

**Lakehead Forest**  
**Independent Forest Audit**  
**2014 – 2021**

**Arbex Forest Resource Consultants Ltd.**

**November, 2021**

© Queen's Printer for Ontario 2021

Cette publication hautement spécialisée (Independent Forest Audit Report – Lakehead Forest 2014-2021) n'est disponible qu'en anglais conformément au Règlement 67192, selon lequel il n'est pas obligatoire de la traduire en vertu de la Loi sur les services en français. Pour obtenir des renseignements en français, veuillez communiquer avec le Ministère du Développement du Nord, des Mines, des Richesses naturelles et des Forêts au [NRISC@ontario.ca](mailto:NRISC@ontario.ca)

## TABLE OF CONTENTS

1.0	Executive Summary.....	i
2.0	Table of Findings.....	iii
3.0	Introduction.....	1
3.1	Audit Process.....	1
3.2	Management Unit Description.....	2
4.0	Audit Findings.....	6
4.1	Commitment .....	6
4.2	Public Consultation and First Nations and Métis Community Involvement and Consultation.....	7
4.3	Forest Management Planning.....	9
4.4	Plan Assessment and Implementation.....	13
4.5	Systems Support .....	20
4.6	Monitoring .....	20
4.7	Achievement of Management Objectives & Forest Sustainability .....	24
4.8	Contractual Obligations .....	25
4.9	Concluding Statement .....	26

### List of Tables

Table 1	Findings.....	iii
Table 2	Area of Crown Managed Land by Land Type (Ha).....	4
Table 3	Actual vs. Planned Harvest Area (Ha) by Forest Unit (2014-2021) .....	14
Table 4	Area (Ha) of Actual vs. Planned Site Preparation (2014-2021) .....	17
Table 5	Area (Ha) of Actual vs. Planned Renewal Treatments (2014-2021).....	18
Table 6	Area (Ha) of Actual vs. Planned Tending Treatments (2014-2021).....	19

### List of Figures

Figure 1	Location of the Lakehead Forest.....	3
Figure 2	Forest Unit Distribution (%) within the Available Crown Managed Forest .....	5

### List of Appendices

Appendix 1	- Findings
Appendix 2	- Management Objectives Table
Appendix 3	- Compliance with Contractual Obligations
Appendix 4	- Audit Process
Appendix 5	- List of Acronyms Used

Appendix 6 - Audit Team Members and Qualifications

## 1.0 Executive Summary

This report presents the findings of an Independent Forest Audit of the Lakehead Forest conducted by Arbex Forest Resource Consultants Ltd. The Lakehead Forest is managed by Greenmantle Forest Inc. under Sustainable Forest License # 542460. The Forest lies within the Ministry of Northern Development, Mines, Natural Resources and Forestry Thunder Bay and Nipigon Districts in the Northwest Region. The Thunder Bay District has lead management responsibilities for the Forest.

The audit utilized a risk-based approach based on the 2021 Independent Forest Audit Process and Protocol. The period of the Independent Forest Audit is April 1, 2014, to March 31, 2021. The audit scope covers the implementation of Phase II of the 2007-2017 Forest Management Plan (years 8, 9,10), the preparation and implementation of the 2017-2020 Contingency Plan (years 1, 2, and 3), the preparation of the 2020-2030 FMP and the Year 1 implementation of that plan. Audit procedures and criteria are specified in the 2021 Independent Forest Audit Process and Protocol.

Forest Management Plans and related documents were reviewed in relation to relevant provincial legislation, policy guidelines and Forest Management Planning Manual requirements. Audit field site examinations were completed by helicopter and truck in September 2021. Public input to the audit was solicited by public notice in the Thunder Bay Source print and digital media platforms and letter and email correspondence with First Nation communities, Métis organizations and Local Citizens Committee members.

Harvest levels were below planned during the audit period due to poor market conditions for some species and products. The harvest area achieved approximately 54% of planned target. The reduced harvest negatively affected the achievement of planned silviculture targets linked to the harvest area. The inability to achieve planned harvest levels over successive planning terms will have negative implications with respect to achieving the desired future forest condition, plan objectives (e.g., supply of wildlife habitat for certain species, movement towards desired forest disturbance size class frequencies), and the Long-Term Management Direction.

We found the Lakehead Forest to be well-managed. The forest management planning process and the implementation of the Forest Management Plans and Contingency Plan met all legal and regulatory requirements.

We identified three shortcomings associated with the forest management planning process. Due to the late delivery of the Enhanced Forest Resource Inventory and requirements to correct errors and inaccuracies in the product, the preparation of the 2017-2027 Forest Management Plan was delayed, and a 2017-2020 Contingency Plan was required. We found that the Thunder Bay District Office timelines for the review and approval of administrative amendments did not meet FMPM timelines. We are also concerned that District staff only implemented a Silvicultural Effectiveness Monitoring Program during one year of the seven-year audit period.

Harvest challenges related to access to the Black Bay Peninsula have been a recurring theme in previous Independent Forest Audits. Currently as directed by the “*Black Bay Peninsula Enhanced Management Area Strategy*” forest management activities are restricted to the winter months in the Black Bay and the Shesheeb Provincially Significant Wetlands in recognition of the area’s ecological and cultural significance. Harvest contractors have been unwilling to risk stranding wood on the peninsula due to access challenges arising from unpredictable weather and wood markets. It is increasingly uncertain that the 2020 Forest Management Plan and the Enhanced Management Area Strategy objectives related to disturbance and renewal will be fully achieved. Our assessment is that forest management planners must critically evaluate the practicality of scheduling operations in this area.

Operational standards for forestry aggregate pits as outlined in the forest management plans and the Forest Management Planning Manual were not consistently met.

We concluded that an effective silviculture program was implemented, and that Greenmantle had done a credible job managing numerous contractors. License obligations were met. There was no significant environmental damage associated with forest operations including harvest, renewal and water crossing installations.

The audit team concludes that the management of the Lakehead Forest was generally in compliance with the legislation, regulations and policies that were in effect during the period covered by the audit, and the Forest was managed in compliance with the terms and conditions of the Sustainable Forest Licence held by Greenmantle Forest Inc. #542460. The forest is being managed consistently with the principles of sustainable forest management, as assessed through the Independent Forest Audit Process and Protocol

*Bruce Byford*

Bruce Byford R.P.F.  
Lead Auditor



## 2.0 Table of Findings

Table 1 Findings

<b>Concluding Statement:</b>
<p>The audit team concludes that the management of the Lakehead 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 # 542460 held by Greenmantle Forest Inc. The forest is being managed consistently with the principles of sustainable forest management, as assessed through the Independent Forest Audit Process and Protocol.</p>
<b>Findings:</b>
<p><b>Finding # 1:</b></p> <p>The production process for the development of the Enhanced Forest Resource Inventory delayed the production of the forest management plan and resulted in additional time and expense to Greenmantle Forest Inc. and the Ministry of Northern Development, Mines, Natural Resources and Forestry.</p>
<p><b>Finding # 2:</b></p> <p>In the absence of reliable access, forestry and land use management objectives related to disturbance and renewal will not be fully achieved on the Black Bay Peninsula.</p>
<p><b>Finding # 3:</b></p> <p>Forest Management Plan Administrative Amendments were not consistently approved by Ministry of Northern Development, Mines, Natural Resources and Forestry District Office in accordance with the timeline in the Forest Management Planning Manual.</p>
<p><b>Finding # 4:</b></p> <p>The Ministry of Northern Development, Mines, Natural Resources and Forestry District and Regional Office did not fully implement a Silviculture Effectiveness Monitoring program.</p>

**Finding # 5:**

The operational standards for forestry aggregate pits identified in the forest management plans were not consistently met.



### 3.0 Introduction

This report presents the findings of the Independent Forest Audit (IFA) of the Lakehead Forest (LF or the Forest) conducted by Arbex Forest Resource Consultants Ltd. for the period of April 1, 2014 to March 31, 2021. The audit utilized a risk-based approach based on the 2021 Independent Forest Audit Process and Protocol (IFAPP).

The audit scope covers the implementation of Phase II of the 2007-2017 Forest Management Plan (FMP) (years 8, 9,10), the preparation and implementation of the 2017-2020 Contingency Plan (CP) (Years 1, 2, and 3), the preparation of the 2020-2030 FMP and the Year 1 implementation of that plan.

The LF is managed by Greenmantle Forest Inc. (GFI or the SFL holder) under the terms and conditions of Sustainable Forest License (SFL) # 542460. At the time of the audit GFI was owned by 26 shareholders (24 independent logging companies and two First Nations (Fort William First Nation and Red Rock Indian Band)). The Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF) administers the Forest from its District Offices in Thunder Bay<sup>1</sup> and Nipigon. One Local Citizens Committee (LCC), based in Thunder Bay, is associated with the Forest. The Forest was certified by a third-party forest management certification organization (Sustainable Forestry Initiative (SFI)) until August 2017<sup>2</sup>.

The 2014 IFA audit made sixteen recommendations for improvement to the forest management program and recommended that the SFL term be extended for an additional five years. The required Action Plan and Action Plan Status Report were completed within the required timelines. Our assessment is that the recommendations were appropriately addressed. As required by the FMPM those audit results were considered in the development of the 2020 FMP and other forest management functions.

#### 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 ten to twelve years by an independent auditor. The 2021 Independent Forest Audit Process and Protocol (IFAPP) provides guidance in meeting the requirements of Ontario Regulation 319/20 made under the CFSA. The scope of the audit is determined by the NDMNRF in specifying mandatory audit criteria (Appendix A of the IFAPP). The audit scope is finalized by the auditors 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) and approved by the NDMNRF with any subsequent changes requiring agreement between the FFTC, NDMNRF and the Lead Auditor.

The procedures and criteria for the delivery of the IFA are specified in the 2021 IFAPP. The audit assesses licence holder and NDMNRF (the auditees) compliance with the Forest Management

---

<sup>1</sup> The NDMNRF Thunder Bay District has lead management responsibilities.

<sup>2</sup> The Forest was certified by the Sustainable Forestry Initiative (SFI) until August 2017.

Planning Manual (FMPM) and the Crown Forest Sustainability Act (CFSA) in conducting forest management planning, operations, monitoring and reporting activities. The audit assesses the effectiveness of forest management activities in meeting the objectives set out in the FMP. The audit further reviews whether results in the field are comparable with planned results and 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 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.

Details on the audit processes are provided in Appendix 4. Arbex Forest Resource Consultants Ltd. conducted the IFA field audit in September 2021, utilizing a four-person team. Profiles of the audit team members, their qualifications and responsibilities are provided in Appendix 6.

### **3.2 Management Unit Description**

The LF surrounds the City of Thunder Bay and encompasses several organized and unorganized townships. The Forest is bordered by the Dog River-Matawin, Black Spruce and Lake Nipigon Forests to the north and east while its southern boundary follows the shoreline of Lake Superior and the international border with the United States. The western boundary of the unit abuts Quetico Provincial Park (Figure 1).

The LF can be characterized as fragmented. It is readily accessible via a long-established network of municipal and provincial highways and a network of primary and branch industrial roads. The Black Bay Peninsula (south of Cox Lake) remains relatively inaccessible.

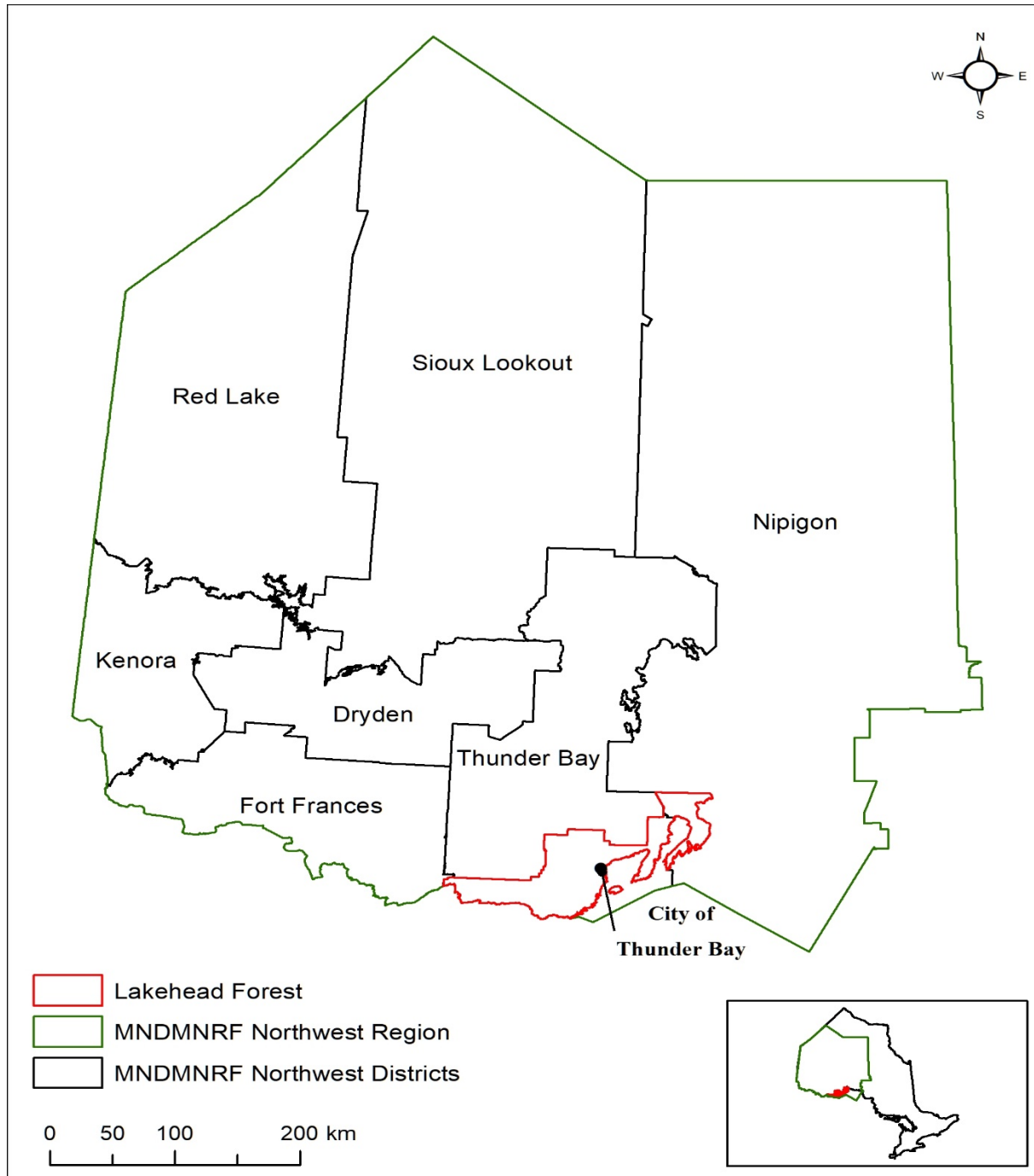


Figure 1 Location of the Lakehead Forest.

The Forest contains 395,277 hectares (Ha) of Crown Managed Land of which 82% is classified as productive forest land available for timber production (Table 2). Patent land comprises approximately 38% of the land base.

Table 2 Area of Crown Managed Land by Land Type (Ha)

Managed Crown Land Type	Area (Ha)
Non-Forested	41,765
Non-Productive Forest	21,372
Protection Forest <sup>3</sup>	9,722
Production Forest <sup>4</sup>	322,418
Forest Stands	291,572
Recent Disturbance	
Below Regeneration Standards <sup>5</sup>	30,846
<b>Total Productive Forest<sup>6</sup></b>	<b>331,857</b>
<b>Total Forested:</b>	<b>353,512</b>
<b>Total Crown Managed:</b>	<b>395,277</b>

Source: FMP 1 2020 FMP

Larger more contiguous areas of Crown Land available for forestry operations are situated in the southwestern portion of the Forest; along the northern boundary, northeast of the towns of Dorion and Nipigon; and on the Black Bay Peninsula. It is in these larger contiguous areas where the majority of forest operations are planned as these areas are more conducive to achieving forest management objectives related to forest structure, composition and pattern.

The Forest falls within two Forest Regions. Most of the Forest, in the central and western/southwestern portions of the limits fall within the Quetico Section of the Great Lakes - St. Lawrence Forest Region, while the northeastern portion of the Forest falls within the Superior Section of the Boreal Forest Region. Functionally, the Forest is managed as Boreal Forest. The long history of logging operations has resulted in a transition from predominantly conifer to a forest dominated by mixedwood associations of conifer and hardwood. The major native tree species present include white, red and jack pine, black and white spruce, white cedar, balsam fir,

<sup>3</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>4</sup> Production forest is land at various stages of growth, with no obvious physical limitations on the ability to practice forest management.

<sup>5</sup> Below Regeneration Standards refers to the area where regeneration treatments have been applied but the new forest stands have yet to meet free-to-grow standards

<sup>6</sup> Islands are excluded.

tamarack, trembling aspen, white birch, balsam poplar, black ash and maple. Figure 2 presents the proportional representation of forest units in the Crown managed forest.

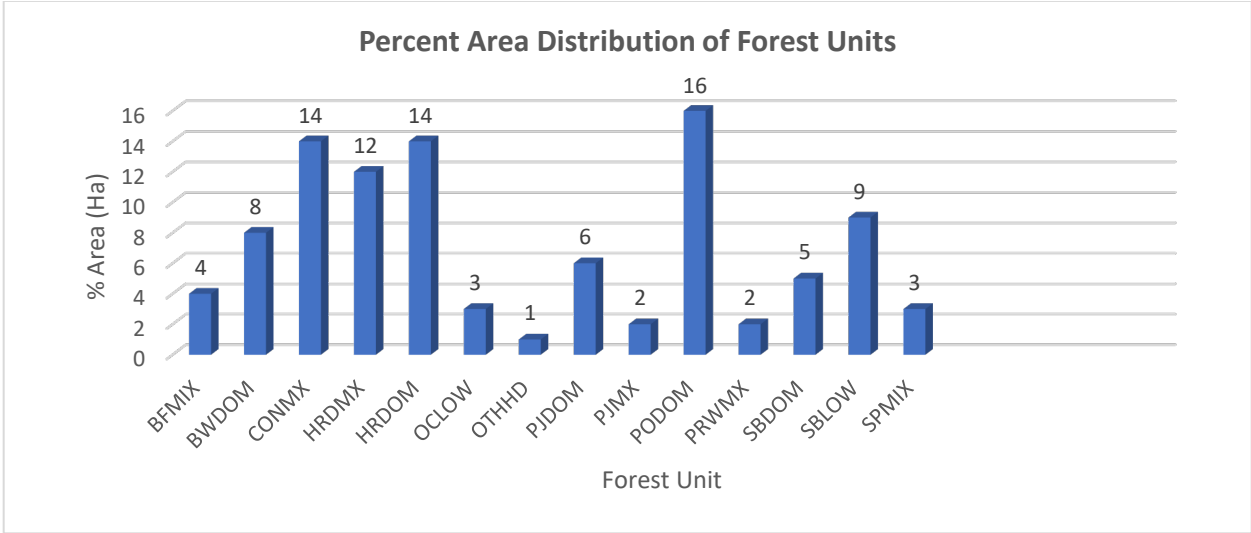


Figure 2 Forest Unit Distribution (%)<sup>7</sup> within the Available Crown Managed Forest<sup>8</sup>

Wood from the LF is made available to forest product companies through supply agreements and open market business to business arrangements with GFI. The 2020 FMP identifies supply agreements with Resolute FP Canada Inc., Resolute Growth Canada Inc., and 366956 Ontario Limited.

The 2020 FMP lists approximately fifty Species at Risk (SAR) that are known, or thought to occur, in the Forest. Several protected areas host multiple species of flora and fauna. These include 14 Areas of Natural and Scientific Interest (ANSI) and 19 provincially significant wetlands.

The Forest is extensively used for recreation by both local people and tourists and supports approximately 16 resource-based tourism operations. No Resource Stewardship Agreements (RSAs) were signed with the operators (Section 4.3)

Several First Nation (FN) and Métis organizations are located within or adjacent to the Forest or have an interest in the Forest. These include the Fort William First Nation (FN), Red Sky Métis Independent Nation, Red Rock Indian Band, the Métis Nation of Ontario and the Seine River First Nation. GFI also regularly contacts the Sand Point FN, Lac la Croix FN, Pays Plat FN and the Seine River FN.

<sup>7</sup> Does not equal 100% due to rounding.  
<sup>8</sup> Forest units are as follows BFMIX=Balsam Fir Mix, BWDOM=White Birch Dominant, CONMX=Conifer Hardwood, HRDMX=Hardwood Mix, HRDOM=Hardwood Dominant, OCLOW=Other Conifer Lowland, PJDOM=Jack Pine Dominant, PRWMIX=Red and White Pine Mix, SBDOM=Black Spruce Dominant, SBLOW=Black Spruce Lowland, SBMIX=Black Spruce Dominant Mix. Some forest units were further redefined in the 2020 FMP.

The management of two Enhanced Management Areas (EMAs); the Black Bay Peninsula (BBP) and the Amethyst Highlands (AHEMA) had significant implications for forest management planning during the audit period.

### Black Bay Peninsula Enhanced Management Area

The BBP Enhanced Management Area is situated between Thunder Bay and Nipigon Bay on the north shore of Lake Superior. This is a remote and relatively roadless peninsula with significant moose habitat, Provincially Significant Wetlands<sup>9</sup> (PSW), endangered species habitat and cultural heritage values. Management of this area is guided by the “*Black Bay Peninsula Enhanced Management Area Strategy*” (BBP EMAS). It is important to note that this strategy restricts forest management access to the winter season within the Black Bay and Shesheeb PSWs.

### Amethyst Highlands Enhanced Management Area (AHEMA)

The AHEMA is located about 50 kilometres northeast of the city of Thunder Bay, and takes in parts of the Municipality of Shuniah, the Township of Dorion and unorganized territory. The primary land use intent of the AHEMA is to provide for the sustainability of the brook trout resource<sup>10</sup> and to maintain the remoteness of the area. The total area of the AHEMA is approximately 9,100 hectares which includes 16 brook trout lakes<sup>8</sup>.

Other land uses and activities may occur in a manner that is consistent with the primary intent, and where permitted, by specific land use policies. Harvest is considered where activities are consistent with the land use intent and specific land use policies of the AHEMA. Concerns with respect to harvest allocations within the AHEMA resulted in a harvest deferral of approximately 400-500 ha in the 2020 FMP planning process.

## **4.0 Audit Findings**

### **4.1 Commitment**

The LF was certified as sustainably managed by the Sustainable Forestry Initiative (SFI) until August 2017. Greenmantle Inc.'s commitment to sustainable forestry is reflected in its vision, mission and policy statements as well as its day-to-day operations. The Board of Directors formally reaffirmed that commitment in March 2021. Mission and vision statements cover all aspects of sustainable forestry (e.g., soil, water, flora, fauna, etc.). GFI also supports the use of Qualified Logging Professionals (a voluntary professional standard for harvest contractors).

GFI has a comprehensive Sustainable Forest Management System (SFMS) that includes a full suite of operating procedures, and associated monitoring/inspection forms. The company was part of a broad industry initiative that developed a best management guide for forest operations. A

---

<sup>9</sup> Harvest, renewal and tending operations are not permitted within a PSW unless an Environmental Impact Study and subsequent review and approval by MNDMNR demonstrates no, or minimal loss of natural features or ecological functions.

<sup>10</sup> The AHEMA contains approximately 40% of the naturally occurring brook trout lakes in the Thunder Bay District.

Sustainable Forest Management System field booklet is available to all employees and contractors as well as associated training.

NDMNRF vision and mission statements are widely distributed on its websites and postings at its various offices. Thunder Bay District staff have completed training appropriate to their roles (e.g., planning, compliance).

It is our finding that the criterion of the IFAPP Commitment Principal was met.

#### **4.2 Public Consultation and First Nations and Métis Community Involvement and Consultation**

FMPM public consultation requirements for the development of the Contingency Plan (CP), the 2020-2030 FMP, Annual Work Schedules (AWSs), and Plan Amendments for the audit period were met. Our interviews and review of records indicated that all stakeholders were made aware of the planning process and opportunities were provided to the LFLCC, FNs, Métis and the broader public for input and engagement in the planning processes for the CP and the 2020 FMP. Comments received were documented in the Supplementary Documentation and appropriately addressed. Public input with respect to values protection was also documented, verified and where appropriate, added to values maps.

No requests for Issue Resolution were received during the development of the CP or FMP.

##### First Nations and Métis Communities

The FMPM has specific requirements for the involvement and consultation with Indigenous communities located in and adjacent to the forest management unit. An auditor made initial contact with all First Nation Chiefs, Métis Presidents and designates identified by the NDMNRF. There were follow-up telephone calls to confirm interest and identify designated representatives.

We found that communications by GFI and the NDMNRF with First Nations and Métis communities were well documented. All required notifications related to the 2017-2020 Contingency FMP and the 2020-2030 FMP development were sent in accordance with FMPM content requirements and timelines. No formal customized consultations were requested for the Lakehead Forest 2020-2030 FMP by FNs or Métis organizations.

NDMNRF invited all communities to designate a representative for the planning team. Four communities (Fort William FN, Red Rock Indian Band, Red Sky Métis Independent Nation and Métis Nation of Ontario) designated a representative to the 2020 FMP Planning team. Two communities (Red Rock Indian Band, Métis Nation of Ontario) had a representative on the 2017 Planning team. We note that FMP-related training was offered to all Planning Team members at various stages of the planning process and that several First Nation and Métis representatives participated in these training sessions.

Background Information Reports and demographic profiles were updated and utilized in FMP development. Throughout the planning process, all communities with planning team representatives were sent invitations to each planning team meeting and were provided copies of

meeting minutes and any additional information related to these meetings regardless of attendance.

Regardless of their participation, each First Nation and Métis community was kept apprised of progress throughout plan development with updates on forest management planning.

We note that two of the GFI shareholders are companies held by the Fort William FN and Red Rock Indian Band. Interviews with GFI staff and FN and Métis representatives indicated that several contractors working in the Lakehead Forest had employees with Indigenous backgrounds.

Our assessment is that all the FMPM requirements for First Nation and Métis community consultation were met.

### Local Citizens Advisory Committee (LCC)

The Lakehead Forest Local Citizens Committee (LFLCC) is a standing committee with members appointed by the NDMNRF District Manager. The LFLCC has responsibilities for the LF. The Committee has approximately 15-18 members. Committee members are selected based on their representation of various groups associated with the Forest. There is comprehensive representation ranging across a wide variety of interest groups (e.g., trappers, anglers, hunters, naturalists, cottage owners, recreationalists, etc.). The Committee has a mix of experienced members (i.e., ten plus years of experience) as well as relatively new members (e.g., student representatives). There was a First Nation representative during the development of the 2017 FMP. While the focus is on forestry, the Committee, is involved with a variety of natural resource topics (e.g., moose, fisheries, etc.). During the audit period the LFLCC was involved with the development of the 2017 Contingency FMP and the 2020 FMP. The Committee's Terms of Reference was updated and an LCC member was on the Planning Team for each plan. A review of the LFLCC minutes indicated there were regularly scheduled meetings, comprehensive agendas, minutes, and usually a quorum in attendance.

The Committee was actively involved in all aspects of the implementation of the 2007-2017 FMP during the audit period. Minutes of meetings show on-going involvement providing advice and comment on the full range of plan implementation activities (e.g., Annual Work Schedules, compliance activities, etc.).

For the development of 2017-2020 Contingency FMP and the 2020-2030 FMP, the Committee participated on Planning teams and members participated in the public consultation process (i.e., Stages Two through Five). The minutes show regular updates were provided to the full Committee. As required, the Committee members brought forward the views of their representative groups. Positions were discussed and generally, a level of compromise was attained. For both the 2017 Contingency and 2020 FMPs the LFLCC provided statements indicating "...*general agreement with the contents* ..." of both plans.

The LF is extensively used by the public. It is well accessed and includes a complex network of private holdings. Most forest activities are readily observable and potential issues are quickly identified. Our interviews with committee members, GFI and NDMNRF staff indicate that the LFLCC is a valuable and effective partner in understanding and responding to public issues.



Our interviews with members also indicated that they were satisfied with the efforts by GFI and the NDMNRF to respond to questions, provide information and seek their views on forest management activities. Auditor interviews and a LFLCC self-evaluation indicate the members felt their time on the committee was well spent, and that they provided value to the forest management planning and implementation processes. This assessment was shared by NDMNRF and GFI staff.

We note that for approximately the last three years the LFLCC Chairperson has been a senior staff member of GFI. We were informed that this circumstance was attributed to an unwillingness amongst other LCC members to assume the Chair position, and that to facilitate the LCC, the forestry industry representative assumed the role with some reservation. This was to be a short-term engagement, and measures were appropriately implemented to mitigate the potential for conflicts of interest. Our interviews indicated that the LCC membership is satisfied with the functioning of the committee, and the leadership of the Chair. We note also that the FMPM and the LFLCC Terms of Reference allow for industry participation and membership on the committee. However, our opinion is that with senior SFL staff in the leadership role of the committee mandated to “*provide advice to the NDMNRF...on “issues resolution decisions and plan development and implementation”*”, there is potential for a perceived conflict of interest by the public. This could undermine the credibility of the LCC, as an impartial advisory group, reporting to the NDMNRF District Manager. We do not provide a finding, as the collection of evidence on public opinion, with respect to the functioning of the LCC Chairperson, is not within the scope of this IFA.

Despite the foregoing, our assessment is that the LFLCC is effective and provides significant benefits to the forest management process.

### **4.3 Forest Management Planning**

Delays in the receipt of a finalized “planning-ready” Enhanced Forest Resource Inventory (eFRI) required for the development of the 2017-2027 Phase I FMP resulted in a requirement for the development of a three-year Contingency Plan (CP) (**Finding # 1**). All FMPM<sup>11</sup> requirements for the development of the CP were met; including the preparation of a Contingency Planning Proposal<sup>12</sup>. Opportunities were provided to LFLCC, the public and FN and Métis communities to review and comment on the proposal. There were no comments from First Nations or Métis communities.

The CP was based on the 2007-2017 Phase I FMP Long Term Management Direction (LTMD). Proposed forest management operations were consistent with the LTMD and were purposely directed to non-contentious areas of the Forest. Areas for harvest operations were appropriately selected from stands identified in previous plans. Operational prescriptions were prepared in accordance with the *Forest Management Guide for Conservation of Biodiversity at the Stand and*

---

<sup>11</sup> 2017 Forest Management Planning Manual

<sup>12</sup> The CP was required to ensure that sustainable forest management operations could continue between the expiry of the of the 2017 FMP and the implementation of the 2020 FMP on April 1, 2020.

*Site Scales* (Stand and Site Guide). As required by the FMPM, the CP proposal was approved by the NDMNRF Regional Director.

Planning challenges for the development of the 2020 FMP included:

- the production of the base model inventory and the LTMD,
- concerns over harvesting in the Amethyst Highlands Enhanced Management Area<sup>13</sup>,
- concerns with respect to harvests adjacent to cottage/recreation areas<sup>14</sup>.

We found that planning and public consultation requirements for the development of the 2020-2030 FMP were met. Each FN and Métis organization were afforded an opportunity to participate on the Planning team.<sup>15</sup> Progress updates were provided to communities throughout plan development by the NDMNRF District. The LFLCC was engaged and provided input into the planning process. As required by the FMPM, all progress checkpoints (e.g., planning inventory, management objectives checkpoint, LTMD checkpoint) were confirmed and documented in the Analysis Package. Despite the late submission of the eFRI, the plan was completed on schedule in part due to the provision of additional staff and shortened review periods implemented by NDMNRF staff.

In the development of the 2020 FMP two types of management zones were identified: strategic and operational. Strategic Management Zones (SMZs) identified areas with strategic objectives (e.g., moose emphasis areas<sup>16</sup> (MEAs)) or areas with distinct ecological characteristics. Operational zones represented areas with distinct operational constraints. We concur with this approach as it set sustainable operational limits for the Available Harvest Area (AHA) within each zone to control the level of harvest both within the sub-unit and across the Forest

We note that the development of the Long-Term Management Direction (LTMD) was based on the modelling of the Forest as two sub-units (Mainland and Black Bay Peninsula (BBP)) as directed in the BBP Enhanced Management Area Strategy (i.e., winter harvest operations only). Objectives and operations on the Mainland sub-unit were identified and assessed per approved NDMNRF guidelines and manuals. The Available Harvest Area (AHA) of 41,419 ha, is distributed as 38,272 and 3,147 hectares for the Mainland and BBP sub-units respectively. Approximately 858 ha was classified as “bridging harvest” in accordance with FMPM direction.

---

<sup>13</sup>Decisions with respect to harvesting in the AHEMA were not resolved during the planning process for the 2020 FMP and as a result 9,100 ha were deferred from harvest in that plan. The deferral did not have a significant impact on wood supply for the 2020 FMP.

<sup>14</sup> Scheduling harvesting adjacent to recreational areas and cottages remains an on-going challenge for forest management planning due to the fragmented nature of the unit (patent land interspersed within Crown Managed Land). We concluded that the Planning Team satisfactorily accommodated harvest-related concerns as evidenced by the lack of requests for issue resolution or Independent Environmental Assessments (IEA) arising during the planning process.

<sup>15</sup> The following communities participated: Fort William First Nation, Red Rock Indian Band, Métis Nation of Ontario and the Red Sky Métis Independent Nation.

<sup>16</sup> MEAs are areas having a high probability of providing habitat for moose over a 60-year period.

To support the development of post-harvest succession rules, silvicultural ground rules (SGRs)<sup>17</sup> and yield curves, an analysis of past performance was conducted in accordance with the NDMNRF Direction for Using Past Silvicultural Performance to Develop FMP Assumptions for Post-harvest Succession (Draft, January 2018). SGRs were also developed using a combination of silvicultural guides, technical information, scientific publications, and local field experience.

Yield curves developed for the 2007 FMP were used to guide the development of yield curves for the 2020 FMP as the curves were considered generally robust. It is noteworthy that, rather than basing the yield curves on the silvicultural intensity, the curves were based on the outcome of treatments projected from inventory information, free-to-grow surveys and professional knowledge. Average planned merchantable volumes were in line with those in the 2007 FMP (108m<sup>3</sup>/ha vs 103m<sup>3</sup>/ha). We concluded that modeling assumptions were reasonable.

We conclude that the LTMD achieved a satisfactory balance of all objectives and indicators, was consistent with legislation and policy, appropriately considered direction in the forest management guides and provided for forest sustainability.

Planned operations met the intent of the LTMD. Operational planning considered the most current values information, relevant guidelines (e.g., Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales) and public input.

Most of the AHA is readily accessible. However, access to the BBP is limited to the winter within PSWs in accordance with the BBP EMAS. The FMP (Supplementary Documentation 6.1.9) provides direction on Primary, Branch and Operational roads that included an environmental analysis of alternate primary road corridors, use management strategies and access provisions/restrictions. We conclude that access planning was well done and met FMPM, AWS and guideline requirements.

Values maps were updated during the planning process and NDMNRF staff indicated that there was adequate funding to collect values information. GFI participates in monitoring and reporting SAR by requiring all staff and operators to report sightings of SAR and any associated habitat features (e.g., nests). Public input with respect to values protection was also documented, verified and where appropriate added to values maps. Area of Concern (AOC) prescriptions conformed to NDMNRF direction, and prescription documentation included a section for an analysis of alternatives to protect the value when required.

We note that the FMP was not designated as a Section 18 *Overall Benefit Instrument under the Endangered Species Act (ESA)* and was prepared under the regulatory exemption for Crown forestry (O.Reg.242/08 s.22.2.). As such, a summary of monitoring for SAR, and the Supplementary Documentation required by Part B, Section 4.7.5 of the 2017 FMPM, was not required. While forest operations are exempt from the permitting process under the ESA, there is still a requirement for SAR to be protected. Protection is provided through AOC prescriptions and ensuring implementation of those prescriptions during operations (as required in Ontario

---

<sup>17</sup> SGRs are defined as “A SGR identifies the current forest condition, silvicultural system, future forest condition at maturity, development information, management standards, regeneration standards, and acceptable alternative harvest, renewal and tending treatments for a specific forest unit-ecosite combination.

Regulation 242/08 Section 22.1.)<sup>18</sup>. For the plan term, there are no requirements or conditions related to SAR that required implementation of a monitoring program. SAR were appropriately considered during planning. Habitat descriptions, the application of guidelines and operational prescriptions are provided in the FMP text. The 2020 FMP also identifies a portion of the Forest that coincides with the discontinuous distribution of caribou habitat. While the LF is not broadly managed for caribou habitat, the FMP notes that an increase in the amount of mature and old conifer landscape classes may provide suitable habitat for temporary caribou occupancy or movement. The collective application of the Boreal Landscape Guide (BLG), Caribou Protection Plan (CPP), Endangered Species Act (ESA) and Stand and Site Guide provided direction for operations within this zone.

AOC prescriptions for identified values were prepared based on the best information available (as provided by the NDMNRF) land use direction (e.g., the Crown Land Use Policy Atlas and the BBP EMAS) and new information provided by stakeholders. For the development of the 2020 FMP coarse filter (i.e., current forest condition) and fine filter (i.e., specific Stand and Site Guide direction) approaches to wildlife assessment and management were applied. Known fish and wildlife values were assessed from NDMNRFs Land Information Ontario (LIO) and Natural Heritage Information Centre (NHIC) systems. There was sufficient funding to complete required wildlife surveys and interviews with Planning Team members indicated that there was sufficient information for FMP development.

A combination of standard AOC operational prescriptions (e.g., roads, landings, aggregate pits, etc.) are contained in the FMP Supplemental Documents. Conditions on Regular Operations (CROs) were utilized to deal with new information discovered during forest operations outside of established AOCs. A Conservation Concern Species (CCS) ranking designation was also utilized to record a rare species “occurrence”, providing an additional layer of information and, if required, protection.

The utilization of a combination of AOC and CRO designations and CCS information provided a significant level of protection for SAR. The LCC, First Nation and Métis Planning Team members for the 2017 CP and 2020 FMP were involved in the review of the FMP flora and fauna protection measures.

Moose habitat was addressed through a landscape scale coarse filter approach with seven Moose Emphasis Areas<sup>19</sup> (MEAs) identified in the planning process. Consistent with Ontario’s Cervid Ecological Framework appropriate guidelines for the establishment, management and maintenance of moose habitat were adopted.

Tourism values were protected through the application of the Management Guideline for Forestry and Resource-Based Tourism and the development and implementation of AOC prescriptions. All sixteen resource-based tourism operators were contacted by GFI to determine if there was an

---

<sup>18</sup> Where a species at risk’s habitat feature, such as a nest, den or hibernacula is encountered during implementation of forest operations and no applicable AOC for the species is documented in the FMP, forest operations are to be suspended in the area of the site-specific feature, application is to be made to MNDMNR for an AOC to be amended into the FMP implemented as required in Ontario Regulation 242/08 Section 22.1.

<sup>19</sup> MEAs are areas having a high probability of providing moose habitat over the short and medium term (60 years).

interest in negotiating a Resource Stewardship Agreement (RSA). No RSAs were requested as values were adequately protected by AOCs.

Over the seven-year audit period there were fifty amendments. All amendments were prepared in accordance with the FMPM and the Forest Information Manual (FIM), are consistent with the FMP, and were appropriately documented. There were significant delays in the approval of plan amendments. Interviews with NDMNRF staff indicated that amendment submissions often had a broad focus requiring additional consultation or information. Staff changes and turnovers also contributed to the extended review and approval periods. Nevertheless, there is a requirement to improve the timelines for the review and approval of amendments (**Finding # 3**).

The content of AWSs conformed to FMPM requirements and the proposed forest management activities were consistent with those outlined in the FMP.

We conclude that forest management planning was in accordance with the requirements of the FMPM and that the proposed FMP objectives and targets are consistent with the achievement of forest sustainability.

#### **4.4 Plan Assessment and Implementation**

Our field assessments confirmed that Silvicultural Ground Rules<sup>14</sup> (SGRs), Silvicultural Treatment Packages<sup>15</sup> (STPs) and Forest Operations Prescriptions (FOPs) were appropriate for the forest cover types and site conditions.

##### Harvest

All harvesting utilized the clearcut silvicultural system. Harvest level achievement was negatively affected by poor market conditions (for some products), mill closures and volume reductions at some local receiving mills.

The lower than planned harvest levels resulted in the underachievement of planned targets for post-harvest silvicultural treatments. In areas not on the BBP, species size, low volumes and the occurrence of lowland spruce in association with unmarketable white cedar, limited harvest opportunities. Progress toward the harvest target for the lowland spruce forest unit was also hampered by access constraints to the BBP<sup>20</sup>.

The lack of reliable access to the BBP and the resultant lower than planned harvest on the peninsula has been noted in numerous previous IFA reports. Currently access via winter road is not reliable and Forest Resource Licence (FRL) holders are unwilling to risk investing in activities which could result in stranded wood. In the absence of market stability and improved access the FMP and BBP EMAS objectives (related to disturbance and renewal) will not be achieved (**Finding # 2**). Between 2014 and 2021, 295 ha were harvested on the BBP<sup>21</sup>. The two most

---

<sup>20</sup> Markets for spruce on the BBP were not seen as secure enough for FRLs to risk harvest operations under the conditions imposed on operations on the peninsula (i.e., winter access weather challenges).

<sup>21</sup> Approximately 181 ha south of 5-Mile Creek and 114 hectares harvested north of 5-Mile Creek within the EMA.

recent FMPs (CP and 2020 FMP) allocated 4,374 ha for harvest. Inconsistent access limits the ability to fulfill plan objectives related to harvest area, in particular those related to moose habitat and landscape classes. Poor access will also impede the ability to meet short medium and long-term volume targets.

At year ending March 31, 2021, 54% of the planned harvest area had been completed (62% of the planned hardwood and 35% of the planned conifer allocation). Table 3 presents the planned vs actual harvest area during the audit period.

Table 3 Actual vs. Planned Harvest Area (Ha) by Forest Unit (2014-2021)<sup>22</sup>

Forest Unit <sup>23</sup>	Planned Harvest (Ha)	Actual Harvest (Ha)	Actual vs Planned % <sup>24</sup>
Aspen	2,509	2,032	81
Poplar Dominant	650	694	107
White Birch Dominant	1,007	715	71
Hardwood Dominant	1,147	579	50
Hardwood Mixed	4,835	2,804	58
Mixedwood	6,347	3,453	54
Other Hardwood	4	9	244
<b>Subtotal Hardwoods</b>	<b>16,499</b>	<b>10,286</b>	<b>62</b>
Balsam Fir Dominant	2,914	675	23
Balsam Fir Mixed	197	83	42
Conifer Mixed	1,724	635	37
Other Conifer/Other Conifer Lowland	316	32	10
Jack Pine Dominant	631	501	79
Jack Pine Mixed	100	142	142

<sup>22</sup> Note that in the first year of the new plan (2019-2020), and commencing August 1, 2020, the forest unit naming convention changed to describe the dominant species. The change is reflected in Table 3

<sup>24</sup> As per Section 3.2.3. of the 2017 FMPM “up to two years of average annual available harvest area by forest unit may be identified to provide flexibility for unforeseen circumstances.”

Red Pine Dominant	10	0	0
White Pine Dominant	0	1	0
Red Pine/White Pine Mix	6	5	83
Black Spruce Lowland	1,343	488	36
Spruce Mixed	60	25	42
Spruce Dominant	430	142	33
<b>Subtotal Conifers</b>	<b>7,731</b>	<b>2,730</b>	<b>35.3</b>
<b>TOTAL</b>	<b>24,230</b>	<b>13,021</b>	<b>53.7</b>

Source: 2014-2021 Annual Reports (2020-21 figures included are estimates).

Conifer utilization achieved 38% of the planned volume (470,000 m<sup>3</sup>) while hardwood utilization achieved 41% of the planned volume forecast (508,511 m<sup>3</sup>).<sup>25</sup>

The inconsistent demand for hardwood served to limit access to conifer volumes in some mixedwood forest types. The lack of harvest in hardwood and mixedwoods will delay the achievement of the desired future forest condition and benefits and increase the representation of mature and overmature age classes on the landscape. Such stands typically yield poorer quality timber and below average volumes per hectare making them less desirable for operations.

There were no salvage harvest operations during the audit period. Approximately 400 ha were harvested under a Forestry Futures Trust (FFT) project.

We visited 14% of the areas harvested during the audit period. All inspected sites were approved for operations in the AWSs. Harvest prescriptions were implemented in accordance with the Silvicultural Ground Rules (SGRs), and individual Forest Operations Prescriptions (FOPs) were prepared and appropriately implemented for each harvest block. There was little evidence of significant site or environmental damage arising from harvest operations except for some instances of localized site compaction on some landings and trails (particularly on clay or loam soils) due to the continued use of select trails and/or large landings during operations. The adoption of this strategy, while limiting the potential for more extensive site damage or loss of productive forest land (due to the dispersion of more landing and skid trails across cutovers) did result in challenges for natural renewal by suckering or seeding. We do not provide a finding due to the limited extent of the issue. GFI indicated that in-fill plantings are normally scheduled for landings and trails where compaction had limited natural ingress.

---

<sup>25</sup> 2014-2020

We visited a site where approximately 65 m<sup>3</sup> of bundled wood was abandoned as unrecoverable due to operational constraints related to slope conditions. We note that the wood was scaled in September 2021 and Crown dues were being processed at the time of the field audit.

AOC prescriptions within and adjacent to cut blocks were properly implemented. Harvest block configurations were designed to meet landscape level objectives to the extent possible given the existing forest structure and the interspersed parcels of private land on the Forest.

We concluded that, on balance, harvest operations were properly implemented.

### Slash Management

Logging debris management treatments included slash piling, chipper debris piling/spreading and mechanical processing (hogging). Harvest contractors are responsible for debris management on their allocations. The Annual Reports (ARs) indicate that debris piling occurred on 248 blocks. During the audit period biofiber markets were unpredictable which resulted in few areas being treated by removing debris off-site. Debris pile burning was not undertaken due to social concerns and liability associated with the Forest's proximity to Thunder Bay and surrounding municipalities. We concluded that debris management activities reduced the potential loss of productive forest land and that the program was effective considering the limitations imposed by the sporadic markets for biofiber and the unwillingness to conduct wide-scale pile burning.

### Area of Concern Management

The 2017 CP and the 2020 FMP applied the Boreal Landscape Guide (BLG) whereby targets for various landscape classes create a diversity of ecosystem conditions through space and time that provide habitat for most native species. The requirements of the Endangered Species Act (ESA) are addressed through the coarse filter direction included in the Boreal Landscape Guide. FMP 11 and Supplementary Documentation in the Analysis Package address habitat requirements with the retention of wildlife trees and patches of unharvested forest in harvested blocks as directed by the Stand and Site Guide. This direction is also supported by applying Conditions on Regular Operations (CROs) and a variety of AOC prescriptions.

We reviewed a sample of AOC prescriptions directed at protecting SAR habitat and confirmed that they reflected FMP direction and intent. We note that there was excellent cooperation between the GFI and NDMNRF in developing appropriate and practical AOC prescriptions and CROs. Our document reviews and interviews with NDMNRF staff revealed that public and LCC input with respect to values protection was documented, verified and where appropriate, added to values maps.

We conclude that AOC prescriptions were appropriate for the protection and/or maintenance of the identified values and were implemented in accordance with FMP direction. Our review of Forest Operations Information Program (FOIP) records indicated that there were few compliance issues associated with AOCs.



## Site Preparation (SIP)

SIP treatments achieved 95% of the planned FMP targets principally due to the lower than planned level of harvest (Table 4). GFI relies on direct planting with no site preparation where post-harvest conditions are suitable. The reduced harvest levels and greater reliance on direct planting (no site preparation) resulted in 69% of the audit period mechanical site preparation target being achieved.

Mechanical site preparation was predominately by powered disc trencher (87%) with the remainder being treated by Bracke scarifier (13%). Trenching did provide good mineral soil exposure and we did not observe any incidences of environmental damage associated with mechanical site preparation activities.

Chemical site preparation treatments are typically adopted to achieve early competition control prior to artificial renewal. The area treated with chemical site preparation exceeded the FMP forecast (558 ha planned vs. 794 ha actual). The overachievement of the plan target was attributed to a larger number of sites being favorable for chemical treatments than anticipated. Our site inspections found the treatments to be effective in achieving early competition control.

Table 4 Area (Ha) of Actual vs. Planned Site Preparation (2014-2021)

Site Preparation Treatments	Planned 7 Year Ha	Actual Ha	Actual vs Planned %
Mechanical	5,445	3,746	69
Chemical – Aerial	1,552	2,628	170
Chemical - Ground	558	794	132
Prescribed Burn	410	0	0
<b>SIP Total</b>	<b>7,555</b>	<b>7,168</b>	<b>95</b>

Source: 2014-2021 Annual Reports (2020-21 figures included are estimates)

A prescribed burn was planned for the fall of 2020 but did not occur. The burn was re-scheduled for the fall 2021 however, at the time of the field audit it had not occurred.

## Renewal

Table 5 presents the planned vs actual area renewed for the audit period. All renewal treatments observed in the field were consistent with the SGRs.

Table 5 Area (Ha) of Actual vs. Planned Renewal Treatments (2014-2021)

<b>Renewal Treatments</b>	<b>Planned 7 Year (Ha)</b>	<b>Actual (Ha)</b>	<b>Actual vs Planned %</b>
Natural Renewal	12,177	8,431	70
Artificial Renewal – Plant	6,561	4,685	71
<b>Total Renewal</b>	<b>18,738</b>	<b>13,116</b>	<b>70</b>

Source: 2014-2021 Annual Reports (2020-2021 figures included are estimates).

Renewal activities are directly associated with the level of harvest. Conifer dominated stands are typically renewed by artificial regeneration strategies. GFI reports natural regeneration the same year as the area is harvested.

Natural renewal treatments were implemented on approximately 70% of the harvest area and were typically prescribed for hardwood dominated forest or areas of lowland black spruce. Our inspections of sites managed for natural renewal generally found the areas to be well-stocked to the desired target tree species.

We did encounter some areas where soil compaction by logging equipment had inhibited the natural ingress of poplar. We were informed that these areas would be treated with infill planting of conifers to augment stocking levels.

Artificial renewal was implemented on conifer or conifer-dominated mixedwood harvest blocks. Artificial renewal treatments were generally effective with the treated areas showing acceptable stocking densities to the desired species. Natural ingress was augmenting stocking levels of desired species within the inspected areas.

We did encounter two operational forestry aggregate pits that had been partially planted suggesting that the supervision of planters could be improved. We do not provide a finding as the problem was not widespread.

We concluded that regeneration efforts were aligned with the level of harvest and that an effective renewal program was implemented.

### Renewal Support

Renewal support includes the activities necessary to support the forecast types and levels of renewal and tending operations. GFI is a member of the Superior Woods Tree Improvement Association and is involved with tree improvement programs for jack pine and black spruce. There are four seed orchards on the LF that provide a seed source for planned renewal

activities<sup>26</sup>, however; during the audit period seeds were received from one orchard (Kreikmann Seed Orchard). Cones are collected in bulk from each seed zone, sent to a processing facility and tracked to ensure that seedlings are grown for locations close to their seed zone origin. Other renewal support activities include planting stock production and tree improvement. We concluded that renewal support activities and funding were sufficient to meet program requirements.

### Tending

Table 6 presents the planned vs actual area treated by tending during the audit period. Tending treatments are often required to promote the establishment and growth of desired crop species. Tending treatments were by back-pack sprayer, ground-based air-blast sprayers or aerial spray. Ground-based tending operations were predominantly conducted adjacent to private property, cottage values, and in small, irregularly shaped areas that have been renewed. Chemical tending was conducted proportionate to planting levels and in response to individual stand requirements. Chemical tending exceeds planned because projections vary with post-harvest conditions. Also, FFT projects added significantly to the chemically treated areas. Our sampling found that tending treatments were effective.

Table 6 Area (Ha) of Actual vs. Planned Tending Treatments (2014-2021)

<b>Tending Treatments</b>	<b>Planned 7 Year (Ha)</b>	<b>Actual (Ha)</b>	<b>Actual vs Planned %</b>
Chemical – Aerial	3,250	3,398	105
Chemical – Ground	949	840	88
<b>Total Tending</b>	<b>4,199</b>	<b>4,238</b>	<b>101</b>

Source: 2016-2020 Annual Reports (2020-21 figures included are estimates).

We note that GFI also cooperated with the NDMNRF to enhance moose habitat by limiting chemical tending adjacent to high quality moose cover with the objective being of increasing the hardwood component within the treated areas.

### Protection

No major insect infestations or disease outbreaks occurred during the audit period, so no protection programs other than monitoring functions were implemented.

---

<sup>26</sup> The LF lies within two seed zones. Seed Zone 13 predominantly encompasses the Thunder Bay District portion of the Forest, while Seed Zone 14 encompasses the Nipigon District portion. The LF is located within the Black Spruce 4400 Breeding Zone and within the jack pine and black spruce Lake Nipigon West Breeding Zone.

## Access Management

Road construction and maintenance responsibilities are assigned to the Forest Resource Licensee (FRL). Between 2014 and 2021 approximately 269 kilometers (km) of road were constructed across the entire forest. During the audit period 31 water crossings were installed (28 culverts and three bridges). Our site inspections indicated that road construction, road maintenance and water crossing installations were well done.

During the audit period, 14.2 km of road was decommissioned. Operational roads were reported as decommissioned in 2014-2015, and 2015-16 as per the approved road use management strategy.

Between 2014 and 2019, 41 water crossings were removed. We visited several locations where water crossings had been decommissioned or replaced. Measures implemented to mitigate erosion for decommissioned crossings were in place (when required) and included the placement of slash on road approaches, the construction of diversion ditches (water bars), the use of rip rap, ditching, and the planting of grass on the road approaches and in ditches for soil stabilization. No significant evidence of environmental degradation associated with the removal of water crossings was observed.

In general, primary access roads were well maintained. Surface conditions on branch roads were somewhat more variable reflecting the lack of operations in some of the inspected areas and/or a reduction in maintenance due to economic conditions.

We conclude that an effective roads management program was implemented.

### **4.5 Systems Support**

Appropriate information management systems are in place to support sustainable forest management. This includes formal data backup, recovery and security systems. NDMNRF and GFI made effective use of Geographic Information Systems (GIS) technology to support their forest management program.

Organization charts were available for both the SFL and the NDMNRF Thunder Bay District. Staff training records relevant to their responsibilities are in place. Training sessions for contractors were regularly implemented. The GFI SFMS includes up-to-date information on specific training responses to identified field issues (e.g., AOC trespass).

IFAPP System Support criterion were met during the audit period.

### **4.6 Monitoring**

The 2020-2030 FMP contained Compliance Plans as required by the FMPM and in accordance with the Guidelines for Industry Compliance Planning.

The Thunder Bay District assumed the lead in preparing Annual Compliance Operating Plans (ACOPs) which identify priority areas, targets and assigned staff responsibilities. COVID-19

related issues (e.g., office closures, etc.) affected some target achievement and reporting, however the ACOPs generally met the required standards. Inspection activities documented in the FOIP over the audit period generally reflected directions in both the GFI and NDMNRF Compliance Plans.

Our review of FOIP records showed that during the audit period the SFL holder and NDMNRF completed 523 inspections. NDMNRF completed approximately 11 % (57) of the inspections with GFI completing approximately 89 % (466). Over the audit period a 94 % compliance rate was achieved. We concluded that there was an appropriate balance of NDMNRF and GFI inspections. Inspections were spread across all activities (i.e., access, harvest, renewal and maintenance). GFI is responsible for all industry inspections and FOIP submissions for the Forest. Inspection approvals and submissions to FOIP by both GFI and the NDMNRF generally adhered to submission deadlines.

In the audit period GFI identified 17 Operational Issues and NDMNRF identified eight. The Operational Issues did not indicate any specific problem areas. NDMNRF reviewed and made decisions on the incidents in a timely manner including corrective actions, repair orders and penalties. At the time of the field audit, all Operational Issues were closed.

Documentation shows that GFI and NDMNRF staff worked proactively and cooperatively to identify issues and develop corrective remedies. As required GFI included compliance training in contractor training sessions (e.g., SARs, AOC trespass, etc.).

GFI maintains current information on movements to and from harvesting blocks. NDMNRF indicated there were no major issues with respect to reporting timelines or suspended blocks.

Our field inspections did identify some issues associated with compliance monitoring. An abandoned mechanical harvester and a fuel/lubricant spill was observed at one of our field stops and we observed approximately 65 m<sup>3</sup> of abandoned wood which was not reported in FOIP until two years after the block had been closed. We note that the wood was scaled in September 2021, and that Crown dues were being processed at the time of the field audit. The NDMNRF compliance inspector had not inspected the blocks as the government compliance program is based on a risk-based assessments and the verification of reported issues. Despite the foregoing, our assessment is that GFI and NDMNRF compliance programs generally met the requirements of the FMPM, Forest Compliance Handbook and FMP targets.

### Monitoring of Silvicultural Activities

Silviculture assessments and other monitoring functions are summarized in the FMPs. Monitoring activities undertaken by GFI included Forest Operations Inspections, Assessments of Regeneration Success (Free to Grow, planting quality), post-tending assessments and monitoring programs for roads and water crossings. It is noteworthy that several significant changes (e.g., forest unit definitions, FMPM reporting formats, land base and forest classifications etc.) have negatively influenced the interpretation of silviculture data and trends over time.

We concluded that an GFI had implemented an effective monitoring and assessment program.

## Free to Grow Survey (FTG)

During the audit period, 14,184 ha were assessed and declared FTG<sup>27</sup> with 98% achieving the projected forest unit. Surveys are normally conducted between eight and twelve years after harvest with the goal to annually assess an area equivalent to the annualized harvest area.

Our field sampling (visual assessments) of FTG survey blocks substantiated the stand descriptions and forest unit designations as reported by GFI.

## Assessment of Past Silviculture Performance

Establishment and Performance Assessments were not completed during the 2010-2020 FMP as they were not required under the 2009 FMPM.

## Silviculture Effectiveness Monitoring

A key principle of Ontario's Forest Sustainability Framework is to ensure that regeneration efforts are achieving the standards in the FMP. The effectiveness of forest operation prescriptions in achieving the desired forest unit must be understood to facilitate reporting on forest sustainability and to provide reliable information for forest management planning.

NDMNRF policy with respect to its requirements and obligations for Silviculture Effectiveness Monitoring (SEM) are provided in internal policy and Regional Operations Division (ROD) direction documents. The IFAPP requires the auditors to *“review and assess whether an effective program exists to assess area that is successfully regenerated to the projected forest unit (silvicultural success) or to another forest unit (regeneration success) in accordance with the applicable FMPM, FIM, FOSM and SEMMO”*. The requirements that are identified in these manuals are specific to the SFL holder's silviculture monitoring and reporting program. However, the 2020 IFAPP also requires the auditor to *“assess whether the management unit assessment program (SFL and MNRF District) is sufficient and is being used to provide the required silviculture effectiveness monitoring information and compare SFL/MNRF SEM results (where they exist)”*.

The 2012 Auditor General Report of Ontario stated: *“To ensure the SEM program adequately assesses the effectiveness of industry reported renewal efforts in regenerating Crown Forests, the MNR district offices should complete all core tasks”*. In response to the Auditor General recommendation, MNR Regional Operations Division committed to *“take steps to improve the completion rate of the core tasks prescribed under the SEM program.”* We note that commencing in 2019 the MNRF Draft Regional Operations Division (ROD) focus/objectives for SEM include a requirement to *“validate the accuracy of the Forest Managers establishment assessment results”*. We were informed that there is flexibility with respect to target setting for District SEM work with target setting based on available resources and other work priorities. District Offices are also instructed to *“subject to current resourcing levels and the priority of field activities, continue to assess the Forest Manager's renewal results with the objective of identifying the accuracy of the submission”*.

---

<sup>27</sup> No survey work was undertaken in 2014/15 and 2019/20. MNDMNRF did not complete any SEM FTG assessments during the audit period.

NDMNRF carried out Silviculture Effectiveness Monitoring (SEM) during one year (2017-2018) of the seven-year audit period (**Finding # 4**). No analysis or formal reporting was completed. We are concerned that the government's mandate to ensure that regeneration standards are met is not being achieved under the current direction. Despite an investment of \$ 5.7 million, the effectiveness of the silviculture program was not meaningfully evaluated. Effective learning, continuous improvement and improved decision-making requires the documentation of results.

#### Exceptions Monitoring

Exceptions monitoring is carried out to determine the effectiveness of prescriptions in forest management plans that are "*not recommended*" in the NDMNRF forest management guides. There are no exceptions to the approved forest management guides in the 2007-2017 or the 2020-2030 FMPs, therefore; exceptions monitoring is not required during the 2020-2030 plan term.

#### Forest Renewal Trust Specified Procedures Report

The Forest Renewal Trust (FRT) provides dedicated funding (reimbursement of silviculture expenses) to renew the forest according to the standards specified in the FMP. Our inspections of activities invoiced in the "*Forest Renewal Trust Specified Procedures Report*" (SPR) confirmed that FRT payments were for eligible silviculture work.

#### Monitoring of Roads and Water Crossings

GFI maintains an inventory of all bridge and water crossings. GFI contractors and staff monitor roads and water crossings through the course of normal operations. Road monitoring is largely confined to areas of active operations.

Monitoring of primary winter road construction and maintenance activities within the Black Bay and Shesheeb Bay Provincially Significant Wetlands (PSW) is conducted in accordance with monitoring plans developed in the BBP EMAS and associated environmental impact studies. As required, results of the BBP and Shesheeb Bay PSW monitoring activities are reported in the ARs.

#### Aggregate Pits

Our field sampling of Forestry Aggregate Pits (FAPs) found that FMP operational standards for pit construction and maintenance were not consistently met (**Finding # 5**). Issues observed included steep slopes and pits within 15 m of operational roads with excavations below ditch levels and improper sloping.

Commercial aggregate applications were submitted in 2020 to re-designate approximately 240 ha of productive forest land for aggregate extraction (quarry/pit) under the Aggregate Resources Act. The decision to approve or deny these applications resides with the Minister of NDMNRF. NDMNRF staff indicate that the application process could require one or more additional years to complete (Regulation 466/20). The permanent or temporary removal/exclusion of productive forest land from the SFL for non-forestry uses has both current and future financial and forest

management planning implications for the licensee<sup>28</sup> particularly when the proposed change in land use was not contemplated in the forest management planning process and scheduled silviculture activities have occurred. While it is recognized that aggregate sites are not technically withdrawn from the SFL land base, the productive forest land base is reduced for the duration of the aggregate license. Cumulative land removals can have implications on wood supply, the achievement of LTMD objectives and result in sunk costs to the SFL holder in silvicultural planning and implementation. We raise this concern as an observation, as land use policy analysis and assessment is outside of the scope of the IFA process.

### Annual Reports (ARs)

ARs were available for each year in the audit scope except for the 2020-2021 AR, which is not required until November 15, 2021. Schedules for the submission, review and revision of the ARs were generally met. The ARs were presented to the LFLCC as directed by the FMPM. The content of the reports generally met the requirements of the FMPM.

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

FMP objectives are monitored annually and formally reported in the ARs. FMP objectives and associated targets included landscape groupings (e.g., old growth), moose habitat targets (in localized areas), wood supply requirements and forest composition targets for the BBP. Appendix 2 provides more details on our assessment of plan objective achievement.

This audit identified several significant trends with respect to the implementation of the forest management program including:

- Planned harvest levels (area and volume) have not been achieved resulting in the underachievement of plan targets for silviculture activities and economic benefits.
- FMP objectives are largely met or there is movement towards FMP desirable levels.
- Plan assumptions and projections were consistent with operations.
- A successful renewal program has been implemented.
- There is no significant backlog with respect to the area requiring FTG survey and the survey of XYZ lands is nearing completion.

Recognizing the on-going issue of access for forest operations and the associated viability of scheduling harvest operations on the BBP, we conclude that forest sustainability as assessed by

---

<sup>28</sup> In instances when the application is rejected and/or the Sustainable Forest License holder delays silviculture treatments due to uncertainty there is the potential for additional silviculture costs, delays in the return on the renewal investment and other challenges/impediments associated with returning the land to forest production (e.g., increased site preparation costs).



the IFAPP is not at risk and that planning objectives are meeting or maintaining progress towards sustainability. This conclusion is premised on the following findings and observations:

- Forest management was planned and implemented in accordance with the Crown Forest.
- Sustainability Act and FMP targets are consistent with the achievement of plan objectives and forest sustainability.
- GFI is substantially in compliance with the terms and conditions of the SFL.
- Forest management modeling demonstrated that the planned operations met the intent of the LTMD.
- Despite the harvest area being lower than planned, the majority of FMP objectives and targets are being achieved or progress is generally being made towards their achievement.
- Silvicultural Ground Rules (SGRs) and Forest Operations Prescriptions (FOPs) were appropriate for the forest cover types and site conditions observed in the field.
- Regeneration efforts are aligned with the level of harvest and an effective renewal program is being implemented.
- There was no evidence during our field audit of significant environmental damage associated with forest management operations.
- GFI and NDMNRF compliance programs were delivered in accordance with the compliance plans.
- Compliance inspections indicated that operations are highly compliant.
- Recommendations and actions resulting from past IFAs were addressed.
- No public issues or concerns were identified to the audit firm through our public consultation outreach.

#### **4.8 Contractual Obligations**

We concluded that GFI is substantially in compliance with the terms and conditions of the SFL. (Appendix 3).

The IFAPP requires auditors to assess the effectiveness of the actions developed to address the recommendations of the previous audit. The 2014 IFA produced 16 recommendations. The required Action Plan and Action Plan Status Report were completed within the required timelines. Our assessment is that the recommendations were appropriately addressed. As required by the

FMPM those audit results were considered in the development of the 2020 FMP and other forest management functions.

#### **4.9 Concluding Statement**

On balance we found the LF to be well-managed. The forest management planning process and the implementation of the CP and FMPs met all legal and regulatory requirements.

An effective silviculture program is being implemented by GFI. We provide five findings to address identified forest management planning and operational issues. We are concerned that the NDMNRF did not fully implement a silviculture effectiveness monitoring program. In the absence of improved access to the BBP the 2020 FMP and the BBP EMAS objectives related to disturbance and renewal will not achieve planned target levels.

The audit team concludes that the management of the Lakehead Forest was generally in compliance with the legislation, regulations and policies that were in effect during the period covered by the audit, and the Forest was managed in compliance with the terms and conditions of the Sustainable Forest Licence held by Greenmantle Forest Inc. # 542460. The forest is being managed consistently with the principles of sustainable forest management, as assessed through the Independent Forest Audit Process and Protocol.

## **Appendix 1**

### **Findings**

## Independent Forest Audit – Record of Finding

### Finding # 1

**Principle:** 3 Forest Management Planning

**Purpose:** 3.3.

To review the assembly of background information, appropriateness, and completeness of the FMP management unit description, and how it was used in plan preparation.

**Procedure(s):**

3.3.2. 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.

Assess whether NDMNRF provided inventory base feature data and FRI for managed Crown and non-licensed Crown areas to the SFL.

#### **Background Information and Summary of Evidence:**

The data contained in the eFRI was often incomplete or erroneous which necessitated the development of the 2017 Contingency Plan and delayed the creation of the Base Model Inventory which in turn delayed the production of the LTMD. These delays negatively impacted the plan production schedule.

Errors and issues associated with the inventory included;

- missing stocking attributes,
- information supplied to interpreters was not or inconsistently used resulting in inaccurate representations of stand conditions in young stands, and
- coding errors.

**Discussion:**

Delays in the receipt of a finalized “planning-ready” Enhanced Forest Resource Inventory (eFRI) required for the development of the 2017-2027 Phase I FMP resulted in a requirement for the development of a three-year Contingency Plan (CP) at considerable time and expense for both SFL and NDMNRF staff. The CP utilized an updated version of the existing inventory.

The 2020 FMP was completed on schedule in part due to the provision of additional staff and shortened review periods implemented by NDMNRF.

The planning inventory for the management unit provides information required for forest management planning, including forest modeling, habitat modeling and forest diversity analysis. Systemic issues related to the production process of the eFRI have persisted for a significant time period and have been identified in numerous IFAs. The continuing difficulties with the production of timely and accurate forest inventories is a major bottleneck for the achievement of forest management planning schedules.

We were informed that Ontario is improving the forest inventory by investing in the acquisition of Light Detection and Ranging (LiDAR) data, an advanced remote sensing technology. This new forest inventory information will inform forest management planning and decision-making by providing quantitative information on key forest structural attributes, including tree height and an excellent ground surface profile. The program also continues to explore targeted opportunities to improve species composition mapping using cost effective, quantitative approaches. The program’s delivery approach is supported by the Provincial Forest Inventory Advisory Committee, which includes representatives from forest industry, academia, and the Provincial government.

**Finding # 1:**

The production process for the development of the Enhanced Forest Resource Inventory delayed the production of the forest management plan and resulted in additional time and expense to Greenmantle Forest Inc. and the Ministry of Northern Development, Mines, Natural Resources and Forestry.

## Independent Forest Audit – Record of Finding

### Finding # 2

**Principle:** 3 Forest Management Planning

**Criterion:** 3.5.6. FMP Harvest

**Procedure(s):** Assess planned implementation of the management strategy...

#### Background Information and Summary of Evidence:

The Black Bay Peninsula (BBP) Enhanced Management Area is situated between Thunder Bay and Nipigon Bay on the north shore of Lake Superior. The remote and relatively roadless nature of the peninsula combined with the existence of significant moose habitat, rare artic-alpine habitats, Provincially Significant Wetlands, endangered species habitat and cultural heritage values led to the development of a strategy document “*Black Bay Peninsula Enhanced Management Area Strategy*” (BBP EMAS). This strategy restricts forest management access to the peninsula to winter only.

The lack of reliable winter access to the BBP and the resultant lower than planned harvest on the peninsula has been noted in numerous previous IFA reports. Currently access via winter road is not reliable and Forest Resource Licence holders are unwilling to risk investing in activities which could result in stranded wood. Between 2014 and 2020, 295 ha was harvested on the BBP. The two most recent FMPs allocated 4,374 ha for harvest. The harvest over the seven-year audit period was less than ten percent of the planned harvest.

#### Discussion:

Access via winter road to the BBP is not reliable and Forest Resource Licence holders have been unwilling to risk investing in activities which could result in stranded wood.

Inconsistent access limits the ability to fulfill plan objectives and volume targets. In the absence of improved access, the FMP and the BBP EMAS objectives (related to disturbance and renewal) will not be fully achieved.

#### Finding # 2:

In the absence of reliable access, forest and land use management objectives related to disturbance and renewal will not be fully achieved on the Black Bay Peninsula.

## Independent Forest Audit – Record of Finding

### Finding # 3

**Principle:** 3 Forest Management Planning

**Criterion:** 3.1.4.1. Amendment Process and Rationale

**Procedure(s):** Amendments have been distributed to the locations and within the timelines as identified in the applicable FMPM.

#### **Background Information and Summary of Evidence:**

The FMPM details the procedures for the submission, categorization, and approval of amendments to the Forest Management Plan (Section 2.0). The FIM provides direction for signing and submitting approval pages associated with electronically submitted amendments to FMPs. As per the FMPM, the decision on whether one can proceed with the amendment request and the appropriate category of amendment is to be made within 15 days of receipt of the request, subject to public consultation requirements which are associated with the Major or Minor category of amendment.

GFI provided information with respect to request and approval timelines for 50 amendments over the audit period. We were informed that all the amendments were categorized as administrative. Fifty percent of the amendments required more than 30 days for approval. Twenty percent of the amendments required 60 or more days for District approval. For example, the table below illustrates the duration for the review and approval of FMP amendments requested in 2020.

Review and approval times for amendments to the 2020 FMP vary considerably. Provincial government workplace health and safety protocols and other challenges associated with delivery of public/FN consultations during the COVID-19 pandemic contributed to delays since March 2020.

Our interviews with NDMNRF staff indicated that early amendment submissions often had a broad focus requiring consideration of several items. In some instances, additional consultation requirements and/or information needs contributed to the delays. Staffing changes and turnovers did contribute to the extended review and approval periods.

The table below tracks the request date and the date of amendment approval for submissions during the audit period.

<b>Amendment #</b>	<b>GFI Request Date</b>	<b>MNR Approval Date</b>	<b>Total review Time</b>
2007-086	1-Apr-14	n/a	n/a
2007-087	4-Jun-14	10-Jul-14	36
2007-088	18-Jun-14	11-Jul-14	23
2007-089	31-Jul-14	n/a	n/a
2007-090	12-Aug-14	22-Aug-14	10
2007-091	28-Nov-14	16-Jan-15	49
2007-092	29-Jan-15	17-Feb-15	19
2007-093	16-Mar-15	19-Mar-15	3
2007-094	13-Mar-15	19-Mar-15	6
2007-095	23-Mar-15	19-Oct-15	210
2007-096	24-Apr-15	6-Jul-15	73
2007-097	27-Mar-15	13-May-15	47
2007-098	2-Jun-15	8-Jul-15	36
2007-099	15-Jun-15	n/a	n/a
2007-100	16-Jul-15	6-Aug-15	21
2007-101	14-Aug-15	24-Aug-15	10
2007-102	18-Sep-15	27-Oct-15	39
2007-103	9-May-16	20-Jun-16	42
2007-104	1-Jun-16	27-Jun-16	26
2007-105	25-Jul-16	22-Aug-16	28
2007-106	28-Sep-16	6-Nov-16	39
2007-107	7-Nov-16	22-Nov-16	15
2007-108	12-Jan-17	27-Jan-17	15
2017-001	14-Mar-17	3-May-17	50
2017-002	3-May-17	27-Jun-17	55



2017-003	7-Jul-17	9-Aug-17	33
2017-004	25-Jul-17	24-Aug-17	30
2017-005	24-Nov-17	17-Jan-18	54
2017-006	15-Jan-18	1-Feb-18	17
2017-007	15-Jan-18	31-Jan-18	16
2017-008	26-Feb-18	15-Mar-18	17
2017-009	20-Mar-18	26-Apr-18	37
2017-010	31-May-18	15-Jun-18	15
2017-011	26-Jun-18	23-Jul-18	27
2017-012	05-Jul-18	23-Jul-18	18
2017-013	10-Sep-18	24-Sep-18	14
2017-014	15-Jan-19	30-Jan-19	15
2017-015	7-Feb-19	22-Mar-19	43
2017-016	31-May-19	25-Jun-19	25
2017-017	31-May-19	08-Jul-19	38
2017-018	02-Oct-19	25-Oct-19	23
2017-019	08-Jan-20	14-Jan-20	6
2020-001	21-Feb-20	2-Mar-21	375
2020-002	20-Mar-20	2-Mar-21	347
2020-003	14-Apr-20	5-Mar-21	325
2020-004	15-Sep-20	5-Mar-21	171
2020-005	27-Nov-20	5-Mar-21	98
2020-006	17-Dec-20	5-Mar-21	78
2020-007	29-Mar-21	5-May-21	37
2020-008	26-Apr-21	7-May-21	11
2020-009	20-May-21	28-Jul-21	69
2020-010	7-Jun-21	8-Oct-21	123

2020-011	2-Sep-21	8-Oct-21	36
----------	----------	----------	----

Source:GFI Excel Files

We were informed that improvements have been made with respect to 2020 FMPM amendment requests.

**Discussion:**

The planning requirements for a requested amendment will depend on the nature of the proposed changes but will normally involve the same technical planning requirements as would be required in the preparation of a FMP. However, the NDMNRF review and approval requirements, and the opportunities for public consultation and First Nation and Métis community involvement and consultation, will differ dependent on the amendment category (e.g., Major, Minor, Administrative).

Nevertheless, improvements are warranted to enable a timelier review and approval of documents.

**Finding # 3:**

Forest Management Plan Administrative Amendments were not consistently approved by Ministry of Northern Development, Mines, Natural Resources and Forestry District Office in accordance with the timeline in the Forest Management Planning Manual.

## Independent Forest Audit – Record of Finding

### Finding # 4

**Principle:** 6 Monitoring

**Purpose:** 6.3 Silviculture standards and assessment program.

To assess whether an effective program exists to assess the status of regeneration in accordance with the applicable FMP, FIM, FOSM, and the Silvicultural Effectiveness Manual of Ontario.

**Procedure(s):** Compare MNR District SEM results (where they may exist) with the SFL

#### **Background Information and Summary of Evidence:**

The NDMNRF did not fully implement a Silvicultural Effectiveness Monitoring (SEM). SEM data was collected in 2017 but this data was not analyzed or reported on. In reference to the SEM program Recommendation # 4 of the 2012 Auditor General Report of Ontario stated *“To ensure the SEM program adequately assesses the effectiveness of industry reported renewal efforts in regenerating Crown Forests, the MNR district offices should complete all core tasks as outlined in the program and follow-up with forest management companies on sites found not to have met the free-to-grow criteria to ensure that companies subsequently took appropriate remedial regeneration measures.”* The 2001 SEM manual states that *“foresters from industry and the NDMNRF should examine whether certain treatments are meeting expectations and if they are not, they should investigate why the treatments were not successful and make appropriate modifications in the future.”* In response to the Auditor General recommendation, MNR Regional Operations Division committed to *“take steps to improve the completion rate of the core tasks prescribed under the SEM program.”*

#### **Discussion:**

A key principle of Ontario’s Forest Sustainability Framework is to ensure that regeneration efforts are achieving the standards in the Forest Management Plan. The effectiveness of forest operations prescriptions in achieving the desired forest unit must be understood to facilitate reporting on forest sustainability and to provide reliable information for forest management planning (e.g., development of SGRs, SFMM inputs, FMP objectives). Information collected through the SEM Core Tasks assists in determination/assessment of the extent to which regeneration efforts meet the regeneration standard. The information also aids in the assessment (over time) of the effectiveness of the SFL holder’s silviculture program, conformance of silviculture activities with the FMP, and forest sustainability. No formal reporting of SEM activities occurred during the seven-year audit period. We view this

as a serious shortcoming.

Between 2014 and 2021 approximately \$ 5.7 million was invested in silviculture and an additional \$ 426K was invested by the Forestry Futures Trust in forest management activities. Monitoring is required to ensure that the investments are consistent with the achievement of the LTMD and forest sustainability. Effective learning, continuous improvement and improved decision-making requires the documentation of outcomes in order that knowledge gained can be transferred to others and to ensure that investments in silviculture are appropriate and effective in achieving planned outcomes.

**Finding # 4:**

The Ministry of Northern Development, Mines, Natural Resources and Forestry District and Regional Office did not fully implement a Silviculture Effectiveness Monitoring program.

## Independent Forest Audit – Record of Finding

### Finding # 5

**Principle:** 4 Plan Assessment and Implementation

**Criterion:** 4.7 Access

Road construction and decommissioning, various types of water crossings including crossing structures, road monitoring, maintenance, aggregates and other access activities must be conducted in compliance with all laws and regulations, including the CFSA, approved activities in the FMP and submission of, or revision to, the AWS.

**Procedure(s):**

1. Review and assess in the field the implementation of approved access activities. Include the following:
  - select a representative sample from those areas where operations have been conducted during the audit period, from each of the years being audited, and for each type of access activity (road construction, and/or decommissioning, various types of water crossings, (i.e., winter crossings, culverts) road maintenance and reclamation from primary, branch and operational roads constructed including forestry aggregate pits for new roads and existing roads.

**Background Information and Summary of Evidence:**

Operational Standards for Forestry Aggregate Pits are documented in the forest management plans (i.e., Section 4.5.7. 2020 FMP). Included in the standards are requirements that:

- topsoil and overburden, where present must be stripped and stored on site,
- undercutting of the working face is not permitted and the working face must be sloped at the angle of repose,
- all trees within five meters of the excavation face must be removed,
- when the pit is inactive, all pit faces must be sloped at the angle of repose,
- when operating within 15 m of a proposed roadside ditch, no excavation is to take place below the planned depth of the proposed ditch; all excavations are to be immediately sloped to no more than a 2:1 angle.
- final rehabilitation of the site must include sloping of all pit faces, the re-spreading of any topsoil and overburden removed as mitigative measures to prevent erosion.

**Discussion:**

Site investigations revealed that operational standards for forestry aggregate pits were not consistently met. Issues observed at non-conforming pits included steep slopes and pits within 15 m of operational roads with excavations below ditch levels.

**Finding # 4:**

The operational standards for forestry aggregate pits identified in the forest management plans were not consistently met.

**Appendix 2**  
**Management Objectives Table**

OBJECTIVE	AUDITOR ASSESSMENT (ACHIEVED, PARTIALLY ACHIEVED, NOT ACHIEVED)	AUDITORS COMMENTS
1.FOREST DIVERSITY		
1.a. To provide forest diversity in a manner that emulates a natural landscape pattern and frequency distribution.	PARTIALLY ACHIEVED	On balance to the extent possible the targets and desired levels for this indicator were met.
1.b. To provide forest diversity in a manner that emulates a natural landscape pattern & distribution on the BBP EMA.	NOT ACHIEVED	Between 2014 and 2020, 295 ha was harvested on the BBP. The two most recent FMPs allocated 4,374 ha for harvest. The harvest over the seven-year audit period was less than ten percent of the planned harvest. This low level of harvest resulted in limited progress toward the creation of the larger forest disturbances and natural landscape patterns on the BBP.
1.c. To provide for a forest composition that is representative of the forest condition under a disturbance regime and similar to the historical forest condition and within the Bounds of Natural Variation (BNV).	PARTIALLY ACHIEVED	Actual harvest was 54% of planned. As a result of the low level of harvest the forest composition has not significantly changed. Renewal activities followed the SGRs and ensured progression toward desired future forest condition.
1.d. To provide for a forest maturity class (mature and old growth) structure that is representative of the forest condition under a natural disturbance regime & similar to the historical forest condition & within the BNV.	ACHIEVED	The achievement of the desirable levels for mature forest area by forest unit are assessed over the long term. Since planned harvest levels have not been achieved mature age classes have been retained on the landscape
2.FOREST DIVERSITY AND PROVISION OF FOREST COVER		
2.a. To provide forest diversity that meets the	ACHIEVED	Marten habitat objectives were achieved.



OBJECTIVE	AUDITOR ASSESSMENT (ACHIEVED, PARTIALLY ACHIEVED, NOT ACHIEVED)	AUDITORS COMMENTS
habitat needs of marten on Crown Forest cover.		
2.b. To provide forest diversity that meets the habitat needs for values dependant on Crown forest cover on Mainland and BBP EMA.	ACHIEVED	The desirable levels and targets continue to be achieved.
2.c. To provide forest diversity that meets the habitat needs for deer dependant wildlife on Crown Forest cover.	ACHIEVED	The indicator to monitor deer habitat for foraging and winter cover was met.
2.d. To provide forest diversity that meets the habitat needs for species at risk dependant on Crown Forest cover.	ACHIEVED	There have been no instances where the identified habitat for a species at risk has not been protected during the audit period.
2.e. To provide forest diversity that meets the habitat needs (moose habitat, moose browse availability, sharp-tailed grouse (on BBP) for values dependant on Crown Forest cover.	ACHIEVED  PARTIALLY ACHIEVED  PARTIALLY ACHIEVED	No high value moose cover habitat within MEA's was harvested during the audit period.  With respect to the desirable level and target for provision of enhanced moose browse opportunity through silviculture, the limited harvest activity that has occurred has been in the spruce lowland forest unit, which has limited browse opportunity.  Careful Logging Around Advanced Growth (CLAAG) harvests in lowland spruce stands may contribute to the creation of sharp-tailed grouse habitat.
3.SOCIAL AND ECONOMIC		
3.a. To provide forest diversity (kilometres of SFL responsible road) that meets the habitat	ACHIEVED	The 2007 plan start road density of 0.32 km/km <sup>2</sup> and a plan end road density of 0.48 km/km <sup>2</sup> . This reflects a road density increase of approximately 50%.

OBJECTIVE	AUDITOR ASSESSMENT (ACHIEVED, PARTIALLY ACHIEVED, NOT ACHIEVED)	AUDITORS COMMENTS
needs for values dependant on Crown forest cover.		
3.b. To provide for sustainable harvest volume levels for SPF, PO and BW.	ACHIEVED	Sustainable harvest volumes were identified in the 2020 FMP.
3.c. To provide for a sustainable harvest (maximizing harvest area forecasted levels) by forest unit.	ACHIEVED	Sustainable harvest volumes were identified in the 2020 FMP.
3.d. To provide for a sustainable harvest (maximizing actual harvest area levels) by forest unit.	PARTIALLY ACHIEVED	During the audit period, 54% of the total planned area was harvested. 62% of the planned harvest for hardwood forest units was achieved. For the Poplar dominant forest unit 100% of the planned harvest was achieved. For conifer forest units on average 35% of the planned harvest was achieved, except for the Jack Pine Mix forest unit where 142% of the planned target was achieved (Table 3)
3.e. To provide for a sustainable harvest (maximizing harvest area forecasted levels) by species.	ACHIEVED	<p>The desirable level &amp; target was achieved. The long-term (100-year projected available harvest area) was maintained at 2,297 ha/year in the wood supply model.</p> <p>On a long-term basis, the projected available harvest volume was maintained at 137,000 m<sup>3</sup>/year for Spruce-Pine-Fir (SPF) &amp; 190,000 m<sup>3</sup>/year for poplar. Available birch harvest volume was maintained with no net decrease exceeding 10% per term</p>
4. SOCIAL AND ECONOMIC COMMUNITY WELL BEING		

OBJECTIVE	AUDITOR ASSESSMENT (ACHIEVED, PARTIALLY ACHIEVED, NOT ACHIEVED)	AUDITORS COMMENTS
4.a. To provide for compliance with FMP and land use direction in road planning, construction, maintenance and use management strategies.	ACHIEVED	100% compliance with the FMP.
4.b. To provide for kilometres of operational forest access roads per square kilometre on the BBP EMA.	ACHIEVED	The objective was to minimize access on the BBP to ensure the remote character of the area was not impacted. The objective was achieved as only 400 ha were harvested.
4.c. To provide for 100% of forest compliance reports in compliance.	ACHIEVED	Operations were compliant with a 94 % compliance rate achieved during the audit period.
4.d. To provide for mill supply and reducing forest conversion.	ACHIEVED	Mill supply commitments were met to the extent possible. The target was that no more that 2% of productive forest area be lost to forest operations (e.g., landings, roads). Due to low harvest levels, there was an estimated 0.5 % reduction during the audit period.
5. INVOLVEMENT IN FOREST MANAGEMENT PLANNING		
5.a. Providing opportunities for involvement of Aboriginal communities in plan development	ACHIEVED	The Fort William FN and Red Rock Indian Band are shareholders in GFI and were engaged in the planning process.
5.b. To provide for community well-being (LCCs self-evaluation of its effectiveness in plan development).	ACHIEVED	The LFLCC continues to be engaged in forest management planning. The LCCs self-evaluation of effectiveness in plan development was 73 %.

OBJECTIVE	AUDITOR ASSESSMENT (ACHIEVED, PARTIALLY ACHIEVED, NOT ACHIEVED)	AUDITORS COMMENTS
5.c. To provide opportunities for involvement of the public and stakeholders in plan development.	ACHIEVED	All formal public consultation and Issue Resolution mechanisms provided by the FMPM. GFI is actively engaged with the LCC and opportunities for RSAs were made available to tourist operators. No RSAs were signed.
<b>6.SILVICULTURE</b>		
6.a. To maintain & enhance forest ecosystem condition & productivity through silvicultural practices.	ACHIEVED	Our field assessments indicated that GFI implemented an effective silviculture program. The area renewed is in balance with the area harvested. FMP objectives to convert low quality or poorly stocked hardwood dominated sites to conifer or conifer dominated stands is being achieved through intensive silviculture practices per the FMP direction.
6.b.To maintain & enhance forest through silvicultural practices.	ACHIEVED	An effective silviculture program was implemented.

## **Appendix 3**

### **Compliance with Contractual Obligations**

Licence Condition	License Holder Performance
Payment of Forestry Futures and Ontario Crown charges.	Forestry Futures and Ontario Crown charges were made with one exception of 65m <sup>3</sup> of merchantable timber harvested during the audit period and left in the harvest block. This has been reported as wasteful practice and charges will be collected in 2021/22.
Wood supply commitments, MOAs, sharing arrangements, special conditions.	Licence commitments were generally met.
Preparation of FMP, AWS and reports; abiding by the FMP, and all other requirements of the FMPM and CFSA.	All reports were completed.
Conduct inventories, surveys, tests and studies; provision and collection of information in accordance with FIM.	All required surveys and data collection were completed as required and in accordance with FIM requirements.
Wasteful practices not to be committed.	There was one incidence of a wasteful practice. The wood was scaled in 2021 and payments to the Crown are being processed.
Natural disturbance and salvage SFL conditions must be followed.	No salvage operations were conducted.
Protection of the licence area from pest damage, participation in pest control programs.	No protection activities were conducted other than monitoring functions.
Withdrawals from licence area.	There was one licence area withdrawal. Approximately 64 hectares was removed for a Waste Disposal Site in Nipigon Township.
Action Plan and progress towards the completion of actions as reported in annual reports or status reports prepared under previous version of the IFAPP.	All IFAPP requirements relevant to action plans were met. The previous audit was approved in January 2015, and the Action Plan completed in March 2015. An Action Plan Status Report was completed in March 2017.
Payment of forest renewal charges to Forest Renewal Trust (FRT).	There are no outstanding Forest Renewal Trust charges (with the exception of the 65m <sup>3</sup> of merchantable timber noted in the report).

FRT eligible silviculture work.	Field investigations verified that payments out of the Trust were for eligible silviculture work.
FRT forest renewal charge analysis.	Forest Renewal Trust renewal charge analysis work was completed annually.
FRT account minimum balance.	The minimum balance of \$704,016 was met each year of the audit period. As of April 1, 2021, a surplus of \$220,601.60 was in the account.
Silviculture standards and assessment program.	GFI implemented a silviculture standards and assessment program.
First Nations and Métis opportunities.	Two First Nations are shareholders in the GFI. Several contractors employed Indigenous people. First Nations served on the LFLCC and participated in FM planning.
Preparation of a compliance plan.	Compliance Plans were prepared annually.
Internal compliance prevention/education program.	There are several active internal compliance/education programs in place.
Compliance inspections and reporting; compliance with compliance plan.	The compliance program conformed to priorities and directions in the Compliance Plan.
SFL forestry operations on mining claims.	There were no SFL forestry operations on mining claims.

## Appendix 4

### Audit Process

The IFA consisted of the following elements:

**Risk Assessment:** A risk assessment was completed in April 2021 to determine which IFAPP optional procedures would be audited. The risk assessment report was submitted to the Forestry Futures Trust Committee and the NDMNRF Integration Branch for endorsement and approval on April 22, 2021.

**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 GFI, and the NDMNRF District, Northwest Region Office, Forestry Futures Trust Committee and the LFLCC Chair in May 2021. Due to difficulties acquiring a helicopter the plan was revised to reflect a new field schedule in June 2021.

**Public Notices:** Public participation in the audit was solicited through on-line and newspaper notices in the Thunder Bay "Source". An attempt was made to contact an additional sample of resource-based tourism businesses. However, the Covid-19 pandemic resulted in a large percentage of those businesses not operating and it was difficult to locate individuals in that sector.

All Indigenous communities with an interest in the Forest were contacted by mail and invited to participate and/or express their views. Indigenous community leaders/forestry staff received several follow-up calls and/or e-mails.

All LCC members received an email explaining the audit process with an invitation to participate in the audit process. A sample of LCC members received follow-up telephone calls and interviews. Harvest contractors were invited by mail to participate in the field audit and/or provide comments to the audit firm.

**Field Site Selection:** Field sample sites were selected randomly by the Lead Auditor in May 2020. 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 GFI. The sample site selections were reviewed by GFI and NDMNRF District staff during a Zoom Meeting on May 25, 2021.

**Site Audit:** Two audit teams each spent 1.5 days field reconnaissance by road and a half day was spent doing aerial reconnaissance by helicopter. The field audit achieved a minimum 10% sample of the forest management activities that occurred during the audit period (see the IFA Field Sampling Intensity on the LF below). A sample of the areas



invoiced in the “*Forest Renewal Trust Specified Procedures Report*” (SPR) was also inspected to verify conformity between invoiced and actual activities<sup>29</sup>.

The field inspection included site-specific (intensive) and landscape-scale (extensive helicopter) examinations. The Closing Meeting was held on October 1, 2021.

Not every hectare of the area sampled is surveyed, as this is not feasible. Individual sites are 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 below. The audit team also inspected the application of Areas of Concern prescriptions, aggregate pit management, and rehabilitation and water crossing installations.

**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	2	2	100	0	GFI is not currently certified by third-party forest management certification organization and is therefore not exempt from IFAPP Commitment Principle procedures. The NDMNRF is also not exempt.
2. Public Consultation and FN/Métis Community Involvement & Consultation	5	5	100	2	

---

<sup>29</sup> Fiscal year 2019-2020.

3. Forest Management Planning	24	4	18	22	The Amethyst Highlands and Black Bay Peninsula have provided on-going management challenges with respect to access, wildlife habitat management, fisheries management (Amethyst Highlands), and wood supply. The BBP is the only area on the LF without all season road access. Road access is critical to the implementation of a sustainable forest management plan and the successful implementation of the Black Bay Enhanced Management Area Strategy (specifically wildlife habitat management).
4.0 Plan Assessment & Implementation	3	2	66	7	The large number of FRLs operating on the unit had the potential to pose challenges for the planning and delivery of forest management operations.
5. System Support	2	2	100	0	The auditee is not currently certified by third-party forest management certification organization and as such is not exempt from IFAPP System Support procedures. The NDMNRF is also not exempt.

6. Monitoring	9	5	56	8	The large number of FRLs requires that an effective compliance program be planned and implemented.
7. Achievement of Management Objectives and Forest Sustainability	0	0	0	5	
8. Contractual Obligations	6	6	100	20	

#### IFA Field Sampling Intensity on the Lakehead Forest

Activity	Total Area (Ha) / Number	Planned Sample Area (Ha)	Actual Area (Ha) Sampled	Number of Sites Visited	Percent Sampled
Harvest	13,171	1,320	1,820	26	14
Renewal (Artificial and Natural)	13,116	1,311	1,346	24	10
Site Preparation (Mechanical and Chemical)	7,168	716	765	12	11
Tending	4,238	424	464	12	11
FTG	14,184	1,418	1,419	23	10
Water Crossings (# of Crossings)	121	12	13	13	11
Aggregate Pits (# of Pits)	91	9	8	8	10
SPA Activities	2130	213	304	23	14

Source: GFI Forestry Shapefiles

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

#### Public Stakeholders

Public participation in the audit was solicited through a notice placed in the Thunder Bay “Source” print and digital media. No responses were received.

An additional sample of resource-based tourism operators were contacted directly by telephone. All respondents indicated that they had been made aware of FMP processes and opportunities to engage in the planning process. Some specific concerns/comments expressed to the audit team included:

- All were aware of the LFLCC and that there was a member representing their specific interest.
- Existing and future access, both for and against it, was the main identified issue.

### NDMNRF

NDMNRF District, Regional and Integration Branch staff who attended the field audit and/or had responsibilities on the LF were interviewed. General comments and concerns expressed by staff to the auditors were:

- Good relationship between the SFL holder and NDMNRF.
- A concern with weak forest products markets.
- Challenges of working with significant number of cottagers and general public in the delivery of the forest management program.
- Concerns with the timeliness and quality of the eFRI during the planning process.

### GFI

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

- A concern with weak forest products markets.
- Good working relationship with NDMNRF District and Regional staff.
- Concern with staff turnovers at MNRF.
- Good relationship with the LCC.
- Concern with lack of access to the BBP.
- Concern with the loss of access to wood in the AHEMA.
- Lateness and quality of the eFRI.
- Concern with the slow turnaround for the review and approval of amendments and other forest management products.
- Concern with the financial and silvicultural implications of productive land removals from the SFL and the timeframes for NDMNRF decisions on Aggregate Resources Act approvals.

### LFLCC Members

Individual members of LCC received a letter requested comment on the forest management program during the audit period and inviting their participation in the field

audit. Nine LCC members were interviewed. General comments made during interviews with members included:

- Satisfaction with the relationship between the LCC, GFI and the NDMNRF. The relationship was characterized as respectful and productive. Communication between the parties was excellent.
- Satisfaction with the overall management of the Forest.
- A concern that the NDMNRF needs to adjust the management priority between wood requirements and other uses of the Forest.

### First Nations and Métis Communities

All Indigenous and Métis 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 period. There was limited response due to the COVID-19 pandemic and associated office closures and the focus of the communities on Forests other than the LF. Comments expressed to the audit team included:

- The protection of endangered species during harvesting operations.
- A lack of financing and staff capacity to fully engage in forest management planning.
- General satisfaction with GFI and NDMNRF efforts to communicate with them.
- Confusion with respect to prioritizing invitations to participate in various audit and planning processes.
- Skepticism with respect to the value of their input.

### Harvest Contractors (FRLs)

Contractors were sent a letter inviting their participation in the field audit and inviting comment on forest management activities during the audit period. No responses were received.

**Appendix 5**  
**List of Acronyms Used**

## List of Acronyms Used

ACOP	Annual Compliance Operations Plan
AHA	Available Harvest Area
AHEMA	Amethyst Highlands Enhanced Management Area
ANSI	Area of Natural and Scientific Interest
AOC	Area of Concern
AR	Annual Report
AWS	Annual Work Schedule
BBP	Black Bay Peninsula
BBP EMA	Black Bay Peninsula Enhanced Management Area
BBP EMAS	Black Bay Peninsula Enhanced Management Area Strategy
BLG	Boreal Landscape Guide
B.Sc.F.	Bachelor of Science in Forestry
BNV	Bounds of Natural Variation
CCS	Conservation Concern Species
CLAAG	Careful Logging Around Advanced Growth
CCS	Conservation Concern Species
CFSA	Crown Forest Sustainability Act
CMU	Crown Management Unit
CPP	Caribou Protection Plan
CRA	Compliance Reporting Area
CRO	Conditions on Regular Operations
eFRI	Enhanced Forest Resource Inventory
ESA	Endangered Species Act
FAP	Forestry Aggregate Pit
FFTC	Forestry Futures Trust Committee

FIM	Forest Information Manual
FMP	Forest Management Plan
FMPM	Forest Management Planning Manual
FN	First Nation
FOIP	Forest Operations Information Program
FOP	Forest Operations Prescription
FOSM	Forest Operations and Silviculture Manual
FRL	Forest Resource Licence/Licensee
FRT	Forest Renewal Trust
FRMA	Forest Roads and Maintenance Agreement
FSC	Forest Stewardship Council
FTG	Free-to-Grow
FU	Forest Unit
GFI	Greenmantle Forest Management Inc
GIS	Geographic Information System.
Ha	Hectares
IFA	Independent Forest Audit
IFAPP	Independent Forest Audit Process and Protocol
KM	Kilometer
LFLCC	Lakehead Forest Local Citizens Committee
LCC	Local Citizens Committee
LTMD	Long-Term Management Direction
m <sup>3</sup>	Cubic Metres
MEA	Moose Emphasis Area
NDMNR	Ministry of Northern Development, Mines, Natural Resources and Forestry
NHIC	Natural Heritage Information Centre



PSW	Provincially Significant Wetlands
R.P.F.	Registered Professional Forester
RSA	Resource Stewardship Agreement
SAR	Species at Risk
SFMS	Sustainable Forest Management System
SFI	Sustainable Forestry Initiative
SEM	Silviculture Effectiveness Monitoring
SEMMO	Silviculture Effectiveness Monitoring Manual for Ontario
SFL	Sustainable Forestry Licence
SGR	Silvicultural Ground Rule
SIP	Site Preparation
SPF	Spruce-Pine-Fir
SPR	Specified Procedures Report
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</b> <b>R.P.F.</b> President Arbex Forest Resource Consultants Ltd.</p>	<p>Lead Auditor Forest Management Planning Harvest &amp; Silviculture Auditor</p>	<p>Audit Management &amp; coordination. Liaison with NDMNRF and FFTC. 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. 42 years of consulting experience in Ontario in forest management planning, operations and resource inventory. Previous work on 43 IFA audits with lead auditor responsibility on all IFAs. 27 FSC certification assessments with lead audit responsibilities on seven.</p>
<p><b>Mr. Al Stewart</b> Arbex Senior Associate</p>	<p>Public Participation including First Nations &amp; LCC Participation in Forest Management Process Forest Compliance Road Construction and Maintenance Forestry Aggregate Pits</p>	<p>Review documentation and practices related to forest management planning &amp; public participation/consultation processes. Review &amp; inspect AOC documentation &amp; practices. Review of operational compliance. Determination of the sustainability component.</p>	<p>B.Sc. (Agr) ISO 14001 Lead Auditor Training. FSC assessor training. 50 years of experience in natural resource management planning, field operations, policy development, auditing and working with First Nation communities. Previous work experience on 43 IFA audits.</p>
<p><b>Riet Verheggen</b> <b>R.P.F.</b> Senior Arbex Associate</p>	<p>Harvest and Silviculture Contractual Compliance Assessment of Achievement of Forest Management Objectives</p>	<p>Determination of the sustainability component. Review and inspect silvicultural practices and related documentation. Review and inspect documents related to contractual compliance.</p>	<p>B.Sc.F. 27 years of experience in natural resource management, policy development and auditing. Previous work experience on 6 IFA audits.</p>

		Review & inspect AOC documentation & practices.	
<b>Jon Peroff</b> Arbex Associate	Forest Compliance Contractual Obligations	Review of operational compliance.	Forest Technologist Certified FOIP Compliance Inspector. 29 years of experience working in forest industry in various capacities such as field operations and management planning. Previous work experience on 1 IFA audit.