, sampling procedures, summarizes the findings and identifies trends, rationalizes the findings and prescribes areas for further investigation. We concluded that MNRFS delivered an effective SEM program.

Table 7 Silviculture and Regeneration Success by Forest Unit (2011-2016).

Forest Unit	Total Area Assessed (ha)	Projected Forest Unit (ha)	Other Forest Unit (ha)	Percent Silvicultural Success (%)	Percent Regeneration Success (%)
BW1	697	697		100	100
HDMIX	3,947	3,834	113	97	100
HDSEL	10	0	10	0.0	100
HDUS	472	374	98	79	100
HECE	55	46	9	84	100
MW1	2,928	1,866	1,062	64	100
MW2	1,622	525	1,097	32	100
PJ1	2,383	2,218	165	93	100
PJSP	4,599	4,047	552	88	100
PO1	1,792	1,664	128	93	100
PR1	27	0	27	0	100
PWMIX	222	97	125	44	100
PWUS4	20	14	6	70	100
SBLC	191	157	34	82	100
SFIR	878	540	338	62	100
<b>Total:</b>	<b>19,843</b>	<b>16,079</b>	<b>3,764</b>	<b>81</b>	<b>100</b>

### Exceptions Monitoring

Exceptions monitoring is carried out to determine the effectiveness of prescriptions included in forest management plans that are “*not recommended*” in the MNRF forest management guides. Monitoring was undertaken to assess the impacts of Full Tree Logging in Partial Harvest Stands to permit the use of full tree logging in stands managed by the shelterwood system. Licensees are required to monitor damage to the residual stand and to conduct a damage assessment survey. Evidence was available that indicated that the required the damage surveys had been completed. The monitoring process was effective, as the harvest technique was suspended on two sites where the required minimum standards for residual damage were not met.

## Forest Renewal Trust Specified Procedures Report

We inspected 24% of the area invoiced in the “*Forest Renewal Trust Specified Procedures Report*” (SPR) to verify conformity between invoiced and actual activities. No non-conformities were found.

### Access Monitoring

Roads and water crossings are monitored through the Forest Operations Inspection Program (FOIP). There were no non-compliances reported in the system. An inspection is completed for all water-crossing installations, repairs and removals occurring on the SFL.

All roads with harvesting operations received active road maintenance and all other road networks were monitored on a rotation basis. Both the MNRF, the OLs and NFI conduct additional inspections as part of their respective compliance planning targets. Informal checks of roads and water crossings are conducted on an ongoing basis as part of the field program.

We concluded that an effective access monitoring program was implemented.

### Annual Reports

ARs were available for each year in the audit scope except for the 2016-2017 AR, which is not required until November 15, 2017. Schedules for the submission and review of the ARs were generally met and as required, the ARs were presented to the LCC. Our examination of ARs revealed that they all contained examples of confusing reporting (i.e. numbers did not add up), and both missing and inaccurate information (Finding # 3).

## **4.7. Achievement of Management Objectives & Sustainability**

FMP objectives are monitored annually and formally reported on in the year 3, 7 and 10 Annual Reports. The lower than forecast level of harvest negatively affected the achievement of FMP objectives related to forest cover, forest diversity and those related to the economic benefits derived from forest management. Appendix 2 provides more details on our assessment of plan objective achievement.

We identified the following trends in the Trends Analysis Report as significant:

- Planned harvest levels (area and volume) have not been achieved resulting in plan targets for silviculture activities linked with the harvest to be underachieved.
- Conifer utilization was significantly higher than hardwood utilization.
- The area renewed exceeded the area harvested.



- The field application of silviculture is achieving high levels of regeneration and silviculture success.

The Report Author concludes that forest sustainability is not at risk from the implementation of forest management activities and that planning objectives are meeting or are within an acceptable tolerance of desired levels in order to maintain progress towards sustainability. The audit team concurs with that assessment.

In our assessment of forest sustainability, we examined factors such as the achievement of plan objectives, progress towards the desired future forest condition, and the level of benefits derived from the implementation of the FMP. Our field site visits, document and record reviews and interviews also informed our sustainability conclusion. We concluded that the achievement of long term forest sustainability as assessed by the IFAPP is not at risk. Our conclusion was premised on the following:

- Forest management was planned and implemented in accordance with the Crown Forest Sustainability Act (CFSA) and FMP targets are consistent with the achievement of plan objectives and forest sustainability.
- Our site inspections and document reviews indicated that an effective silviculture program was implemented.
- Despite the lower than planned harvest, FMP objectives and targets are being achieved or there is progress towards their achievement.
- The area renewed exceeds the area harvested and a high level of regeneration and silviculture success was achieved.
- We did not observe any instances of environmental damage associated with forestry operations and our site inspections confirmed that AOC prescriptions were appropriately implemented.
- FOIP results indicate a high in-compliance rate was achieved for forest management activities.
- Silvicultural Ground Rules (SGRs), Silvicultural Treatment Packages (STPs) and Forest Operations Prescriptions (FOPs) were appropriate for the forest cover types and site conditions.

#### **4.8. Contractual Obligations**

We concluded that NFI was substantially in compliance with the terms and conditions of its licence agreement (See Appendix 3).

The IFAPP requires auditors to assess the effectiveness of the actions to address the recommendations of the previous audit. We found that the recommendations had been appropriately addressed.

We note also that the term of Sustainable Forest Licence # 542521 has not been extended since 2003, even though previous IFAs have recommended the extension (Finding # 5).

#### **4.9. Conclusions and Licence Extension Recommendation**

A high-quality forest management program was delivered by NFI and the MNRF. The forest management planning process and the implementation of the FMPs met all legal and regulatory requirements which resulted in the production of an excellent quality Phase II FMP and the implementation of an effective silviculture program with a good compliance record. It is our assessment that NFI did a creditable job managing harvest allocations and operations given the inherent challenges associated with managing a significant number of operators (25) with preferences to harvest within traditional areas and/or cut certain species.

We are concerned with the poor quality of the forest resource inventory information delivered for the preparation of the 2020 FMP (Finding # 2). We also identify a concern related to the frequency of RMAC meetings and questioned whether the infrequent schedule of meetings was affecting the ability of the LCC to satisfactorily meet its terms of reference (Finding # 1).

We found that the Annual Reports need improvement, as they contained confusing text, inaccuracies and omissions (Finding # 3). In Finding # 5, we note that contrary to provisions in the Crown Forest Sustainability Act and IFAPP direction, that SFL # 542521 has not been extended since 2003.

The audit team concludes that forest management was planned and implemented in accordance with the Crown Forest Sustainability Act (CFSA) and the FMP targets are consistent with the achievement of plan objectives and forest sustainability. We concluded that Northshore Forest Inc. is managing the Northshore Forest in compliance with the terms and conditions of its sustainable forest licence. Forest sustainability as assessed through the 2017 Independent Forest Audit Process and Protocol is being achieved. The audit team recommends the Minister extend the term of the Sustainable Forest Licence # 542521 for a further five years.

## **Appendix 1**

### **Findings**



**Independent Forest Audit – Record of Finding  
Finding # 1**

**Principle 2:** Public consultation and Aboriginal involvement

**Criterion: 2.1** Local Citizens Committee (LCC)

**Procedure(s):** Review and assess whether the LCC met the purposes and conducted its activities in accordance with the applicable FMPM.

**2.1.2 LCC purpose and activities**

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

**Background Information and Summary of Evidence:**

The Northshore Forest LCC (Resource Management Advisory Committee (RMAC)) is a standing committee appointed by the MNRF Sault St. Marie District Manager. The Committee has a Terms of Reference (TOR) approved by the MNRF District Manager (May, 2017). The TOR states that, “The purpose of the RMAC is to participate as an integral part of the forest management planning process and to act as an intermediary between stakeholder groups and MNRF when MNRF is providing RMAC other, non-forestry related, natural resource planning information.”

The auditors interviewed 8 members of the RMAC as well as MNRF and Northshore staff involved with the Committee and its operations. All the interviewed members believed their involvement with the committee was worthwhile. However, all indicated that they had problems staying current with plan development, plan implementation and other natural resource issues associated with the Forest. They indicated that this was, in part, a result of infrequent committee meetings that made it difficult to follow and remain current on activities on the Forest.

A review of meeting minutes revealed that there were 6 meetings in 2012, 4 in 2013, 5 in 2014, 3 in 2015, 2 in 2016 and 3 in 2017 (as of the field audit in October). The LCC TOR (2017) requires that “The Committee shall hold its regular meeting on the fourth Thursday of each month...”.

**Discussion:**

LCCs normally meet 8 - 10 times per year (with a break during the summer months). This frequency of meetings allows members to remain current with forest management issues, and carry out their duties in a timely manner (e.g. amendment reviews, AWS reviews, etc.).

Interviewed RMAC members stated that infrequent meetings did not allow the members sufficient time or the opportunity to fully understand issues, to form necessary working relationships with MNRF and Northshore staff or to properly represent their constituent's interests (e.g. tourist operators, cottagers, trappers, etc.). These same concerns were expressed by both Company and MNRF staff.

We do note the most recent TOR indicates movement to more frequent meetings. However, we also note that while the TOR was approved in May 2017 only one meeting had occurred prior to the audit (approximately 5 months).

**Finding # 1:**

The infrequent meetings of the Northshore Resource Management Advisory Committee prevent it from meeting the intent of the FMPM or the direction of its Terms of Reference.

**Independent Forest Audit – Record of Finding  
Finding # 2**

**Principle:** 3. Forest Management Planning

**Criterion:** 3.3.2. Forest Resource Inventory

**Procedures:**

1. Assess whether the FRI has been updated, reviewed and approved to accurately describe the current forest cover that will be used in the development of the FMP.

**Background Information and Summary of Evidence**

The Northshore Forest was flown to capture imagery for the eFRI over a three-year period beginning in 2007. The inventory was received by NFI in December 2016.

There were several significant issues with the quality of the information. A three-year time frame (2007-2009) to capture imagery resulted in problems related to the identification of depleted areas which necessitated manual updates in the GIS. Other issues related to the quality of information included:

- Problems with the identification of unclassified land (UCL) features including the misidentification of areas of water or wetlands as UCL,
- Problems with the water layer,
- Updated and verified FTG features from the SFL were not updated in the inventory,
- Several polygons had more than one ownership code and there were duplicate polygons,
- There were a considerable number of slivers etc. The audit team concurs with that assessment.

**Discussion:**

The inaccuracies and inconsistencies in inventory data and information required considerable time and effort by the SFL to correct and prepare the inventory for forest management planning.

**Finding # 2:**

There were a considerable number of inaccuracies and inconsistencies in the eFRI inventory data and information.



**Independent Forest Audit – Record of Finding  
Finding # 3**

**Principle 6:** Monitoring

**Criterion:** 6.5 Annual Report

**Procedure(s):**

...assess whether the text, tables and maps including digital information is accurate, complete and in accordance with the applicable requirements, including the associated deadlines.

**Background Information and Summary of Evidence:**

The FMPM, PART E, describes the format and required content of ARs. Our examination of ARs revealed that they all contained examples of confusing reporting (i.e. numbers did not add up), and both missing and inaccurate information. For example, the text on compliance in the 2012-13 AR reports 230 inspections. When the compliance data is tabulated the total is 222 based on 218 in-compliance and 4 not-in-compliance. In the same report, Table AR 6 reported 7 MNRF inspection reports but the data in the table only showed 4. There were similar examples in all the ARs.

Northshore staff indicated that the discrepancies were related to FOIP submissions that were pending decisions and would be carried over into the next AR reporting period. We note that a caution has been included to address the AR inconsistencies in the 2016-2017 AR-6 which states:

*Remedies are not always applied in the same year which the non-compliance occurred. Numbers for Reports and Non-Compliance are not comparable to the numbers for Remedies Applied,*

- 1. Total number of Inspections may not be equal to number of In-Compliance report + number Not-In-Compliance report due to operational issue still pending.*

While the caution provides an explanation for the discrepancies in the text and tables, the ARs remain confusing for members of the public reviewing the documents.

Additionally, the ARs failed to report shelterwood and selection harvests for a three-year period (2013-2016). There were also errors in the area of reported treatments (i.e. site preparation and ground chemical tending).

We note that the MNRF review of the ARs identified tabulation errors but failed to identify other errors and omissions.

**Independent Forest Audit – Record of Finding  
Finding # 3**

**Discussion:**

The ARs are public documents reporting on annual forest management activities and progress towards FMP objectives. Confusing text, as well as errors and omissions, within the reports do not serve to advance public understanding of, or confidence in, the forest management process.

**Finding # 3:**

The Annual Reports contain confusing text as well as errors and omissions.

**Independent Forest Audit – Record of Finding  
Finding # 4**

**Principle 6:** Monitoring

**Criterion 6.1:** District compliance planning and associated monitoring

**Procedure(s):**

Determine whether the FOIP reports have been submitted electronically to the MNRF database in accordance with requirements including timelines specified in MNRF procedures and FIM.

**Background Information and Summary of Evidence:**

The Forest Compliance Handbook provides the following directions for the submission of compliance inspections to the FOIP database;

- Inspections with no operational issues are to be submitted to FOIP no more than 20 working days after completion.
- All inspection reports that contain an Operational Issue(s) must be submitted to FOIP within 10 working days of its discovery.
- The Industry and MNRF must provide written (e.g. e-mail) notification to the other party within 5 working days of the discovery of all Operational Issues.
- Where there is an operational issue that requires immediate mitigation action the Licensee must notify MNRF within 24 hours (verbally/email) and follow up with written notification within 5 working days.

The Trends Analysis Report indicated that MNRF completed 92 of the 941 inspections reported. We reviewed a random sample of 15 MNRF FOIP inspection reports for content and adherence to Compliance Handbook timelines. Six of the fifteen MNRF reports (40%) did not comply with the timing requirements.

**Discussion:**

Discussions with MNRF staff indicated that inspectors act quickly on operational inspections with respect to submissions to the data base. A lower priority is assigned to non-operational issues based on workload imperatives. However, Compliance Handbook timelines for submission of reports were not consistently met.

**Finding # 4:**

The MNRF did not consistently meet Compliance Handbook timelines for the submission of reports in the FOIP system.

**Independent Forest Audit – Record of Finding  
Finding # 5**

**Principle:** 8 Contractual Obligations

**Criterion:** 8.1.21 SFL or Agreement extension recommendation

**Procedure(s):**

- ...make a concluding statement and recommendation on the extension of an individual SFL or the Agreement in accordance with the IFAPP direction for such a recommendation (Appendix D).

**Background Information and Summary of Evidence:**

Provisions for the extension of an SFL are provided in Crown Forest Sustainability Act as follows.

Subsection 26 (1) of the CFSA provide that:

*“The Minister may, with the approval of the Lieutenant Governor in Council, grant a renewable licence to harvest forest resources in a management unit that requires the licensee to carry out renewal and maintenance activities for the benefit and on behalf of the Crown necessary to provide for the sustainability of the Crown forest in the area covered by the licence.”*

Subsection 26 (3) and (4) of the CFSA provide that:

*(3) “Subject to subsection (3.1), during the term of the licence, the Minister shall conduct a review every five years to ensure that the licensee has complied with the terms and conditions of the licence.” And (4) “If a review conducted under subsection (3) or (3.1) satisfies the Minister that the licensee has complied with the terms and conditions of a licence, the Minister shall, with the approval of the Lieutenant Governor in Council, extend the term of the licence for five years.”*

The 2007 and 2012 Independent Forest Audits recommended the extension of SFL # 542521 for a further five years. The current licence expires in 2023, indicating that formal extensions of the SFL have not taken place.

**Discussion:**

It is understood that the IFA recommendation on licence extension is only a component of the Minister's consideration for the extension of an SFL. The current licence expires in 2023, indicating that the SFL has not been extended since 2003.

**Finding # 5:**

The term of Sustainable Forest Licence # 542521 has not been extended.



## **Appendix 2**

### **Management Objectives Table**





2010 FMP OBJECTIVES	ASSESSMENT OF OBJECTIVE ACHIEVEMENT	AUDITOR COMMENTS
Move toward a distribution of disturbances that more closely resembles the natural disturbance pattern.	PARTIALLY MET	The lower than planned harvest levels are hampering the achievement of this objective. The actual achievement of this objective will be determined at the end of the plan term.
To maintain 10% to 20% of the forest which has the capability to produce marten habitat in suitable conditions in core areas.	MET	This objective was achieved in the development and implementation of the 2010 FMP. No harvests allocations were identified in marten core areas.
To maintain a forest landscape that provides moose habitat.	PARTIALLY MET	This objective was achieved in the development of the 2010 FMP.  The lower than planned harvest levels will negatively affect the overall supply of early successional forest available for browse.
To maintain a forest landscape that provides suitable pileated woodpecker habitat.	MET	This objective was achieved in the development and implementation of the 2010 FMP. The lower than planned harvest should maintain or increase the area of preferred habitat.
To maintain a forest landscape that provides suitable red shouldered hawk habitat.	MET	The objective was achieved in the development and implementation of the FMP. The lower than expected harvest levels should at least maintain or increase the area of habitat.
To maintain the area of forest type that would occur naturally through time on the Northshore Forest.	MET	Targets and desired level for all forest units was achieved for all management terms modelled during the development of the 2010 FMP.
To increase the proportion of conifer forest types thereby more closely resembling pre-settlement forest conditions.	MET	An effective conifer renewal program was implemented during the audit term. Silviculture strategies conducive for the maintenance of conifer are being successfully implemented. The target related to this objective was achieved in the FMP modelling exercise.

2010 FMP OBJECTIVES	ASSESSMENT OF OBJECTIVE ACHIEVEMENT	AUDITOR COMMENTS
To achieve a future and post harvest forest condition that has structural characteristics including the retention of living trees, veterans, snags and downed woody debris.	MET	This objective has been met. There have few non-compliances issued related to tree retention. The field audit found no non-conformances on the inspected harvest blocks.
To achieve a future forest condition that maintains genetic diversity.	MET	58% of the area renewed was by natural renewal. All nursery stock and seed utilized was from appropriate seed zones.
To maintain wildlife habitat for species dependent on over-mature forest conditions,	MET	FMP modelling achieved targets for all species. The lower than planned harvest level retained older stands on the landscape.
To maintain wildlife habitat for forest dependent provincially and locally featured species.	MET	FMP modelling achieved targets for all species. AOC prescriptions appropriately protected wildlife values and habitat.
To maintain wildlife habitat for forest dependent wildlife species at risk.	MET	SAR species were protected by FMP AOC prescriptions.
To have access roads in place to allow for effective and efficient forest operations, while decommissioning roads no longer required in the long term to reduce road density in areas of concern (i.e. EMA, SAR habitat) and to limit Company and MNR liability.	MET	Road density targets were achieved during the FMP planning. The lower than planned level of harvest has reduced the requirement for road construction. The field audit indicated that access controls were effective.
To ensure the successful renewal of harvested stands.	MET	The field audit determined that an effective renewal program was implemented. The area renewed exceeded the area harvested. A high level of regeneration and silviculture success was achieved (100% and 81% respectively).
Implement forest operations in a manner that minimizes conflicts with non-timber resources users, and	MET	FOIP reports indicate a high level of forest operations compliance. Non-timber values and uses were appropriately protected by RSAs and

2010 FMP OBJECTIVES	ASSESSMENT OF OBJECTIVE ACHIEVEMENT	AUDITOR COMMENTS
protects non-timber values, in order to provide the opportunity to benefit from the forest.		AOCs.
To protect cultural heritage values that may be affected by forest management.	MET	There were no non-compliances issued with respect to cultural heritage values.
To carry out forest operations in a manner that maintains the viability of the tourism industry by protecting and sustaining tourism values within the forest.	MET	There were no non-compliances issued relating to the protection of tourism values. AOC prescriptions or RSAs appropriately protected values.
To provide a sustainable and continuous supply of timber to meet or exceed MNR wood supply commitments and Industry demand.	MET	Wood supply commitments were achieved in the LTMD. Prevailing market conditions resulted in less area than planned harvested. Long term sustainability is not jeopardized as the AHA will be recalculated in subsequent plans accounting for the undercut.
To increase the future proportion of tolerant hardwood sawlogs & veneer, and red & white pine sawlogs through tree marking.	MET	Marking was completed by certified tree markers in accordance with FOPs prepared by a Registered Professional Forester. Our site inspections confirmed that marking prescriptions were appropriate for site and stand conditions. Prescriptions and marking operations favoured the development of higher value wood products (i.e. sawlogs, veneer logs and poles). The effectiveness of the management prescriptions and marking operations in improving tree and stand quality will be ascertained in future cutting cycles.
To ensure ecological processes and forest productivity are minimally impacted or enhanced by forest management activities.	MET	Our site inspections did not reveal any instances of environment site damage arising from operations.
To maintain/enhance water quality and fish habitat so	MET	Our site inspections did not reveal any instances of damage to water quality or

2010 FMP OBJECTIVES	ASSESSMENT OF OBJECTIVE ACHIEVEMENT	AUDITOR COMMENTS
they are not diminished as a result of forest management activities.		fisheries resources arising from operations.
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.	UNCERTAIN	This objective requires assessment following the completion of the 2020 planning inventory. Land Claims filed with the Provincial and Federal Governments will likely result in the future removal of productive forest land. It is noteworthy that harvest allocations were deferred in 2017 within the area of the Thessalon First Nation Land Claim.
To manage forest cover and conduct forest operations in a manner that will compliment other resource based activities such as cottaging, recreation, hunting, trapping and mineral exploration.	MET	Other forest uses were appropriately considered during the FMP planning process through public consultation and the development and implementation of AOC prescriptions to protect or maintain identified values. No negative responses about the forest management program were received from the public in response to our public notices and mail survey.
To involve First Nation communities in consultation opportunities and in the development of the forest management plan.	MET	For the Phase II FMP, 4 First Nation communities and the Métis Nation of Ontario were involved with the Planning Team and the Task Team.
To enhance silvicultural opportunities to local First Nation communities for employment and economic benefit.	MET	There have been multiple silviculture contracts with FN communities and contractors for nursery stock production, cone collection, harvest and aerial and manual tending.
To increase the % of area harvested in relation to the Harvest share allocated to First Nation Licenceses.	NOT MET	Each licensee was allocated harvest areas during FMP planning. Harvest levels achieved were consistent with other OLs operating on the NF.  FN licenceses have harvested more area than in previous plan terms, but the % area allocated to FNs has not increased since FN harvest area achievements are lower than FMP targets.
To increase the harvest capacity of the First Nation Licenceses	MET	Harvest opportunities have been made available to FN licenceses.

2010 FMP OBJECTIVES	ASSESSMENT OF OBJECTIVE ACHIEVEMENT	AUDITOR COMMENTS
		<p>Since harvest levels have been below target levels, increased opportunities for more harvest area have not been required.</p> <p>Harvest level achievement between 2010 and 2015 was as follows:</p> <ul style="list-style-type: none"> <li>• Robinson Huron Forestry Company - 1,763 ha available, and harvested 492 ha (28%);</li> <li>• Sagamok Anishnawbek- 736 ha available and harvested 378 ha (51%);</li> <li>• Ten First Nation licence - 1,095 ha available and harvested 349 ha (32%).</li> </ul>
To make available incidental volumes of timber for local First Nation communities for personal uses such as fuelwood, fence post material and other uses.	MET	Twenty areas totalling 828 ha were allocated for First Nation communal use.
To encourage and support the participation of the Local Citizens Committee (RMAC) in the development of the Forest Management Plan.	PARTIALLY MET	RMAC was actively involved in the development of the FMP. The LCC self-evaluation of its effectiveness was 75%. Interviewed LCC members indicated that their infrequent meeting schedule was affecting the ability of the LCC to meet its TORs (Finding # 1).
To minimize the risk of industrial caused forest fires.	MET	No fires occurred as a result of forest industry operations.
To improve forest operations compliance.	MET	Operations in the 2010-2017 plan period achieved an overall in-compliance rate of 95%. Our site inspections confirm that operations were largely compliant.



## **Appendix 3**

### **Compliance with Contractual Obligations**





Licence Condition	Licence Holder Performance
Payment of Forestry Futures and Ontario Crown charges.	<p>Outstanding Charges as of March 31<sup>st</sup>, 2017 were:</p> <p>Forest Futures – \$ 69,742.61 Crown Dues - \$ 28,323.55</p> <p>These charges reflect the timing of stumpage invoice submissions and the accounts are not in arrears.</p>
Wood supply commitments, MOAs, sharing arrangements, special conditions.	<p>Timber on the NF is committed to various receiving mills through Supply Agreements, Commitment Letters, and Letters of Intent issued by the MNRF. Supply commitments are as follows:</p> <ul style="list-style-type: none"> <li>• Domtar Inc – 93,400 m<sup>3</sup> SPF</li> <li>• EACOM Timber Corporation (Nairn Centre)-Sawmill – 19, 800 SPF</li> <li>• Midway Lumber Mills Limited (Thessalon)-Sawmill</li> <li>• 40,000 m<sup>3</sup> PWR</li> <li>• 25,000 m<sup>3</sup> SPF</li> <li>• 6000 m<sup>3</sup> Tolerant Hardwoods</li> </ul> <p>Signed Memorandums of Agreement (MOAs) were in place.</p>
Preparation of FMP, AWS and reports; abiding by the FMP, and all other requirements of the FMPM and CFSA.	All required forest management documents (AWS, ARs and FMPs) met the requirements of the FMPM, FIM and CFSA. The ARs contained errors and omissions (Finding # 3).
Conduct inventories, surveys, tests and studies; provision and collection of information in accordance with FIM.	Inventories, silvicultural assessments and other information required (i.e. values information) for the development of the Phase I and II FMPs were completed as required in conformance with the FIM.
Wasteful practices not to be committed.	No wasteful practices were reported during the audit term
Natural disturbance and salvage SFL conditions must be followed.	Salvage operations were conducted on 840 ha. Conditions for salvage were followed.
Protection of the licence area from pest damage, participation in pest control programs.	No pest management activities or programs were implemented during the audit term.
Withdrawals from licence area.	There were no withdrawals from the license area during the audit term.
Audit Action Plan and Action Plan Status Report.	An Action Plan and the Action Plan Status Report were prepared and submitted in accordance with the IFAPP schedule.

Licence Condition	Licence Holder Performance
Payment of forest renewal charges to Forest Renewal Trust (FRT).	Renewal Charges were fully paid to the Forest Renewal Trust.
Forest Renewal Trust eligible silviculture work.	There were no non-conformities between the Specified Procedures Report and activities observed in the field.
Forest Renewal Trust forest renewal charge analysis.	A renewal charge analysis was completed and approved annually.
Forest Renewal Trust account minimum balance.	The Minimum balance of \$ 2,306,000 was maintained in each year of the audit term.
Silviculture standards and assessment program.	Silviculture standards and assessment programs were implemented. Field assessments included FTG surveys, competition assessments, and the assessment of the effectiveness of silviculture operations (i.e. site preparation).
Aboriginal opportunities.	Indigenous people are represented in woodlands operations working independently (e.g. Sagamok Anishnawbek) or for other OLs. Indigenous people also participated in silvicultural work such as cone collection, tending and nursery stock production. Four FN communities participated on the Phase II FMP Planning Team.
Preparation of compliance plan.	NFI prepared a compliance plan which met the requirements of the Compliance Handbook.
Internal compliance prevention/education program.	NFI has an effective training program for SFL staff and OLs.
Compliance inspections and reporting; compliance with compliance plan.	<p>The number of compliance inspections was appropriate for the level of activity on the Forest. A high in-compliance rate of 99% was achieved during the audit term.</p> <p>FOIP submissions were generally within the required timelines and directions in the compliance plan were generally followed.</p>
SFL forestry operations on mining claims.	There were no disputes with respect to mining claims.
SFL Extension Recommendation.	We provide a recommendation that the SFL be extended for a further five years. A finding

<b>Licence Condition</b>	<b>Licence Holder Performance</b>
	that the SFL has not been extended over its term is provided (Finding # 5).



## **Appendix 4**

### **Audit Process**



## **Appendix 4 Audit Process**

The IFA consisted of the following elements:

**Audit Plan:** An audit plan describing the schedule of audit activities, audit team members, audit participants and the auditing methods was prepared and submitted to the NFI, MNRF Sudbury and Sault Ste. Marie Districts, Northeastern Region MNRF Office, Forestry Futures Trust Committee and the LCC Chair on September 5, 2017.

**Public Notices:** Public participation in the audit was solicited through the placement of a public notice in the Espanola Mid North Monitor and the Elliot Lake Standard (October 12, 2017) and a random mailing to 100 individuals/organizations listed in the FMP mailing list. All Indigenous and Métis communities with an interest in the Forest were contacted by mail to participate and/or express their views. Indigenous community representatives received several follow-up telephone calls and/or e-mails.

All LCC members received letters and follow-up telephone calls with an invitation to participate in the audit process. Harvest contractors were invited by letter to participate in the field audit or provide comments to the audit firm.

**Field Site Selection:** Field sample sites were selected randomly by the Lead Auditor in September 2017. Sites were selected in accordance with the guidance provided in the IFAPP (e.g. operating year, contractor, geography, forest management activity, species treated or renewed, and access) using GIS shapefiles provided by the NFI. The sample site selections were reviewed by NFI, MNRF District Staff and two members of the audit team during a conference call and a GoToMeeting session on September 26, 2017.

**Site Audit:** The audit team spent 5 days in late October and early November 2017 conducting the field audit, document and record reviews and interviews. The field audit was designed to achieve a minimum 10% of the forest management activities (including road construction and maintenance) that occurred during the audit term (see the IFA Field Sampling Intensity on the NF below). We also conducted a sample of the areas invoiced in the "*Forest Renewal Trust Specified Procedures Report*" (SPR) to verify conformity between invoiced and actual activities.

Not every hectare of the area sampled is surveyed, as this is not feasible. Individual sites are initially selected to represent a primary activity (e.g. harvesting, site preparation) but all associated activities that occurred on the site are assessed and reported in the sample table. The audit team also inspected the application of Areas of Concern prescriptions, aggregate pit management and rehabilitation and water crossing installations. The field inspection included site-specific (intensive) and landscape-scale (extensive helicopter) examinations. The Closing Meeting was held on November 3, 2017.

A member of the RMAC participated during one day of the field audit.

**Report:** This report provides a description of the audit process and a discussion of audit findings and conclusions.

Procedures Audited by Risk Category

Principle	Optional – Applicable (#)	Optional – Selected (#)	Optional - % Audited	Mandatory Audited (#) (100% Audited)	Comments
1. Commitment	N/A	N/A	N/A	N/A	The FSC certification met IFAPP Principle 1 criterion.
2. Public Consultation and Aboriginal Involvement	5	0	0	3	
3. Forest Management Planning	45	13	29	38	
4. Plan Assessment & Implementation	3	0	0	9	
5. System Support	N/A	N/A	N/A	N/A	The FSC certification met IFAPP Principle 5 criterion
6. Monitoring	12	8	67	6	
7. Achievement of Management Objectives and Forest Sustainability	0	0	0	15	
8. Contractual Obligations	7	7	100	25	



## IFA Field Sampling Intensity on the Northshore Forest

Activity	Total Area (Ha) / Number	Planned Sample Area (Ha)	Actual Area (Ha) Sampled	Number of Sites Visited	Percent Sampled
Harvest	12,915	1,291	1,541	44	12
Renewal (Natural & Artificial)	6,719	671	1,242	46	18
Site Preparation	4,294	429	446	9	10
Tending	5,944	594	740	16	12
FTG	12,091	1,209	1,226	15	10
Water Crossings (# of Crossings)	95	10		11	10
Aggregate Pits (# of Pits) *	251	25		26	10
SPA Activities	3,386	338	798	21	24

Source: NFI Shapefiles

\*Active Pits

### **Summary of Consultation and Input to the Audit**

#### Public Stakeholders

Public participation in the audit was solicited through the placement of a public notice in the Espanola Mid North Monitor and the Elliot Lake Standard (October 12, 2017). The notice directed interested individuals to contact the audit firm with comments or complete a survey questionnaire on forest management during the audit term on the Arbex website. No responses from the general public were received.

One hundred individuals/organizations on the FMP mailing list received a letter and the survey questionnaire. No response was received.

#### MNRF

MNRF District and Regional staff who attended the field audit and/or had responsibilities on the NF were interviewed. General comments and concerns expressed by staff to the auditors were:

- A concern with respect to the lack of markets for hardwoods.
- A concern with the implications of Domtar's procurement process (quota system) on small operators.
- A concern with areas of un-piled slash.

- A concern that the transformation process had hindered their ability to get into the field over the past 2-3 years due to vacant positions, inexperienced staff and changing staff.
- A concern that the travel distances made it difficult to complete office duties and also get on the Forest.
- A comment that there were good relations with Indigenous communities.

## NFI

NFI staff were interviewed and participated the field audit. General comments made to the audit team included:

- A concern with the lack of markets for hardwoods.
- A concern with the spotty efficacy of aerial tending treatments.
- A concern with viability of the forestry sector and Domtar's procurement process (quota system) vis-a-vis small operators.
- A concern that MNRF staff vacancies and changing/inexperienced staff made it difficult to explain company issues and find pragmatic, realistic solutions to problems, issues, etc.
- A comment that there were good relations with the LCC but there was concern that infrequent meeting dates made it difficult to keep the management process moving forward (e.g. review of amendments).
- Comments on good relations with Indigenous communities.
- A concern that some Indigenous opposition to herbicide use could threaten future silviculture objectives.
- A concern that the implementation of protection measures for SAR should be based on some level of investigation and supporting science.

## LCC Members

Individual members of RMAC received a letter inviting their participation in the audit and eight members were interviewed. A member of the LCC accompanied the auditors for one day of the field audit. General comments to the audit team included:

- They were pleased with the relationship with NFI and MNRF.
- A concern about slash management.
- A concern about the viability of the forestry sector.
- A concern about wood utilization and wasteful practices.
- A concern that the forest was not being renewed and was overcut.
- A comment that the LCC did not meet frequently enough to enable members to keep abreast of forest issues or fully understand the various forest management planning and implementation processes.

## Indigenous Communities

All Indigenous communities with an identified interest in the Forest were contacted by mail, telephone and/or email and asked to express their views on forest management during the audit term and/or participate in the field audit. Four interviews were conducted. Interviewed individuals indicated that the comments provided were their own and not necessarily representative of their general community. Comments expressed to the audit team included:

- Opposition to the use of herbicides on the Forest.
- A desire to see more benefits accruing to Indigenous communities from forest management.
- A perception that past audits had not adequately addressed their concerns.
- A concern that harvest operations may impact future land claims.
- A recognition that a lack of spraying may threaten future Indigenous employment.
- A concern that the FMP should address carbon loading and climate change.
- A comment that old growth forests should not be harvested.
- A comment that Indigenous communities should have control over forest access roads.
- General confusion with respect to the different audits they were asked to get involved with (i.e. IFA, certification audits).

## Harvest Contractors

Contractors operating on the unit were sent a letter inviting their participation in the audit and inviting comment on forest management activities of the MNRF and NFI during the audit term. One response was received which indicated a concern that a 1998 Thinning Share Agreement had not been implemented and a concern with respect to the 2017 deferral of harvest allocations within the Thessalon First Nation Land Claim Area.



## **Appendix 5**

### **List of Acronyms Used**



## List of Acronyms Used

AHA	Available Harvest Area
AOC	Area of Concern
AR	Annual Report
AWS	Annual Work Schedule
B.Sc.F.	Bachelor of Science in Forestry
CFSA	Crown Forest Sustainability Act
eFRI	Enhanced Forest Resource Inventory
FFTC	Forestry Futures Trust Committee
FMP	Forest Management Plan
FMPM	Forest Management Planning Manual
FN	First Nation
FOIP	Forest Operation Inspection Program
FRI	Forest Resource Inventory
FRT	Forest Renewal Trust
FSC	Forest Stewardship Council
FTG	Free-to-Grow
FU	Forest Unit
Ha	Hectares
IFA	Independent Forest Audit
IFAPP	Independent Forest Audit Process and Protocol
KM	Kilometer
LCC	Local Citizens Committee
LTMD	Long Term Management Direction
m <sup>3</sup>	Cubic Metres
MOA	Memorandum of Agreement

MNRF	Ministry of Natural Resources and Forestry
NF	Northshore Forest
NFI	Northshore Forest Inc.
NDPEG	Natural Disturbance Pattern Emulation Guide
NESMA	Northeast Seed Management Association
RMAC	Resource Management Advisory Committee
OL	Overlapping Licence
R.P.F.	Registered Professional Forester
RSA	Resource Stewardship Agreement
SAR	Species at Risk
SEM	Silvicultural Effectiveness Monitoring
SFL	Sustainable Forestry Licence
SFMM	Sustainable Forest Management Model
SGR	Silvicultural Ground Rule
SIP	Site Preparation
SPF	Spruce Pine Fir
SPR	Specified Procedures Report
SSM	Sault Ste. Marie
STP	Silvicultural Treatment Package
VS	Versus



## **Appendix 6**

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



## Appendix 6

### Audit Team Members and Qualifications

Name	Role	Responsibilities	Credentials
<p><b>Mr. Bruce Byford R.P.F.</b> President Arbex Forest Resource Consultants Ltd.</p>	<p>Lead Auditor Forest Management &amp; Silviculture Auditor</p>	<p>Audit Management &amp; coordination Liaison with MNRF Review documentation related to forest management planning and review and inspect silviculture practices Determination of the sustainability component.</p>	<p>B.Sc.F. ISO 14001 Lead Auditor Training. FSC Assessor Training. 38 years of consulting experience in Ontario in forest management planning, operations and resource inventory. Previous work on 37 IFA audits with lead auditor responsibility on all IFAs. 27 FSC certification assessments with lead audit responsibilities on 7.</p>
<p><b>Mr. Al Stewart</b> Arbex Senior Associate</p>	<p>First Nations &amp; LCC Participation in Forest Management Process Auditor Forest Compliance</p>	<p>Review &amp; inspect AOC documentation &amp; practices. Review of operational compliance. First Nations consultation.</p>	<p>B.Sc. (Agr) ISO 14001 Lead Auditor Training. FSC assessor training. 47 years of experience in natural resource management planning, field operations, policy development, auditing and working with First Nation communities. Previous work experience on 37 IFA audits.</p>
<p><b>Mr. Trevor Isherwood R.P.F.</b> Arbex Senior Associate</p>	<p>Silviculture, Forest Operations and Contractual Compliance Auditor</p>	<p>Review and inspect silvicultural practices and related documentation. Review and inspect documents related to contractual compliance.</p>	<p>B.Sc.F. Former General Manager of an BSFL. 47 years of experience in forest management and operations. Previous work experience on 34 IFA audits.</p>