

Temagami Management Unit

Independent Forest Audit

April 1st, 2016-March 31st, 2021



Final Report

Merin Forest Management

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1.0 Executive Summary

An Independent Forest Audit was conducted on the Temagami Management Unit covering the period April 1st, 2016-March 31st, 2021. The audit assessed the development of the 2019-2029 Forest Management Plan, implementation of the final three years of the 2009-2019 Forest Management Plan and the first two years of the 2019 Plan, and the performance of the Ministry of Northern Development, Mines, Natural Resources and Forestry (Ministry or auditee) in the management of the Temagami Management Unit. During the period of the audit, the auditee contracted many of the day-to-day forest management activities to a service provider: First Resources Management Group. While the auditee is ultimately responsible for the forest management on the Temagami Management Unit and addressing the findings in this audit, the audit also assessed the performance of the service provider, in its delivery of forest management services on behalf of the auditee, during the period of the audit.

The auditors conducted site inspections on the forest over five days and interviewed auditee Ministry staff, First Resources Management Group staff, Forest Resource Licence¹ holders' staff, affected Indigenous community members, and members of the Temagami Local Citizen's Committee. A representative of the pending tenure holder, Temagami Forest Management Corporation, was also interviewed during the audit although is not considered an auditee for this audit. The audit followed all government protocols for Covid in place at the time of the audit which accommodated field interviews with forest industry representatives, auditees, and audit observers but did not allow for office interviews.

The Independent Forest Audit is a regulatory audit conducted periodically on all Crown management units in the province with the goal of improving forest management. The audit of the Temagami Management Unit identified 14 findings for improvement and issued 1 best practice. Best practices are defined in the Independent Forest Audit Process and Protocol as exceptional practices or novel approaches to forest management. The majority of findings centered around the 2019-2029 Forest Management Plan. The best practice recognized the exemplary working relationship between all the parties involved in the delivery of the forest management on the Temagami Management Unit.

Auditors found all but one recommendation (Recommendation #6) from the previous audit was sufficiently addressed and have issued a finding to ensure this recommendation is fully addressed. Most of the 2009-2019 Forest Management Plan objectives were assessed by the audit team as being achieved. Those that were not achieved can be directly attributed to the low level of harvest on the forest. There is still outstanding area that has not been declared successfully regenerated but the North Bay District has, in the opinion of the audit team, made good progress such that the area not declared regenerated yet is within acceptable levels.

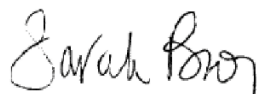
There were several very positive findings from the audit, including:

¹ Under the Crown Forest Sustainability Act, a Forest Resource Licence is required to use trees for commercial purposes on a Crown management unit. On the Temagami Management Unit, 5-year Forest Resource Licences have been issued to operators or mills with wood supply agreements/commitments. There are 5 5-year Forest Resource Licences on the Temagami Management Unit.

- Temagami Local Citizens Committee is a well functioning and committed group;
- Regeneration efforts are very successful as noted by the audit observations and regeneration surveys (formal and informal);
- Planning Team for the 2019-2029 Forest Management Plan included all First Nation communities and, those communities attended a majority of meetings;
- Harvest operations and water crossings were well done;
- There were no non-compliances reported during the audit period;
- Wood utilization has improved as a result of efforts by all parties working on the forest, and;
- Hiring of First Resources Management Group, as the service provider, brought the systems and processes they use on other management units to the Temagami Management Unit.

Despite the identified findings, on balance, the North Bay District, and its service provider (First Resource Management Group) have delivered a successful forest management program during the audit period. Generally, the legal and regulatory requirements have been met in the preparation and implementation of the 2019-2029 Forest Management Plan and the level of engagement by affected First Nations and the Local Citizens Committee on the Planning Team was excellent. The silviculture program is effectively renewing the forest and the increase in harvest levels in the last two years are providing economic benefits to local communities. There were no non-compliances recorded during the audit period or environmental damage arising from forest operations noted.

The audit team concludes that the management of the Temagami Management Unit was generally in compliance with the legislation, regulations, and policies that were in effect during the term covered by the audit, and the Ministry of Northern Development Mines Natural Resources and Forestry met its legal obligations. The forest is being managed consistently with the principles of sustainable forest management, as assessed through the 2021 Independent Forest Audit Process and Protocol.



Sarah Bros, R.P.F.
Lead Auditor

2.0 Table of Audit Findings

Concluding Statement:
The audit team concludes that the management of the Temagami Management Unit was generally in compliance with the legislation, regulations, and policies that were in effect during the term covered by the audit, and the Ministry of Northern Development, Mines, Natural Resources and Forestry met its obligations. The forest is being managed consistently with the principle of sustainable forest management, as assessed through the Independent Forest Audit Process and Protocol.
Findings:
1. Some road signs on the forest, designed to protect public safety, are not compliant with the Occupational Health and Safety Act Section 24(1) and the Public Lands Act Section 59(4).
2. The 2019-2029 Forest Management Plan is missing the required elements and important discussions required to fully meet the 2017 Forest Management Planning Manual and the management strategy for the Plan.
3. Amendment information posted to the public Natural Resource Information Portal was found to be incomplete, missing amendment decision/approvals, and, in most instances, the same information repeated under different tabs.
4. The Social and Economic description in the forest management plan provided little value to the development of the management strategy for the Temagami Management Unit.
5. No alternative road corridors were presented for the Clement Road and Banting Chamber Road as required in the 2017 Forest Management Planning Manual.
6. The 2019-2029 Forest Management Plan does not adequately describe the degree to which the quality or quantity of habitat for species at risk could be affected by forest management operations, nor the potential implications of Species At Risk on forest management.
7. The 2019-2029 Forest Management Plan, is missing a forecast of expenditures for Renewal Support and associated discussion in the text to support the renewal program proposed in the FMP as required in the Forest Management Planning Manual.
8. The 2019-2029 Forest Management Plan text does not include a discussion or explanation for objectives that do not have targets or timing of assessment making it difficult to meaningfully assess objective achievement for those objectives and/or indicators.
9. Not all clearcut harvest blocks met the residual retention requirements, for species representation or size, as required in the Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales.
10. Existing tree improvement assets were not included in the 2019-2029 Forest Management Plan.
11. There are discrepancies between the kilometers reported as constructed in the 2017-2018 and 2019-2020 Annual Reports and what was invoiced to the Provincial Roads Funding Program.
12. Poor grading practices are contributing to sediment flow into streams at water crossings.

13. The 2019-2020 annual report does not include a discussion on progress on Management Objective 8 (invasive species monitoring) as per the 2019-2029 Forest Management Plan.

14. The objective to reduce herbicide use in the 2019-2029 forest management plan does not propose a target and, as such, cannot address concerns raised by the public and affected Indigenous communities.

Best Practices:

1. North Bay District Ministry of Northern Development Mines Natural Resources and Forestry staff, First Resources Management Group service provider staff, Temagami Local Citizens Committee, representatives of affected Indigenous communities, and forest industry partners have shown a high level of cooperation and commitment to quality forest management practices and, respectful regard for the other users on the Temagami Management Unit.

3.0 Introduction

3.1 Audit Process

The Crown Forest Sustainability Act and Ontario Regulation 319/20 directs the Minister of Northern Development Mines Natural Resources and Forestry (Ministry) to conduct a forest audit of every management unit at least once every ten to twelve years. These regulatory audits assess compliance with the Crown Forest Sustainability Act, the Forest Management Planning Manual, the forest management plan, and, where applicable, the terms and conditions of the Sustainable Forest Licence. The 2021 Independent Forest Audit Process and Protocol provides the guidance in meeting Ontario Regulation 319/20. The audit scope is laid out by the Ministry in the mandatory audit criteria (Appendix A of the Independent Forest Audit Process and Protocol). The Independent Forest Audit Process and Protocol is also available online at [Independent forest audit process and protocol | ontario.ca](https://www.ontario.ca/independent-forest-audit-process-and-protocol). The Protocol is organized into Principles, Criteria, and Procedures. An audit procedure may be ranked as mandatory or optional depending on its impact on forest sustainability. As part of the audit process, auditors conducted a risk assessment, specific to the management unit, to determine if any of the 73 optional audit criteria should be included in the scope of the audit. The Ministry and Forestry Futures Trust Committee accepted the final audit scope. Any further changes to the scope are subject to agreement between Forestry Futures Trust Committee, the Ministry, and the Lead Auditor. The risk assessment for the Temagami Management Unit resulted in 15 optional procedures being included in the scope of this audit. Appendix 4 provides additional detail on how the audit process was followed, the approach used in the risk assessment, and the field audit sampling intensity.

The audit covers five years from April 1st, 2016 – March 31st, 2021 and includes the last three years of implementation of the 2009-2019 Forest Management Plan and the development and implementation of the first two years of the 2019-2029 Forest Management Plan. The audit examined a representative sample of all the forest management activities that took place during the audit period as well as the forest management planning process for the 2019-2029 Forest Management Plan. Merin Forest Management (auditor) utilized a four-person audit team to conduct this audit. Appendix 6 contains the profiles of the audit team members, their responsibilities, and professional qualifications for this audit.

3.2 Management Unit Description

To set the context for this audit report, it is important to understand the dynamics and issues associated with the forest. The Temagami Management Unit is a Crown unit managed by the North Bay District of the Ministry within the Northeast Region. During the audit period day-to-day management activities, including preparation of annual work schedules and the 2019-2029 Forest Management Plan, were prepared under a service level agreement with First Resource Management Group. Compliance monitoring is also under a service level agreement with First Resources Management Group. Harvesting and road building over the audit period has been through five-year Forest Resource Licences. Also, there are five wood supply commitments; Rockshield Engineered Wood Products, Georgia Pacific North Woods LP, Temagami Cedar,

Goulard Lumber Limited, and Rayonier AM Canada and, one conditional commitment (i.e., supply letter) to KD Quality Pellets Ltd. on the Temagami Management Unit.

The Temagami Management Unit is situated approximately 100 km north of the city of North Bay centered on the village of Temagami. The communities of New Liskeard, Haileybury, Cobalt, Latchford, Dymond, Harris, Hudson, and Coleman are located within the management unit. The management unit is bordered on the north by the Temiskaming Forest, on the east by the Quebec border, and on the south and west by the Sudbury and Nipissing Forests (Figure 1). The Temagami Management Unit lies within the transition zone between the Boreal forest region and the Great Lakes-St. Lawrence forest region supporting a variety of vegetation types found in both forest regions. The management unit also falls within the traditional territories of the Teme-Augama-Anishnabai, Temagami First Nation, Matachewan First Nation, and the Timiskaming First Nation.

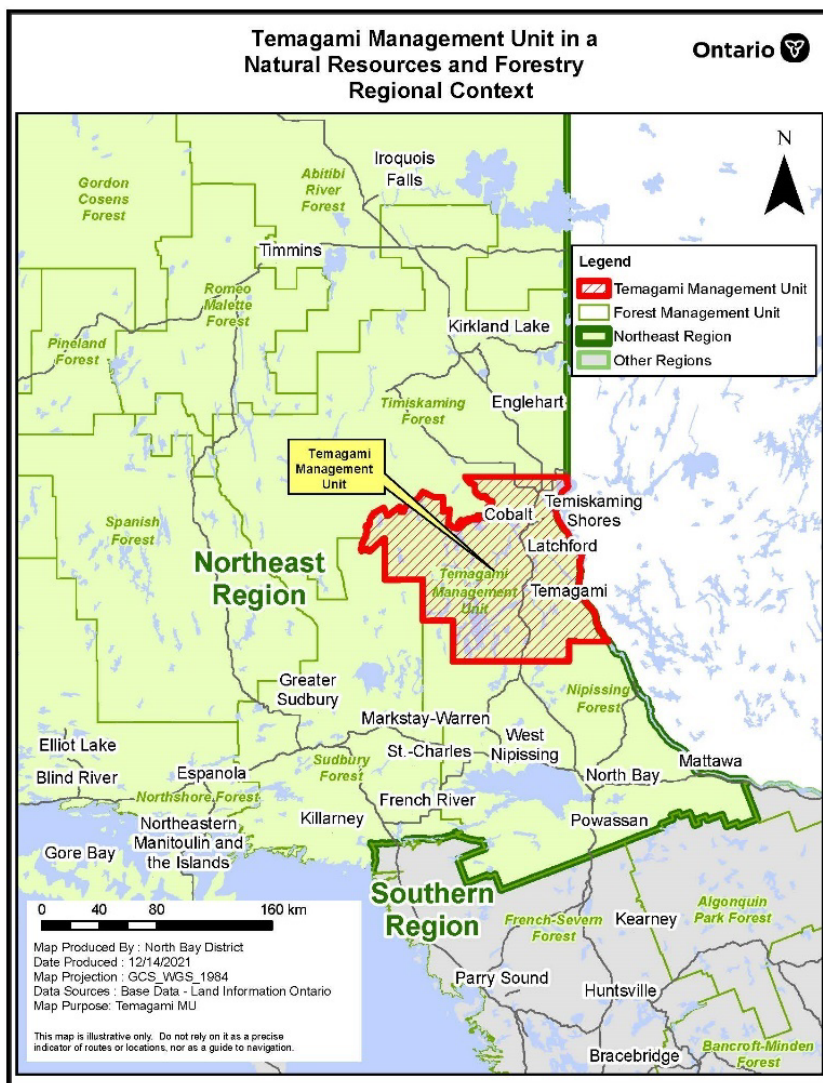


Figure 1: Location of the Temagami Management Unit

Most of the 584,999 hectares of the Temagami Management Unit is Crown land (94%) with approximately 2/3 available for forest management and the balance classified as provincial park, conservation reserve, or 'no forestry' land use zones. Table 1 provides a breakdown of the Crown land available for forest management activities.

Table 1: Temagami Management Unit Area Description (from FMP-1 2019 FMP)

Land Class	Managed Crown Land (hectares)	Total Management Unit Area (hectares) ¹
Water	93,029	105,215
Non-forested ²	3,095	4,396
Non-productive ³	18,322	23,381
Productive Forest ⁴	342,327	451,511
Production Forest ⁵	340,792	449,390
Total ⁶	456,774	584,503

1. All land ownerships

2. Includes area capable of growing trees but currently does not have trees on it.

3. Includes area incapable of growing trees (i.e. bogs, swamps, treed muskeg, rock).

4. Includes all forested area including islands, poor sites.

5. Includes all Crown managed area (forested and not yet regenerated) available for forest management minus inaccessible or inoperable forest.

6. Includes all water, non-forested, non-productive, and productive forest area

Figure 2 displays the area by age class for the major forest types on the Temagami Management Unit. The range of forest types is reflective of the variety of tree species found in the management unit because of the transition zone between the Boreal and Great Lakes-St. Lawrence forest regions. The forest management plan distinguishes between mixedwood clearcut and mixedwood uniform shelterwood, as displayed in Figure 2 because the tree species present in each forest type require different harvest systems be employed.

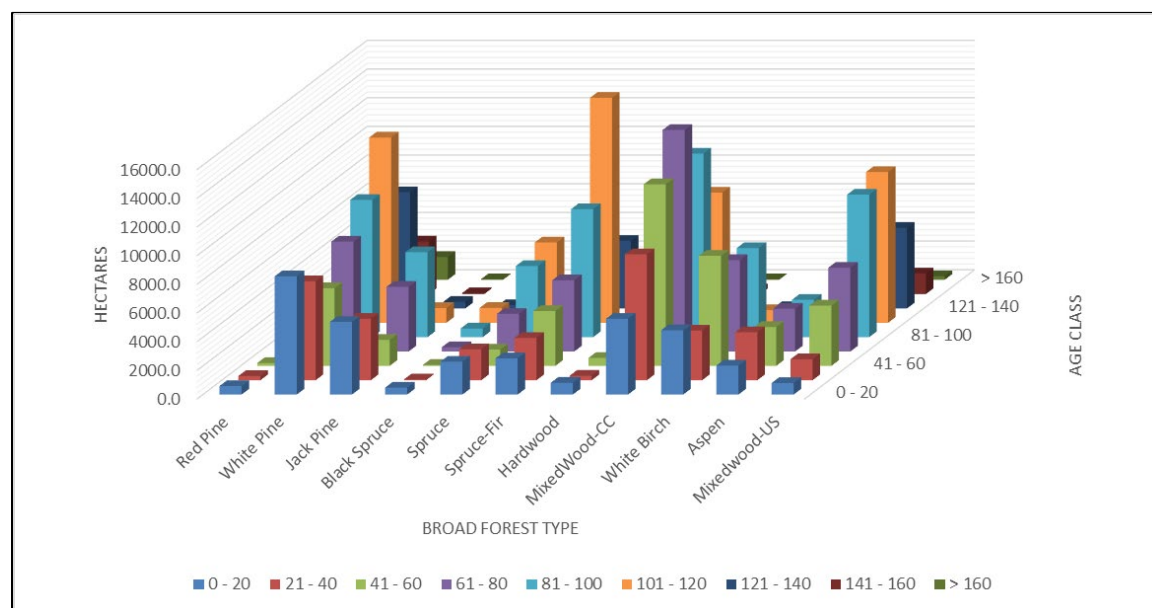


Figure 2: Temagami Crown Managed Forest Age Class Distribution

A little over half (52%) of the Crown managed area is in a mature to overmature state. One of the longstanding issues on the Temagami Management Unit has been the underharvest. This was identified in the previous two Independent Forest Audits, was raised again in this audit, and directly contributes to the current forest condition. Table 2 presents a summary of actual volumes harvested in the past three plan periods. This table does not include the volumes from “bridging”² area. The provincial wood measurement and reporting system are not designed to distinguish between volumes from bridging areas and volumes from regular planned harvest areas.

Table 2: Planned vs. Actual Volumes wood harvested 1999-2019

Volumes (m3)			
Plan Period	Planned Harvest	Actual Harvest	Percent Harvested
2009-2019	290,511	86,341	29.7
2004-2009	255,367	62,213	24.4
1999-2004	287,073	130,524	45.5

Source: 2018-2019 Annual Report (Year 10)

The Temagami Management Unit has, for decades, been a popular destination for outdoor enthusiasts with opportunities for many types of recreational activities including cottaging, fishing, hunting, hiking, camping, canoeing, horseback riding, and ATVing. Also, there are more than 30 bear management areas, greater than 28 trapline areas in addition to many tourism camps, summer camps and rental cabins. The management unit has a history of land-use conflicts, including anti-logging protests in the late 1980s. Census Canada (2011) reported the total population impacted by the Temagami Management Unit is more than 175,000³ people. The municipality of Temagami is located within the Management Unit and represents 0.46% of the total population impacted by the Temagami Management Unit.

During the development of the 2019-2029 Forest Management Plan, a strategic management zone (Lands Set Aside) was identified in consultation with the Temagami First Nation. The Lands Set Aside is part of a settlement negotiation with the provincial government and the Temagami First Nation. Plan objectives for this area were included in the forest management plan with the intent of developing forestry capacity within the Temagami First Nation. The Lands Set Aside were included in the strategic modelling and a sustainable harvest level was calculated as part of the Long-Term Management Direction (Management Strategy) for the forest.

Like all forests, the Temagami Management Unit provides habitat for a variety of wildlife species that depend on the diverse habitat found on the management unit. Many of the species common to the management unit also provide recreational opportunities such as hunting, viewing and commercial opportunities such as trapping and outfitting. Moose, white-tailed deer, and black bear are the main large game species found in the management unit. The Temagami

² Bridging area represents harvest blocks that were not completed in the current plan and are carried over into the next plan.

³ Taken from the Socio-Economic Analysis in the 2019-2029 Forest Management Plan for the Temagami Unit

Management Unit also provides habitat for several wildlife species that are classified as at-risk either provincially or federally. The 2019-2029 Forest Management Plan lists 19 species at risk of which 10 are listed as Special Concern, 3 are listed as Threatened, and the balance is listed as Endangered.

4.0 Audit Findings

4.1 Commitment

This Principle was not audited based on the risk assessment and the fact the Ministry has strong policies and procedures that guide forest management in this province. However, during the audit, the topic of commitment came up repeatedly such that the report would be remiss if we did not include some commentary.

The Temagami Management Unit is one of the few remaining Crown management units in the province. It has been announced that the unit will soon be transitioned to a Local Forest Management Corporation that will be responsible for forest management activities under a Sustainable Forest Licence. While the future tenure for this management unit has been decided the North Bay District staff continue to demonstrate a strong commitment to the principles and practices of good forest management and have done so transparently. This commitment is best exemplified in the relationship and support for the Temagami Local Citizens Committee, Indigenous communities and the collaborative working relationship with the forest industry.

Auditors issued a **Best Practice (#1)** to recognize the efforts of the North Bay District staff and its partners (forest industry, Local Citizens Committee, and service provider – First Resources Management Group) for their commitment to sound forest management on the Temagami Management Unit.

4.2 Public Consultation and Indigenous Involvement

4.2.1 Local Citizens Committee

The audit team attended a regular meeting of the Temagami Local Citizens Committee on 17th June 2021 and two members of the Committee attended the field portion of the audit. Input into the audit was provided at the meeting, during telephone interviews with 6 of the 11 committee members, through email correspondence, surveys, and in-person discussions during the field audit.

As required, the Committee membership represents a range of community interests including Indigenous representation by the Temagami First Nation. Meetings were held with increasing frequency throughout the planning process with a total of 24 meetings held over the three-year timeframe. The audit sample of meeting minutes indicated there was always a quorum in attendance. While the focus of the Temagami Local Citizens Committee is primarily forestry matters (e.g., Annual Work Schedules, Annual Reports, forest management planning or amendments), auditors noted the agendas often include additional topics specific to the Temagami Management Unit such as the public perception of forestry.

A review of the Temagami Local Citizens Committee Terms of Reference indicates they were last ratified on April 9, 2021. The audit noted that several members have served on the

Temagami Local Citizens Committee for more than twenty years. The most recent appointment, by the North Bay District Manager, was in 2017. All of the members interviewed had extensive knowledge of the Temagami Management Unit and a keen interest in forest management. It is also noteworthy that the Resource Management Supervisor for the North Bay District often attended these meetings.

The auditors were impressed with the interest and involvement of the Temagami Local Citizens Committee and their knowledge of the issues facing the Temagami Management Unit. Auditors found a good level of involvement and communication with the North Bay District staff and their service provider (First Resources Management Group).

Additional positive aspects auditors noted with the Committee's investment in the Temagami Management Unit include:

- The length of time many Committee members have served on the committee;
- Well run and organized meetings;
- The effective representation of rotating members of the Committee on the 2019 forest management plan Planning Team so that everyone had a good understanding of the plan;
- The addition of an extra Committee member on the Planning Team representing municipalities;
- The high level of commitment and participation of the Committee members in training, field tours, forest management planning, and Long-term Management Direction presentation to the Regional Director, and;
- A general positive self-assessment of the Committee included in the Supplementary Documentation of the 2019 forest management plan that indicated general satisfaction with the structure of the Committee, its involvement in the development of the plan and where it could be more effective in the future.

4.2.2 Indigenous Communities

The forest management plan identifies four Indigenous communities that have traditional territory within the boundaries of the Temagami Management Unit:

1. Temagami First Nation
2. Teme-Augama-Anishnabai
3. Matachewan First Nation
4. Timiskaming First Nation

All of the communities were formally contacted, as required, at various stages during the planning process and were provided notifications of information sessions held during planning. All communities were also contacted during annual work schedule planning and were provided opportunities to review and comment on areas scheduled for operations. The Terms of Reference for the 2019-2029 forest management plan lists representatives from Temagami First Nation, Timiskaming First Nation, Teme-Augama-Anishnabai and Matachewan First Nation as members of the Planning Team. A review of planning team minutes indicated that, at all but one

meeting, there was at least one Indigenous representative in attendance. Of note, in addition to a Planning Team representative, the Temagami First Nation also had representation on the Local Citizens Committee and representation as a Forest Resource Licence holder. The Metis communities did not respond to invitations to participate in the development of the 2019-2029 forest management plan for the Temagami Management Unit and were not represented on the Planning Team.

North Bay District established an Indigenous Working Group in 1998 to address areas of problem-solving, education and training. The Working Group involved the forest industry, government, and Indigenous communities. The Working Group evolved into the Indigenous Task Team for the development of the 2019-2029 Forest Management Plan meeting 15 times over the three-year planning period. Supplementary Documentation 6.1 (c) contains a summary of the meetings and open houses held in each community during the development of the 2019-2029 Forest Management Plan.

Auditors were impressed with the level of involvement by Indigenous communities, with traditional territory on the Temagami Management Unit, in the development of a forest management plan and commend the efforts of the North Bay District staff and service provider in successfully providing a forum where Indigenous people feel comfortable and their input important.

4.3 Forest Management Planning

4.3.1 Forest Management Planning

The audit team spent considerable time reviewing the 2019-2029 Forest Management Plan. The Plan was developed using the 2009 Forest Management Planning Manual up to the endorsement of the management strategy and then followed the 2017 Forest Management Planning Manual for the draft and final Plan submissions.

The development of the 2019-2029 Forest Management Plan involved the collective efforts of a multi-disciplined team comprised of District staff, First Resources Management Group staff, Local Citizens Committee delegates, the forest industry and Indigenous community representatives all supported by Ministry Regional Specialists. Generally, the plan met the requirements of the applicable Forest Management Planning Manual with a few exceptions around missing discussion in the text on Species at Risk (**Finding #6**) and missing discussion in the text and silvicultural expenditures table items for renewal support (**Finding #7**) and there was no indication that alternatives for two roads were presented to the public (**Finding #5**).

Development of management objectives included a review of the previous objectives, results of Desired Forest and Benefits meetings with stakeholders and Planning Team requests. The objectives for the 2019 Plan were expanded from those in the 2009 Forest Management Plan to include objectives specific to the Lands Set Aside as well as landscape-level objectives specific to the new Forest Management Guide for the Great Lakes-St. Lawrence Landscapes. The review of this Plan highlighted several areas in the plan that would have benefited from a fuller discussion or the inclusion of additional information including:

- **Finding #2** - some key elements/discussions required to adequately address objective achievement are missing;
- **Finding #4** – socio-economic description is lacking relevant local data;
- **Finding #8** – a lack of desirable levels, indicators or targets will complicate the assessment of objective achievement in the future;
- **Finding #10** – tree improvement assets have not been included in this Plan;
- **Finding #13** – there is no information on how invasive species or climate change will be reported on, and;
- **Finding #14** – there is no discussion on how herbicide use will be reduced.

Planned harvest and access, and Conditions on Regular Operations planning were assessed by the audit team and found to meet all of the requirements. The audit team reviewed the planned renewal, tending and protection operations, and forecast of silvicultural expenditures as presented in the 2019-2029 Forest Management Plan. With the exception (**Finding #7**) around renewal support, the balance of required elements was in conformance with the applicable Forest Management Planning Manual and was sufficient to treat the proposed operations for the period of the plan.

The Silvicultural Ground Rules describe how a specific forest type is harvested (e.g., clearcut or uniform shelterwood), and outline silviculture treatment options and standards for regeneration success. The Ground Rules were updated, with guidance from the Northeast Regional Science Specialists, to meet the requirements of the 2017 Forest Management Planning Manual and the changes in forest classifications (i.e. forest units). The Silvicultural Ground Rules appropriately represent a balance between science and local knowledge based on historical regeneration results.

Auditors reviewed the Area of Concern planning and found the description and discussion in the forest management plan for Species At Risk did not fully meet the regulatory requirements (**Finding #6**). It is worthy to note, there were no species at risk that required a Plan amendment, to create a new Area of Concern prescription, during the audit period. Public comments related to values protection comprised over 30% of the comments with four of those comments resulting in a formal issue resolution process. Auditors did not audit the issue resolutions or the process because an initial review found the issues were either resolved or required no change to the approved forest management plan. A review of the suite of public comments indicated there were many comments about access, old-growth red and white pine, herbicide use and climate change. In our review of the 2019-2029 Forest Management Plan, auditors noted that some of these concerns were included in the management objectives table (FMP-10) but were not fully addressed in the text of the plan resulting in two audit findings related to herbicide use (**Finding #14**) and climate change (**Finding #13**).

The forest management plan also includes a “plan within a plan” for the forest management of the Lands Set Aside for the Temagami First Nation/Teme-Augama Anishnabai land claim. The Lands Set Aside plan contained most of the elements required by the Forest Management Planning Manual including a sustainable harvest level that was determined concurrently with the management strategy for the Temagami Management Unit. A separate suite of management

objectives was developed based on community Desired Forest and Benefit meetings and a set of Silviculture Ground Rules tailored to the community's desire not to rely on the use of herbicides.

During the audit period 35 administrative plan amendments were processed to address changes in planned activities (e.g., adjusting bridging area), minor planning oversights (e.g., adding a seeding option to the Silvicultural Ground Rules) and inclusion of new information/values (e.g., Regional Wood Utilization Strategy). All of the amendments were reasonable and met the requirements of the applicable Forest Management Planning Manual however, in our review of the amendment documents posted to the Ministry's Natural Resource Information Portal we discovered an issue with the publicly available information and have issued a finding (**Finding #3**) to ensure this is corrected.

While the audit found several shortcomings with the 2019-2029 Forest Management Plan, there were sections of the Plan that, in the auditor's opinion, were very well done. Specifically, the Analysis Package contains the detailed analysis of the development of the management strategy, the Lands Set Aside Forest Management Plan, and the Local Citizens Committee Report. Another highlight, discussed in Section 4.2.2, was the makeup and size of the Planning Team. The auditors have not often seen such good attendance at meetings or, the number of guests that attended key planning team meetings and commend both the North Bay District and the service provider for their efforts to accommodate this large and diverse group through a very complex planning process.

4.3.2 Annual Planning

An annual work schedule was prepared and submitted for each year of the audit period. All of the submissions were on time, were reviewed by affected Indigenous communities, were presented to the Local Citizens Committee, and met all of the requirements of the appropriate Forest Management Planning Manual.

4.4 Plan Assessment and Implementation

4.4.1 Harvest

The audit reviewed the annual report data for the actual area harvested during the audit period: 2,356 hectares were reported as harvested between 2016-2020. Although the area harvested for the 2020-2021 year has yet to be reported, auditors were given an estimate of approximately 3,000 hectares that will be reported as harvested in year five of the audit period. During the audit period, the majority (approximately 5,054 hectares) of the area was harvested in the first two years of the 2019-2029 Forest Management Plan. As discussed later in the report, Section 4.7.1, harvest during the 2009-2019 Plan achieved only 25% of the forecasted planned harvest. This issue of underharvest was the subject of recommendations in the previous two audits. The issue was raised again in this audit in our discussions with the Temagami Local Citizens Committee. Auditors spent a considerable amount of time investigating how the auditees were dealing with this issue and if the Audit Action Plan for the 2016 Independent Forest Audit satisfactorily addressed this issue.

Wood utilization on a management unit is a complex subject because not all tree species have a market, or the market is not economical (i.e. cost of getting the wood to a mill is greater than the price the mill is willing to pay). Since the Temagami Management Unit is in the transition zone between the Boreal and Great Lakes-St. Lawrence forest regions, many of the tree species are on the edge of their range and may not be of a quality or size that can be marketed or there is not an economical market for some tree species. In addition, there are significant operational challenges in some areas of this Forest because of topography, the number of lakes and the lack of roads due to land use constraints (e.g., Enhanced Management Areas).

In response to the previous Independent Forest Audit recommendations on underharvest on this forest, the North Bay District and its service provider have been working on a creative solution that would make those underutilized harvest blocks more attractive to harvest contractors. The auditors encourage the Ministry to continue these efforts.

Also, during the audit period, EACOM Timber Corporation's Elk Lake sawmill made a strategic change in their wood supply strategy by increasing rates to their contractors for purchased wood, to encourage more harvest on the Temagami Management Unit. From a cost-benefit perspective, EACOM'S efforts have made the Temagami Management Unit a more attractive wood source than surplus wood from surrounding forests. The EACOM mill is projected to utilize approximately 46% of the available wood supply (not including open market and the Lands Set Aside area) during the 2019-2029 period. Furthermore, EACOM has been proactive in contacting hardwood operators on the forest, who traditionally bypass predominantly conifer stands, and negotiating agreements to harvest those conifer blocks. The EACOM strategy also encourages contractor and labour stability to ensure equipment and operators are available to work on the Temagami Management Unit.

Additionally, to promote better wood utilization and increase harvest levels, Georgia Pacific, a hardwood mill, has offered unutilized wood from their forest resource licence area to other operators/licensees in the forest.

The North Bay District encouraged the facilitation of these business strategies via meetings, phone calls and emails with forest resource licence holders and wood supply agreement holders on the Temagami Management Unit. All of the above is helping to deal with Recommendation #10 from the previous audit.

Auditors are of the opinion that issuing another finding to improve wood utilization will not resolve the problem. The concerted efforts by everyone involved have resulted in an improved level of harvest early in this Plan. This is tempered by the knowledge that at the start of a new forest management plan it is not an uncommon occurrence for utilization to be high. As noted in the Year 10 Annual Report; *"Actual harvest area appears to increase at the start of each period, and decrease throughout the plan, indicating the preferred harvest area is selected at the start of each plan and the remaining harvest area is more difficult to harvest economically."* It is our hope that this level of harvest will continue for the balance of the Plan and that the transfer of responsibilities to the Local Forest Management Corporation (Temagami Forest Management Corporation) will continue to focus efforts on utilization and to continue to look for markets for those tree species that do not have markets currently.

During the field audit, auditors found Forest Operation Prescriptions were, for the most part, being followed. Shelterwood stands visited on Day 4 of the field audit (e.g., Belfast 70 harvest block), observed residual basal areas and residual damage were within the targets outlined in the 2019-2029 Forest Management Plan and consistent with the associated Silvicultural Ground Rules.

However, in the clearcut with standards harvest blocks (e.g., Lundy 141 harvest block) auditors noticed that, although residual patches were left as required, individual residual trees did not always meet the Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales (**Finding #9**).

4.4.2 Silviculture

Silvicultural operations (i.e., planting, mechanical site preparation, aerial chemical site preparation, aerial chemical tending) viewed during the audit were successful, the prescriptions were appropriate for the specific site conditions and were consistent with the Forest Operations Prescription. Records on each site were accurate and complete.

Table 4 presents the summary of silviculture operations undertaken during the audit period. No aerial seeding was conducted in 3 of the 5 years in the audit period, and no chemical ground or manual tending was completed in the audit period. The field audit viewed 56% of the aerial chemical tending and 100% of the chemical mechanical site preparation conducted during the audit period. Auditors found both treatments were successful in achieving the objective of protecting the regeneration. The majority of renewal employed during the audit period was via natural regeneration (77%). This amount is consistent with the Silvicultural Ground Rules for areas harvested that do not require planting to achieve regeneration success. The audit viewed 26% of the total area declared Free-to-Grow (successfully regenerated) including one site that was not Free-to-Grow, during the audit period; of that 71% was natural regeneration. There were no exceptions to the silvicultural guides identified in either the 2009-2019 Phase II Forest Management Plan or the 2019-2029 Forest Management Plan.

Table 3: Summary of Silviculture on Temagami Management Unit 2016-2021

Treatment Type	Audit Years					Total
	2016	2017	2018	2019	2020*	
Seeding			39		645	684
Natural	4122			139		4261
Plant	13	392	159			564
Mechanical Site Preparation	367				447	814
Aerial Chemical Site Preparation					188	188
Chemical Ground Tending						0
Manual Tending/Thinning						0
Aerial Chemical Tending			405		510	915
* seeding figures represent Forestry Futures Trust project						

Based on auditor observations of regeneration activities, areas declared successfully regenerated and areas not yet declared successfully regenerated, auditors have no issues or

concerns with the silviculture program as implemented. In our opinion, trees are responding successfully to treatments and the forest is growing well.

Auditors viewed 13% of the 2018 Forestry Futures Trust wildfire regeneration project which was the only Forestry Futures Trust project undertaken during the audit period. Although too early to assess the success of the seeding project, auditors saw evidence of young seedling germinates (1-2 years old) in the project area.

4.4.3 Access

During the audit period, excluding 2020-21 which has not been formally reported, there were:

- 8.9 km of primary road constructed
- 0 km of branch road constructed
- 15.6 km of operational road constructed

The Temagami Management Unit is heavily influenced by the Temagami Land Use Plan/Crown Land Use Policy (CLUPA), where recreational use and limiting access are priorities. The North Bay District ensured gates and timing restrictions were in place, during the audit period, on roads to protect recreational use. Road use strategies were being implemented as defined in the forest management plan and land use plan. Our review of Table FMP-18 Road Construction and Use Management, road planning documentation and the roads section of the Plan confirms road use strategies as outlined in the Land Use Plan are being implemented on:

- Lundy road where access signs were used to limit access, and
- on Eagle Lake Road where a gate was being used to limit access.

The field audit revealed that roads are generally in good condition, it was noted that grading on the Red Squirrel Road and Eagle Lake Road had significant grading berms as reported in

Finding # 12.

Monitoring of access roads and water crossings are being completed and is discussed in 4.6.1 Compliance Monitoring. An example of this was noted at water crossing #5594 where the recent rainfalls lead to a washout on the Red Squirrel primary road. This washout stranded public users of the forest. Monitoring by EACOM and its contractor reported the washout immediately to First Resource Management Group who then immediately contacted North Bay District. The result was a culvert repair within 48 hours of the washout.

During interviews, EACOM made it clear to auditors that Ontario's Provincial Forest Access roads funding was critical to accessing harvest blocks for the Elk Lake Mill. EACOM has proactively sought dollars for construction to improve access to harvest blocks (e.g., Eagle Lake extension).

4.4.3 Values Protection

Given the low level of operations during the audit period, many of the Area of Concern prescriptions in the forest management plans were not utilized. Most of the Area of Concern

prescriptions checked in the field were for water crossings. As discussed in Section 4.3 and **Finding #6**, auditors found the 2019-2029 Forest Management Plan was missing some listed Species At Risk and as such the Plan does not include protection for those missing species in the Area of Concern prescriptions. While not a regulatory requirement for a forest management plan to include all listed Species At Risk that might occur on the management unit, the audit team believes that including Area of Concern prescriptions for all listed species on the Temagami Management Unit is good business practice. If a Species At Risk, that does not have an Area of Concern prescription in the Plan, is encountered in the field, all operations will likely cease until a prescription is developed, presented to the public and approved. This will likely result in costly delays to forest management activities, which could have been avoided if Area of Concern prescriptions had been developed during the forest management planning process. The auditors strongly encourage the Ministry to develop such Area of Concern prescriptions, for the balance of listed Species At Risk on the Temagami Management Unit before the next Plan.

Auditor's observations found Area of Concern prescriptions were properly implemented and the values or habitat they were designed to protect were properly protected as per the Forest Management Planning Manual, the Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales and any other applicable guides.

4.5 System Support

The audit found document control, training, and education of North Bay District staff to be well done. Early in the audit period, the Ministry of Northern Development, Mines, Natural Resources and Forestry determined it was no longer structured or resourced to deliver direct forest management services (e.g., forest management planning) on Crown-managed units such as the Temagami Management Unit. In 2017 the District contracted First Resource Management Group to develop the 2019-2029 Forest Management Plan, prepare annual work schedules and annual reports, implement the forest management plans including silviculture activities, and conduct compliance monitoring.

North Bay District retained responsibility for oversight of these activities and any contracts associated with the annual work program (e.g., tree planting, regeneration surveying, etc.). In its capacity as the service provider, the work and processes used by First Resource Management Group were subject to audit. Auditors reviewed the record systems used to track all forest management activity and, for the most part, found them to have a good level of detail. For example, the silviculture data allowed auditors to track all activity on a forest stand right to the declaration of regeneration, including changes to prescriptions or retreatments. Auditors discovered that the water crossing inventory file has no information for monitoring year since 2017 but note that there is a comprehensive monitoring program of all roads and water crossings, as described in Section 4.6.1 of this report, and have chosen not to issue a finding as this oversight is minor.

4.6 Monitoring

4.6.1 Compliance Monitoring

The auditee's compliance program including monitoring, inspecting, and reporting of forest operations was delivered by First Resource Management Group during the audit period. A total

of 162 compliance inspections, including joint inspections with forest resource licence holders, were completed as follows:

- Access = 87
- Harvest = 63
- Maintenance = 2
- Renewal = 10

There were no non-compliances reported during the audit period. There were only 6 operational issues created during the 2016-17 operating year, and all were confirmed as non-issues. As per the Forest Compliance Handbook (2014), operational issues are identified where forest operations deviate from the forest management plan but are correctible. All operational issues have the potential to be a non-compliance if not corrected. During the field audit, auditors observed several sites that did not meet the residual requirements for size and species representation and have issued a finding (**Finding #9**) to ensure this issue is corrected in future. In our review of compliance inspections for these blocks, this issue was not identified, however, auditors are of the opinion that **Finding #9** will address this issue from a compliance perspective as well as meet the forest management plan.

The Temagami Management Unit Compliance Plan must adhere to the Temagami Land Use Plan/Crown Land Use Policy Atlas adding another complexity to the compliance program. The Temagami Management Unit has fifty-nine management areas largely dealing with recreational use and access conditions and restrictions.

Auditors reviewed each of the compliance plans included in the annual work schedules covered by the audit period. The Compliance Plan, as described in the 2019-2029 Forest Management Plan, is made up of two parts:

1. the 10-year strategic plan outlining objectives and strategies for compliance monitoring; and,
2. the annual compliance schedule of actions based on a risk assessment as part of the annual work schedule referred to as the Annual Compliance Operations Plan.

Auditors noted that all annual work schedules include a Compliance Performance Review that briefly describes remedial actions from the previous operating season. The text also described the pre-operation (i.e., start-up) meetings to educate operators and minimize risk for the potential of an operational non-compliance.

Another important part of the Compliance Plan is the notification system describing block status. The annual work schedule described the web-based notification system, and monthly reports were completed by First Resource Management Group to reconcile and track block status.

In terms of compliance frequency outlined in the 2019-2029 Forest Management Plan compliance inspections for harvest, maintenance, renewal was completed within the 20-day

requirement while access reports were completed within the 10-day requirement. This was primarily a result of having one person at First Resource Management Group monitoring all the compliance work and continual communication with each licence holder (i.e., annual compliance meetings, start-up meetings before each block was started, email and phone contact).

Monitoring of constructed roads and water crossings was completed regularly, as per the forest management plan compliance strategy and the annual work schedule compliance focus, by the certified Compliance Inspector with First Resource Management Group. The annual work schedules did not include a list of roads to be monitored but inspections of roads and water crossings were completed. Auditors did observe that each road has an electronic folder with digital map files of the roads and water crossings that is complemented by a spreadsheet outlining a maintenance schedule and includes documents of the annual inspections. These are shared and transferred to North Bay District regularly by the service provider. The auditors concluded, although not a specific requirement of the forest management planning manual, the annual compliance plan in the annual work schedule would be improved by including a list of the roads scheduled for monitoring during each annual work schedule period. This small addition would add to the public transparency of forest management activities on the Temagami Management Unit.

Auditors are of the opinion that a combination of factors implemented during the audit period satisfactorily dealt with Recommendation #5 from the 2016 Independent Forest Audit, which stated the North Bay District is to ensure that the 10 Year and Annual Compliance Plans and educational program meet the requirements of the Compliance Handbook. These factors included:

1. Implementation of the web-based operational notification system;
2. Tracking of compliance inspections monthly and summarized in the monthly FOIP inspection reconciliation;
3. Identification of issue trends from the monthly FOIP reconciliation and setting up training courses to deal with these issues (e.g., problems with water crossings lead to water crossing training course); and,
4. Making operationally usable toolkit guides available on the Temagami Management Unit operator's website to provide references for operators and to integrate parts of these toolkits into operational maps used by operators.

Auditors did observe one aggregate pit that had not been rehabilitated and did not fully meet the requirements for pit slope and one recent water crossing installation that did not have sufficient bank stabilization. When District staff were questioned about these two isolated incidents, they were unclear if the pit was still active or who and when the water crossing was installed. There is no compliance inspection for the pit closure or water crossing installation. Auditors were told that the water crossing was likely an emergency repair to gain access to a hydropower station. The Temagami Management Unit is well used by other resource users including Ontario Hydro. *The auditors encourage North Bay District to expand their roads monitoring program to include roads maintained by other resource users, roads not regularly maintained and to urge those*

users to report washouts to ensure emergency repairs meet the standards for forest access roads and public safety.

The compliance plan and implementation of the compliance plan meet the requirements of the Forest Compliance Handbook and the 2019-2029 Forest Management Plan.

4.6.2 Silviculture Monitoring

Silviculture assessments and other monitoring are summarized in the Supplementary Documentation of the 2019-2029 Forest Management Plan. Monitoring of silviculture activities includes compliance monitoring, informal/formal assessments of regeneration (e.g., plant quality, pre-tending surveys, regeneration success) or post-tending assessments.

Compliance monitoring for silviculture is discussed under Section 4.6.1 above. During the audit period, First Resource Management Group staff conducted informal visual assessments of depletion areas to determine treatment needs. Completed after harvest, an initial visual assessment determines if the original forest operations prescription is still appropriate for the site. Formal quality assessments are conducted during tree planting that is followed up with an informal competition survey to determine further treatment needs. Changes to forest operations prescriptions are recorded on maps in data recorders that can be uploaded to the records system managed by First Resource Management Group. This change information is reported in Annual Reports in the required format. In the opinion of the auditors, this informal system works well and captures all of the required information. Auditors did not view any discrepancies during the field audit where the records did not match what was viewed on the ground. Also, the service provider's Silviculture Forester has a good working knowledge of the forest, the response of treatments and the status of regeneration projects initiated during the audit period.

Tabular data and maps of silvicultural treatments are reported annually to the Ministry as required.

The previous audit included a recommendation to address the backlog of area for regeneration survey. In 2017 the North Bay District carried out an aerial survey of 9,813 hectares of backlog area declaring 45% as successfully regenerated. Of that 27.3% regenerated back to the target forest unit (i.e. silvicultural success) with the balance classified as a regeneration success. In 2019 a formal ground survey was conducted on the balance of the backlog to determine further treatment requirements. Most of the area was determined to need more time to meet regeneration standards and the balance was declared as successfully regenerated. The audit visited one site that was not declared regenerated because it did not meet the regeneration standards for that forest type because of low stocking. Auditors found the site to be adequately regenerated where trees had been planted, however, some areas where soils were too shallow for planting did not have trees. Auditors are of the opinion the site meets the minimum stocking of a forest stand (30%) but it may be years before it meets the regeneration standards as outlined in the Silvicultural Ground Rules or the area may never reach the regeneration standards because of the limitations of the site due to the shallow soils. Also, auditors noted there is not much remediation that could be done to meet the regeneration standards in the forest management plan. Rather than carry these sites on the "books" as not being regenerated,

we suggest these sites be reported as regenerated if they meet the definition of a forest stand or reclassified as some other forest type (e.g., protection forest).

4.7 Achievement of Management Objectives and Sustainability

4.7.1 Achievement of Management Objectives

Forest management plan objectives are assessed for achievement according to the schedule presented in table FMP-9 in the 2009-2019 Forest Management Plan. For those objectives and associated Indicators monitored and reported on during plan implementation, progress towards achievement is reported in annual reports as stipulated in FMP-9. Regulatory requirements necessitate a preliminary assessment and analysis of progress toward meeting objectives at the mid-point of the plan and then a more detailed and thorough analysis at plan end.

The audit scope requires a review of the Year 10 (Plan end) Annual Report for the previous plan period (i.e. 2009-2019) including the audit team's comments and assessment of objective achievement and the results of that review and assessment be presented in the audit report (Appendix 2). Of note, the 2011-2016 Independent Forest Audit report also assessed the 2009-2019 Forest Management Plan objectives for progress in objective achievement at Year 7 of the plan. In our assessment of objective achievement for the 2009-2019 Forest Management Plan, the audit team also considered:

- how recommendations from the previous audit were addressed and how those contributed to the achievement of some indicators;
- what we saw in the field;
- the previous audit (2016 Independent Forest Audit) assessment of objective achievement;
- the Year 10 Annual Report; and,
- plan start levels (FMP-10) for the 2019-2029 forest management plan.

Generally, our assessment concluded the majority of objectives were achieved with some exceptions, most of which are directly related to harvest levels including:

1. Wood utilization is well below planned levels; however, the North Bay District and its service provider (First Resources Management Group) are actively pursuing opportunities to harvest underutilized species.
2. Wildlife habitat objectives that rely on young forest were only partially achieved. Not meeting planned harvest levels had a direct outcome on the amount of young forest created during the plan period. The 2018 wildfire had a positive effect on creating young forest although not substantive.
3. Protection of Species At Risk was only partially achieved because this audit found the list of occurring or potentially occurring Species At Risk to be incomplete and has made **Finding #6** to correct this oversight.
4. Not meeting planned harvest levels contributed to not fully achieving the objective to create a forest with a more natural disturbance pattern. The 2018 wildfire had a positive effect on disturbance patterns although not substantive.

5. Good efforts have been made to address areas not yet surveyed for Free-to-Grow. The current backlog of area not yet surveyed is within acceptable levels given the time lag between harvest and the time it takes for an area to meet the associated regeneration standards.
6. The low harvest levels also contributed to fewer economic opportunities for Indigenous communities in silviculture. Less harvest area equates to a smaller and more expensive silviculture program. To keep costs down, First Resources Management Group was able to capitalize on economies of scale (e.g., tree planting contracts) by partnering with adjacent forests in delivering the silviculture program. Unfortunately, this meant fewer direct opportunities for Indigenous communities with traditional territory on the Temagami Management Unit. The Lands Set Aside have the potential to improve economic opportunities in silviculture.

The audit process also requires the audit team to conduct a preliminary assessment and, remark on progress towards achieving the objectives for the 2019-2029 Forest Management Plan. In our assessment of progress towards achieving objectives in the Plan, we considered:

- only one year of actual data for this plan was available, as noted in Section 4.6 of this report.
- The audit team's observations from the field audit,
- our review of the 2019-2020 Annual Report and,
- findings from this audit that have a direct impact on objective achievement.

Our preliminary assessment found that some of the objectives could not be assessed for progress on achievement because they do not include measurable targets or desirable levels and there is no explanation in the Plan explaining how these objectives are to be measured/assessed. This audit has issued **Finding #2, #7, #8 and #14** to correct this. Addressing **Finding #9** and **Finding #12** helps achieve no non-compliances over the plan period. The audit team believes addressing these deficiencies (findings) will improve the overall objective achievement for this plan and provide additional data for the assessment of objective achievement by the Forest Manager. At this early stage in the implementation of the 2019-2029 Forest Management Plan, auditors are confident the collaborative approach of the North Bay District staff, First Resource Management Group (service provider), the Local Citizens Committee, affected Indigenous communities and the forest industry will result in the achievement of the management objectives set out in the current plan.

4.7.2 Assessment of Sustainability

The assessment of sustainability is based on the audit team's assessment of objective achievement of the 2009-2019 Forest Management Plan (Appendix 2), progress on the objectives for the 2019-2029 Forest Management Plan and the audit team's observations in the field. As identified in Appendix 2, some objectives for the 2009-2019 Forest Management Plan were achieved, some partially achieved, and others not achieved. Most of the objectives that were not achieved or only partially achieved were tied to the low level of harvest during the plan period. While the low level of harvest has been an issue that has plagued the Temagami Management Unit, auditors were encouraged with the efforts of the auditee, First Resource

Management Group, and the forest industry to address this issue and have not reissued a finding related to this. Several other factors that support a positive conclusion for this audit include:

- Harvest levels in the first two years of the 2019-2019 plan are more than twice what the harvest level was for the entire 2009-2019 plan period;
- Concerted efforts to address the backlog of harvest area requiring regeneration surveys;
- Innovative approach for addressing underutilized tree species by First Resources Management Group (service provider);
- Efforts by the forest industry to make blocks bypassed in the past more economically attractive through financial incentives and offering unutilized conifer from hardwood licensees;
- Quality of forestry operations by industry and Indigenous licence holders that have resulted in no compliance infractions during the audit period;
- Regeneration success is good and audit observations confirm the forest is growing well;
- A notable level of Indigenous participation in the development of the 2019-2029 forest management plan;
- An engaged and committed Local Citizens Committee; and,
- Invested and passionate North Bay District Management Forester.

4.8 Contractual Obligations

Since the Temagami Management Unit is a Crown unit administered by the North Bay District, forest resource licences are issued to the following businesses:

- Daki Menan Land and Resource Corp
- EACOM Timber Corporation
- Goulard Lumber (1971) Limited
- GP North Woods LP
- Alexander Welch Logging

Review of the conditions of these forest resource licences, each of the licence holders' operations and the North Bay District administration of these licences found that overall contractual obligations were being met. It was noted that the requirement in the licence agreements to follow all the laws of Ontario has a minor issue in that not all roads had proper road signage as reported in **Finding #1**.

The provincial roads funding allocation for the Temagami Management Unit and the required contractual obligations to distribute the roads funding was being followed on the Temagami Management Unit. Beneficiary flow-through agreements with each mill were signed annually. **Finding #11** addresses a discrepancy in kilometers of roads constructed, what was invoiced to the Provincial roads funding program and what was reported in the annual reports for 2017-18 and 2019-20.

Additionally, the Ministry contracted First Resource Management Group to provide forest management services on the Temagami Management Unit starting on 1 April 2017; before this forest management planning and associated activities were completed by North Bay District.

The terms of this contract and its compliance with the legislation, policies and guidelines were not reviewed. However, the issuance of this forest management contract to First Resource Management Group provided the resources, mechanisms, and systems to address the following recommendations from the 2016 Independent Forest Audit:

Recommendation #3: District Ministry of Northern Development, Mines, Natural Resources and Forestry to review the Conditions on Regular Operations (CROs) developed by the planning team and to ensure the annual work schedule is consistent with the Forest Management Plan during the development and implementation of the 2019 Forest Management Plan.

Recommendation #5: District Ministry of Northern Development, Mines, Natural Resources and Forestry to ensure that the 10 Year and Annual Compliance Plans and educational program meet the requirements of the Compliance Handbook.

Recommendation #6: District Ministry of Northern Development, Mines, Natural Resources and Forestry to ensure sufficient resources for adequate updating of values maps, both pre-and post-harvest, to better assure robust effectiveness monitoring.

Recommendation #8: District Ministry of Northern Development, Mines, Natural Resources and Forestry to develop a comprehensive inventory and schedule for inspection of all water crossings, access controls and aggregate pits.

Furthermore, North Bay District has made effort to encourage maximum utilization of Crown wood supply agreements by mills. It was noted that the District through phone calls, meetings and emails has made considerable effort to increase utilization. This has forced mills with wood supply agreements to find ways to utilize the wood (e.g., Georgia-Pacific business to business agreements with EACOM, Alex Welch Logging) and this has helped address recommendation #10 from the 2016 Independent Forest Audit.

Recommendation #10: Ministry of Northern Development, Mines, Natural Resources and Forestry to review their current “Wood Disposition Strategy” to see whether it can be revised to assist in improving the level of utilization on the forest.

Finally, North Bay District has made concerted efforts to address First Nation issues and needs that are required through the forest management planning process, through the inclusion of the Lands Set Aside, as an example and as a requirement of the Crown Forest Sustainability Act.

4.9 Concluding Statement

On balance, while this audit identified a total of 14 findings for improvements to the management of the Forest, there is a lot of very good work being done on the Forest.

The development of the 2019-2029 Forest Management Plan generally met all the legal and regulatory requirements. Auditors also found it a well-thought-out forest management plan, particularly the Analysis Package. However, auditors did note several deficiencies with the plan that resulted in 9 findings for improvement.


The working relationship and stakeholder communication between the North Bay District staff, First Resource Management Group, LCC, Temagami First Nation and the forest industry is exemplary and resulted in a best practice.

Considerable attention has been paid, during the audit period, to increasing harvest levels on the Forest with notable success. Contracting First Resource Management Group to deliver forest management and compliance services have had a positive effect on the overall delivery of forest management on the Temagami Management Unit. Observations in the field confirmed that renewal monitoring is being carried out, there is an effective silviculture program in place and the forest is growing well. Nevertheless, auditors did identify shortcomings concerning the delivery of the forest management program that resulted in 5 findings.

The audit team considered the nature and severity of all the findings and have concluded that the management of the Temagami Management Unit was generally in compliance with the legislation, regulations and policies that were in effect during the term covered by the audit, and the Ministry of Northern Development Mines Natural Resources and Forestry met its legal obligations. The forest is being managed consistently with the principles of sustainable forest management, as assessed through the 2021 Independent Forest Audit Process and Protocol.

APPENDIX 1: AUDIT FINDINGS

<p style="text-align: center;">Independent Forest Audit – Record of finding</p> <p style="text-align: center;">Best Practice #1</p>
<p>Principle 1: Commitment</p> <p>Audit Criterion 1: Whether the auditee is committed to Sustainable Forest Management (SFM) as evidenced by its adherence to applicable legislation and policies, and the commitment to SFM is articulated in its vision, mission, and policy statements.</p> <p>Procedure(s) 1.1: It is reflected in the daily operations of the auditee and its employees.</p>
<p>Background information and summary of evidence:</p> <ul style="list-style-type: none"> • Interviews LCC members, First Nations, forest industry, public • Field visits
<p>Discussion: During the conduct of the audit, auditors were impressed with the high level of cooperation and commitment shown by the auditee, the service provider (First Resources Management Group), Local Citizens Committee, Temagami First Nation, and the forest industry (forest resource licence holders).</p> <p>Examples of the commitment and spirit of cooperation to high-quality forest management and forest sustainability and regard for the other users on the Temagami Management Unit include:</p> <ul style="list-style-type: none"> • The high level of forest compliance during the audit period; • Working with the service provider and with the forest industry to address the chronic underutilization of some forest units; • Few complaints from stakeholders and the LCC interviewed; • A LCC that works with the Ministry Of Northern Development, Mines, Natural Resources And Forestry, First Nations and Licence holders to solve problems to help increase harvest levels, and. • Working together with the forest industry in the timely response during the pandemic to a public safety emergency (road washout that stranded users).
<p>Conclusion: Auditors found the cooperative relationship between the District NDMNRF staff, service provider staff, forest industry, LCC and Temagami First Nation to be exemplary and deserving of a best practice.</p>
<p>Best Practice: North Bay District Ministry of Northern Development, Mines, Natural Resources and Forestry, First Resources Management Group service provider staff, Temagami Local Citizens Committee, representatives of affected Indigenous communities and forest industry partners have shown a high level of cooperation and commitment to quality forest management practices and, respectful regard for the other users on the Temagami Management Unit.</p>

Independent Forest Audit – Record of finding	
Finding #1	
<p>Principle 1: Commitment</p> <p>Audit Criterion 1.2: Adherence to legislation and policies</p> <p>Procedure(s): Review operations to ensure a commitment to adhere to legislation and policies governing the forest industry and public safety</p>	
<p>Background information and summary of the evidence: The Temagami Management Unit is a very public forest with multi-use activities and public sharing roads with the forest industry. The Forest Management Plan states that when the forest industry is not using roads the Ministry of Northern Development, Mines, Natural Resources and Forestry is responsible for their maintenance and public safety. In addition, the Occupational Health and Safety Act and the Public Lands Act require roads on forest licences to be safe. It was noted on the Lundy Road, which was currently not in use by the forest industry, that the road was very rough with beaver dams in 2 locations on the road.</p>	
<p>Discussion: Although the North Bay District was aware through their monitoring program of the status of the Lundy Road, the sign warning of potential hazards at the start of the road was illegible (as illustrated in the attached photo).</p> <p>The Red Squirrel Road is an example where the public safety signs were in good condition. Other auditors noted that road safety signage was inconsistent on the roads visited during the audit.</p>	
<p>Conclusion: Evidence confirms Ministry of Northern Development, Mines, Natural Resources and Forestry is monitoring roads but not always ensuring signs are legible to protect public safety.</p>	
<p>Finding: Some road signs on the forest, designed to protect public safety, are not compliant with the Occupational Health and Safety Act Section 24(1) and the Public Lands Act Section 59(4).</p>	

Independent Forest Audit – Record of finding

Finding #2

Principle 3: Forest Management Planning

Audit Criterion 3.1-3.6: For plans prepared under the 2017 FMPM

Audit criteria 3.1 to 3.6 apply to the forest management planning process for the ten-year FMP in its entirety.

Background information and summary of evidence:

- 2019-2029 Forest Management Plan (FMP)
- 2017 Forest Management Planning Manual (FMPM)

The 2019-2029 Forest Management Plan generally met the requirements of the regulated manuals and guidelines in effect during its development. However, auditors found, in their review of the 2019 FMP, some important subject discussions were inadequately addressed or missing/not documented in the FMP. Examples include:

- Road's planning documentation
- Values information
- Renewal support
- Invasive species
- Tree improvement
- Management objectives without targets

As an example, the 2017 FMPM requires '*identification of those subjects for which data is recognized as being incomplete or missing.*' The FMP values maps that support the FMP, include values that are not discussed in the text of the FMP and not all values discussed in the FMP are shown on the values maps, species at risk excluded. The final list of required alterations did not include these inconsistencies or missing elements.

Discussion: Many of the examples noted in the summary of evidence are addressed through individual findings (**#5,7,8,10**). During our review of the 2019, Forest Management Plan auditors found numerous inconsistencies (e.g., references to tables or figures missing), statements made not supported by rationale or a fuller discussion and incorrect/missing information in supporting documentation.

Auditors heard that this plan was one of the first forest management plans to be developed with the Northeast Region assuming a lead role in the plan development. Auditors are also cognizant that the development of a forest management plan involves the efforts of many people, in varying degrees, over 3+ years. Auditors were told there was staff turnover of Ministry planning team members and/or regional advisors such that some key positions/individuals were involved in the process only temporarily before the next person stepped in. Auditors recognize this is unavoidable in most cases, however, in the case of the Temagami Forest Management Plan, it resulted in a final product that is missing some required elements and/or fuller discussions.

The 2017 Forest Management Planning Manual requires the following:

1. The plan author ensures the plan is edited for ease of understanding, all calculations are correct and the plan is complete and meets the content requirements of Part B of the Forest Management Planning Manual, and

2. The Ministry of Northern Development, Mines, Natural Resources and Forestry review of the draft and final forest management plan ensures it meets the requirements of the Forest Management Planning Manual including that the plan is complete, calculations are correct, and the plan is understandable.

A review of the full suite of comments, suggestions, editorials and required alterations for the Temagami Forest Management Plan indicated some of the inconsistencies and required elements were highlighted for correction and were addressed by the plan author. The final list of required alterations totaled 342 with 274 editorial/suggested comments (80%) making up the majority of the review. However, in the auditor's opinion, there are still important elements missing, and statements made without supporting discussion or rationale in the approved Forest Management Plan that require addressing.

In developing this finding, auditors considered that the pending tenure change to a Local Forest Management Corporation will mean different individuals will be responsible for assessing the implementation of the current forest management plan. This could present challenges where plan development concepts or decisions were not captured in the forest management plan.

Conclusion: The auditor's review of the 2019-2029 Forest Management Plan for the Temagami Management Unit found the plan is missing key elements/discussions as required in the 2017 FMPM and supporting regulated guides and manuals. These missing elements and discussions would improve the understanding and assessment of plan implementation by the next forest manager.

Finding: The 2019-2029 Forest Management Plan is missing required elements and important discussions required to fully meet the 2017 Forest Management Planning Manual and the management strategy for the Plan.

Independent Forest Audit – Record of finding**Finding #3****Principle 3.14: FMP or Contingency Amendments****Audit Criterion 3.14.1: Amendment Process and Rationale**

Procedure(s) 3.14.1.1: Review the FMP or contingency plan amendment to assess whether adequate rationale and documentation existed for all amendments consistent with the applicable FMPM (see IFAPP Appendix 1 page 120 for a full list of requirements).

Background information and summary of evidence:

- 2016-2019 Phase II Forest Management Plan for the Temagami Management Unit
- 2019-2029 Forest Management Plan for the Temagami Management Unit
- 2017 Forest Management Planning Manual (FMPM)
- Natural Resource Information Portal (public site) – amendment files
- Amendment files supplied as part of the audit information package

Discussion: A download of amendment files from the public site of the Natural Resource Information Portal (NRIP) revealed that some public amendment documents were blank or missing information or the same files were posted under several tabs. Auditors found it confusing and difficult to ascertain if the amendment, in some instances, was approved because the review and approval page was either incomplete or missing. A review of amendments on file at the District office of the Ministry of Northern Development, Mines, Natural Resources and Forestry auditors found the files to be complete with the required amendment classifications, reviews, and approvals. It is not clear to auditors why some of the documents posted are incomplete or whether the amendment was reviewed by the government and is approved. In discussions with auditees, the auditors recognize that some amendments were brought over from the old Forest Information Portal, there have been changes to the requirements for amendments and that signatures are no longer posted. However, there is an expectation that any documents posted (e.g., amendment decision) to a public site are complete and indicate the amendment has been approved. . The Ministry, at all levels, should determine what information on amendments gets publicly posted, what information should be available to the public and align the tabs on the portal accordingly or adjust the amendment process/template so that information posted is under the correct tab and posted to only one tab. The auditee should ensure that documents posted to NRIP are complete.

Conclusion: The public NRIP site should contain the necessary documents under the appropriate tab so the public can quickly surmise an amendment has been reviewed by the government and is approved. The auditors found amendment documents on the Ministry of Northern Development, Mines, Natural Resources and Forestry public information site to be missing information, repetitive and confusing.

Finding: Amendment information posted to the public Natural Resource Information Portal was found to be incomplete, missing amendment decision/approvals and, in most instances, the same information repeated under different tabs.

<p style="text-align: center;">Independent Forest Audit – Record of finding</p> <p style="text-align: center;">Finding #4</p>
<p>Principle 3 – Forest management planning</p>
<p>Audit Criterion: Criteria 3. Whether Forest Management Plan (FMP), Contingency Plan, Plan Extension and Annual Work Schedule (AWS) production were consistent with planning requirements. The planning processes related to the above actions and decisions were effective overall.</p>
<p>Procedure(s): 3.4.5.2; Assess the results of the social and economic assessment of the management strategy /Long Term Management Direction (LTMD) (based on the results of a social and economic model, or a qualitative analysis based on the data in the social and economic description)</p>
<p>Background information and summary of evidence: 2019 FMP 2.2 Social and Economic Description 2019 FMP 3.4 Desired Forests and Benefits 2019 FMP 3.6 Management Objectives and Indicators: <ul style="list-style-type: none"> ○ Socio and Economic Objective Category: Management Objective 10 to 22 2019 Supplementary Documentation 6.1E: Social and Economic Description Forest Management Planning Manual 2017 Appendix II</p>
<p>Discussion: The Social and Economic discussion in the 2019-2029 Forest Management Plan meets the minimum requirements of the 2017 Forest Management Planning Manual. Auditors found this section of the FMP adds little value to the overall forest management strategy in the forest management plan. In discussion with the Local Citizen's Committee and members of the Planning Team, more local and relevant information and data would improve this section, for example, how forest access roads are used by the public for recreation or how many direct and indirect jobs are an outcome of forest management on the Temagami Management Unit. The 2017 FMPM ties the socio-economic analysis to the forest management strategy and to wood utilization. Including mills that received less than 1,000 m3 during the previous plan, period has little impact on the economy of their communities and raised questions with auditors why include it. More useful information, including from other government ministries (e.g., tourism), industry and non-government agencies or the public, would assist the planning team in developing better management unit-specific objectives. More relevant socio-economic information in addition to the information from the desired forests and benefits meetings may assist with setting plan objectives and measurable targets for the next FMP.</p>
<p>Conclusion: The minimum requirements for the socio-economic description/information in the forest management plan should include measurable, relevant, local socio-economic data that directly affects the Temagami Management Unit.</p>
<p>Finding: The Social and Economic description in the forest management plan provided little value to the development of the management strategy for the Temagami Management Unit.</p>

Independent Forest Audit – Record of finding**Finding #5****Principle 3 – Forest management planning**

Audit Criterion: 3.4.5.5 FMP achievement of Checkpoint 'Preliminary Endorsement of the LTMD' (2004 FMPM) or 'Support for the Proposed Long-Term Management Direction, Determination of Sustainability and Primary Road Corridors' and 'Preliminary Endorsement of Long-Term Management Direction' Checkpoints for the 2019 FMP using the 2017 FMPM

Procedure(s): 5 Assess the effectiveness of primary road planning including whether alternatives were considered

Background information and summary of the evidence: A review of the Roads Supplementary Documentation revealed that the Banting Chambers Primary Road and Clement Primary Road had no road alternatives presented, as required. All other primary roads had a review of alternative options. There was also inconsistency in that the LTMD Analysis Table 4 indicated there were alternatives for the Banting Chambers Primary Road that were not described in the roads planning supplementary documentation or associated maps.

Appendix 3 in the 2017 Forest Management Planning Manual requires the analysis of road alternatives.

Discussion: Interviews with North Bay District staff revealed there had been earlier drafts of the roads supplementary documentation where road alternatives were discussed and documented for the Banting Chamber Road. For an unknown reason, this draft was not in the approved FMP Supplementary Documentation but was believed to have been presented during the LTMD process. For the Clement Road, auditors did not find that an alternative was presented during Stage 3.

If there were no alternatives this needs to be described in the roads planning supplementary documentation with clear reference to associated maps.

Conclusion: The documentation of all road alternatives in the Roads Planning Supplementary Documentation was not followed for two of the six proposed primary roads. Presentation and summary of primary road alternatives during the planning process were not completed or documented for the Clement Road. A review of alternatives for the Banting Chamber may have been completed but was not documented in the Roads Planning Supplementary documentation.

Finding: No alternative road corridors were presented for the Clement Road and Banting Chamber Road as required in the 2017 Forest Management Planning Manual.

Independent Forest Audit – Record of finding**Finding #6****Principle 3: Forest Management Planning****Audit Criterion: 3.3.5**

Procedure(s): Determine if any Species at Risk (SAR) have been identified on the management unit, and consider whether:

- the available inventories and information for SAR (flora, fish, and wildlife) include known sites of species occurrence and occurrence of their habitat;
- the forest management plan describes the degree to which the quality or quantity of habitat for SAR could be affected by forest management operations; and
- the FMP describes the implications of SAR and SAR habitat on the development of the FMP and the preparation of operational prescriptions and conditions for areas of concern

Background information and summary of evidence:

- the 2019-2029 FMP - the FMP provides a table (Table 6) and summary of the SAR listed at the time of the plan (2017) known or likely to occur on the Temagami Management Unit. While generally complete, this list lacks Barn Swallow and Black Tern, species that have confirmed occurrences on the Temagami Management Unit, while including Cougar, which does not.
- 19 species at risk are listed in Table 6 and Area of Concern (AOC) prescriptions developed for 7, with Conditions on Regular Operations (CROs) developed for 1 additional SAR and 1 CRO that potentially addresses 3 SAR bird species
- Natural Heritage Information Centre (NHIC) – there is limited occurrence data for SAR on the Temagami Management Unit through the NHIC despite it being referenced as the primary source for this information in the 2017 FMPM (p. A-21). For example,
 - Only 255 observations of SAR for the Temagami Management Unit were available in the NHIC geodatabase for the Temagami Management Unit;
 - 60% of these were of one species (Peregrine Falcon) consisting of multiple observations from only 14 sites
 - There were no SAR observations since 2013 and 80% of observations were more than a decade old.
- 2019-2029 Analysis Package - states 18 SAR versus FMP text states 19 SAR
- Table FMP-11 includes an AOC for Barn Swallow (SAR), yet it is not listed in Table 6 in the FMP text.
- Supplementary Documentation (6.4A) Implementation Toolkit – represents the CROs for the Temagami Management Unit – does not clearly outline procedures that address the balance of listed SAR species; for example, Modules 4 & 7 do not consider snapping turtle.

Discussion:

Auditors found the available information from NHIC did allow for a largely complete list of SAR for the Temagami Management Unit which supported the development of appropriate Areas of

Concern (AOCs) or Conditions on Regular Operations (CROs) for most of the SAR present on the Temagami Management Unit. However, auditors are of the opinion that the AOCs and CROs in the FMP do not fully ensure adequate protection measures are in place for all listed SAR. For example, although Snapping Turtle was identified as a SAR in Table 6 and NDMNRF mapping confirms its presence on the Temagami, no CRO or AOC was developed for this species, even though it could be affected by routine road maintenance during the nesting season (other FMPs within its range routinely have an AOC for this species).

According to the 2017 FMPM, inventories and information for SAR on the management unit “will be available for use in planning” to “contribute to the development of management objectives and the preparation of operational prescriptions and conditions for areas of concern”. The species inventories and information which will be available include known sites of occurrence of flora, fish, and wildlife species, and known sites of occurrence of their habitat.

According to the FMPM (p. A-22), the MNRF will update and provide the most current and relevant information available on values. The Temagami FMP also stated (p. 87) that the NDMNRF is responsible for monitoring wildlife populations in Ontario and undertaking surveys to increase our knowledge of species at risk in the Temagami Management Unit”. During the audit period, interviews with District staff confirmed there was one aerial survey conducted targeting SAR. Given the limited amount of recent values information available from NHIC or collected by NDMNRF in the development of this plan, it is the auditors’ opinion that additional data sources (e.g., eBird, iNaturalist) should be used where possible in support of forest management.

Apart from Table 6 in the FMP text listing the SAR species, there is virtually no discussion of SAR in the FMP. Although required by the 2017 FMPM (Sections 1.1.8.7 and 1.1.8.9), the FMP does not describe the sources and limitations of SAR data used to develop the plan (including values maps), nor the implications on forest management or the species themselves. Additional discussion on planning team decisions not to include AOCs or CROs for some of the listed species would improve this section. The FMP does not describe the degree to which the quality or quantity of habitat for SAR could be affected by forest management operations, nor does it adequately describe the implications of SAR on the development of the FMP. Both are requirements of the FMPM and are particularly relevant on the Temagami FU given the limited current values information available for SAR.

Conclusion: The lack of a comprehensive discussion in the FMP regarding SAR makes it difficult to evaluate the implications on potential impacts on SAR or their habitat from forest management activities.

Finding: The 2019-2029 Forest Management Plan does not adequately describe the degree to which the quality or quantity of habitat for species at risk could be affected by forest management operations, nor the potential implications of SAR on forest management.

Independent Forest Audit – Record of finding**Finding #6****Principle 3: Forest Management Planning****Audit Criterion: 3.3.5**

Procedure(s): Determine if any Species at Risk (SAR) have been identified on the management unit, and consider whether:

- the available inventories and information for SAR (flora, fish, and wildlife) include known sites of species occurrence and occurrence of their habitat;
- the forest management plan describes the degree to which the quality or quantity of habitat for SAR could be affected by forest management operations; and
- the FMP describes the implications of SAR and SAR habitat on the development of the FMP and the preparation of operational prescriptions and conditions for areas of concern

Background information and summary of evidence:

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- Table FMP-11 includes an AOC for Barn Swallow (SAR), yet it is not listed in Table 6 in the FMP text.
- Supplementary Documentation (6.4A) Implementation Toolkit – represents the CROs for the Temagami Management Unit – does not clearly outline procedures that address the balance of listed SAR species; for example, Modules 4 & 7 do not consider snapping turtle.

Discussion:

Auditors found the available information from NHIC did allow for a largely complete list of SAR for the Temagami Management Unit which supported the development of appropriate Areas of

Concern (AOCs) or Conditions on Regular Operations (CROs) for most of the SAR present on the Temagami Management Unit. However, auditors are of the opinion that the AOCs and CROs in the FMP do not fully ensure adequate protection measures are in place for all listed SAR. For example, although Snapping Turtle was identified as a SAR in Table 6 and MNDMNRF mapping confirms its presence on the Temagami, no CRO or AOC was developed for this species, even though it could be affected by routine road maintenance during the nesting season (other FMPs within its range routinely have an AOC for this species).

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According to the FMPM (p. A-22), the MNRF will update and provide the most current and relevant information available on values. The Temagami FMP also stated (p. 87) that the OMNRF is responsible for monitoring wildlife populations in Ontario and undertaking surveys to increase our knowledge of species at risk in the Temagami Management Unit”. During the audit period, interviews with District staff confirmed there was one aerial survey conducted targeting SAR. Given the limited amount of recent values information available from NHIC or collected by MNRF in the development of this plan, it is the auditors’ opinion that additional data sources (e.g., eBird, iNaturalist) should be used where possible in support of forest management.

Apart from Table 6 in the FMP text listing the SAR species, there is virtually no discussion of SAR in the Temagami FMP. Although required by the 2017 FMPM (Sections 1.1.8.7 and 1.1.8.9), the Temagami FMP does not describe the sources and limitations of SAR data used to develop the plan (including values maps), nor the implications on forest management or the species themselves. Additional discussion on planning team decisions not to include AOCs or CROs for some of the listed species would improve this section. The FMP does not describe the degree to which the quality or quantity of habitat for SAR could be affected by forest management operations, nor does it adequately describe the implications of SAR on the development of the FMP. Both are requirements of the FMPM and are particularly relevant on the Temagami FU given the limited current values information available for SAR.

Conclusion: The lack of a comprehensive discussion in the FMP regarding SAR makes it difficult to evaluate the implications on potential impacts on Species At Risk or their habitat from forest management activities.

Finding: The 2019-2029 Forest Management Plan does not adequately describe the degree to which the quality or quantity of habitat for species at risk could be affected by forest management operations, nor the potential implications of SAR on forest management.

<p style="text-align: center;">Independent Forest Audit – Record of finding</p> <p style="text-align: center;">Finding #7</p>
<p>Principle 3.5: Planning of Proposed Operations</p> <p>Audit Criterion 3.5.8: FMP renewal, tending, protection and renewal support</p> <p>Procedure(s) 3.5.8.2: Assess whether the renewal support requirements for planned operations:</p> <ul style="list-style-type: none"> • have been documented in the plan as required of the applicable FMPM; and • whether the renewal support is appropriate for the proposed management strategy.
<p>Background information and summary of evidence:</p> <ul style="list-style-type: none"> • 2019-2029 Forest Management Plan for the Temagami Management Unit • 2017 Forest Management Planning Manual (FMPM) • temagami management unit_inventory_Summary2021.xls (seed inventory) <p>In the review of the 2019-2029 Forest Management Plan for the Temagami Management Unit, auditors noted information missing in the FMP, related to renewal support and in table FMP-19: Planned Expenditures.</p> <p>Table FMP-17: Planned Renewal and Tending Operations in the 2019-2029 FMP lists 11,735 hectares of planting or seeding. There is no discussion in the FMP text Section 4.4.2 Renewal Support on seedling production requirements or seed requirements needed to support the planned renewal as required by the 2017 FMPM.</p> <p>Auditors also reviewed the status of the current seed inventory and concluded there is not enough seed in the inventory to meet the management strategy and planned renewal activities as listed in FMP-17.</p>
<p>Discussion: The 2017 Forest Management Planning Manual (FMPM) requires “<i>the licensee’s program for the collection of seed and the production of nursery stock, during the 10-year period</i>” and “<i>the quantity of nursery stock to be planted (by species), for the 10-year period</i>” to be described in the FMP text. There is no discussion in the text of the FMP on this requirement. Additionally, the 2017 FMPM requires the planned expenses associated with renewal support be identified in FMP-19. This information is missing from FMP-19 and Section 4.6.</p>
<p>Conclusion: The Ministry of Northern Development, Mines, Natural Resources and Forestry, North Bay District should revisit table FMP-19 and Sections 4.4.2 and 4.6 of the 2019-2029 FMP for the Temagami Management Unit to ensure the requirements of the 2017 FMPM are fully met and that the management strategy for the Temagami Management Unit, as presented in the FMP, can be achieved.</p>
<p>Finding: The 2019-2029 Forest Management Plan, is missing a forecast of expenditures for Renewal Support and associated discussion in the text to support the renewal program proposed in the FMP as required in the Forest Management Planning Manual.</p>

<p style="text-align: center;">Independent Forest Audit – Record of finding</p> <p style="text-align: center;">Finding #8</p>
<p>Principle 3: Forest Management Planning</p> <p>Audit Criterion 3.4.4: FMP achievement of Checkpoint ‘Support for Management Objectives’</p> <p>Procedure(s) 3.4.4.2: Confirm checkpoint by reviewing the FMPM requirements and determining whether:</p> <ul style="list-style-type: none"> reasonable objectives, indicators (including desirable levels) and appropriate targets were developed by the planning team with the assistance of the LCC
<p>Background information and summary of evidence:</p> <p>2019-2029 FMP 2017 FMPM FMP-10: Achievement of Management Objectives 2019-2020 Annual Report</p> <p>Auditors found some management objectives in table FMP-10 did not have desirable levels or targets and, for at least one objective, there is no clear timing of assessment. The text in the FMP did not include a discussion or explanation as to why these objectives did not have desirable levels or targets. Examples include:</p> <p>Objective #9 – herbicide use and impact on forest composition Objective #8 – invasive species reporting Objective #7 – underutilized silvicultural tools Objective #4 – km/km² of roads in the Enhanced Management Area and Temagami Management Unit</p> <p>Additionally, FMP-10 lists some targets as ‘will be established at plan start’. There has been no update of this table with targets and the FMP is in the third year of implementation. Annual Reports reviewed for the first year of the 2019 FMP have not reported on those objectives with annual reporting requirements, as stated in the FMP, including invasive species reporting (#8), LCC field trips (#17), stand improvement projects (#6) and underutilized silvicultural projects (#7).</p>
<p>Discussion: A review of the objectives table in the FMP found some of the objectives to be missing desirable levels, targets, or timing of assessment. This missing information will, in some instances, make it difficult for the forest manager to assess progress on achieving these objectives. One management objective (#22) around promoting forestry; it is not clear to auditors how this fits in a forest management plan.</p> <p>Discussions with the District Forest Manager stated it was a planning team decision not to include targets for some objectives. A review of planning team minutes related to management objectives (Meeting #9, 10 & 13) provides good information on planning team discussions and decisions that should have been included in the text of the FMP where the planning team had chosen not to state a desirable level/target/timing of assessment.</p>
<p>Conclusion: Some objectives in FMP-10 will be difficult to assess for objective achievement without targets and timing of assessment or clear discussion in the FMP as to the planning team decisions for those objectives that do not have targets.</p>

Finding: The 2019-2029 Forest Management Plan text does not include a discussion or explanation for objectives that do not have targets or timing of assessment making it difficult to meaningfully assess objective achievement for those objectives and/or indicators.

Independent Forest Audit – Record of finding

Finding #9

Principle: 4 Plan assessment and implementation

Audit Criterion: 4.3 Harvest

Procedure(s): Assess whether the harvest and logging methods implemented were consistent with the FOP and that actual operations were appropriate and effective for the actual site conditions encountered. This must include residual stand structure required of the FMP including individual residual tree retention and downed woody material.

Background information and summary of evidence:

The FMP Supp Doc 6.4a Implementation Toolkit Module 8 Conditions on Regular Operations (CROs) within Residual Forest Cover discusses attributes of wildlife trees and presents figures on how to achieve the desired number of leave trees when harvesting. Module 10 – Forest Operation Prescriptions specify the size, number, species, and distribution of trees that must be retained, consistent with the Forest Management Guide for Conserving Biological Diversity at the Stand and Site Scales (the Stand and Site Guide). For the *Clearcut With Standards* silvicultural system, the CRO requires at least 25 stems per hectare that are at least 10 cm in diameter and 3 m tall (if stubbed). Of these, at least 6 live wildlife trees must be left of a minimum of 24 cm diameter and should be 40 cm in diameter if present.



The toolkit provides direction on how to implement residual requirements, and the service provider and Ministry of Northern Development, Mines, Natural Resources And Forestry compliance inspectors and other staff are knowledgeable with the requirements. No non-compliances for residual retention were noted for the audit period.

Several harvest blocks visited in the field (e.g., Lundy 130, Lundy 141, Brigstocke 124) that used the Clearcut with Standards silvicultural system lacked the minimum number of larger diameter residual trees. The presence of large diameter stumps and relative lack of large diameter

windthrow, rule out blowdown as the reason for failing to meet the residual requirement on at least portions of these harvest blocks.

Discussion: Most of the sites sampled in the field in the Temagami Management Unit met the requirements of the Implementation Toolkit for wildlife tree retention. However, several harvest blocks lacked a sufficient number of large trees.

Conclusion: Compliance inspections should identify where clearcut harvest blocks on the Temagami Management Unit did not meet the residual requirements of the Stand and Site Guide.

Finding: Not all clearcut harvest blocks met the residual retention requirements, for species representation or size, as required in the Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales.

Independent Forest Audit – Record of finding**Finding #10****Principle 4: - Plan assessment and implementation**

Audit Criterion 4.6: Whether the information and assumptions used in preparation of the Forest Management Plan (FMP) were appropriate for the management unit and whether the implementation of the Long-Term Management Direction (and proposed operations) was consistent with Forest Management Plan direction.

Procedure(s) 4.6.1: Review and assess in the field the implementation of approved tree improvement operations.

Background information and summary of evidence:

- 2009 FMP Phase 2: 8.4.2 Renewal Support
- 2009 FMP Phase 2: Appendix 1 Renewal and Tending maps
- 2019 FMP 4.4.2 Renewal Support
- FMPM 2017 4.4.2 Renewal Support
- 2018 Annual Report (10 years)

Discussion: The audit review of the 2009-2019 FMP noted that the Temagami Management Unit belonged to the Northeast Seed Management Association. Discussions with the District Forest Manager confirm the District is no longer a member. During the 2009-2019 plan period, routine maintenance was scheduled on the Tree Improvement areas. The Temagami Management Unit has two Jackpine seed orchards, Jackpine family tests, Red pine, and White spruce seed production areas. A Red pine seed orchard located in the Nipissing Forest contains grafted stock originating from Temagami.

The 2019-2029 Forest Management Plan indicates that Tree Improvement operations will be conducted on the management unit, but there is no specific text that references tree improvement activities scheduled for the plan period and the discussion from the previous plan, which details the tree improvement areas, is missing from this Plan.

The 2019 Forest Management Planning Manual requires that the forest management plan reference existing seed orchards and tree improvement strategies, along with the location of these activities (pg. B-34). There are no operational prescriptions or conditions for areas of concern related to tree improvement. The tree improvement areas are displayed on the renewal and tending index map for this plan.

Seed Orchards could eventually contribute a genetically superior seed supply for Temagami and Ontario. The Tree Improvement Asset could contribute to the success of the achievement of Plan objectives related to forest diversity and forest cover as well as the achievement of some socio-economic objectives.

Conclusion: The forest management plan should be updated to include a discussion on tree improvement assets and how they will be managed during this plan period as required in the 2017 FMPM.

Finding: Existing tree improvement assets were not included in the 2019-2029 Forest Management Plan.

Independent Forest Audit – Record of finding**Finding #11****Principle: 4 - Plan Assessment and Implementation**

Audit Criterion: 4.7.2 Road construction and decommissioning, various types of water crossings including crossing structures, road monitoring, maintenance, aggregates, and any other access activities must be conducted in compliance with all laws and regulations, including the CFSA, approved activities of the FMP, and submission of, or revisions to, the AWS

Procedure(s): 4.7.2.4 - Select a representative 10% sample of the range of eligible construction and maintenance activities (excluding activities like grading and ploughing that cannot be confirmed in the field), seasons of operations and variety of operators for roads (primary or branch) constructed or maintained with funding under the Road Construction and Maintenance Agreement. Examine whether there is evidence that the work was performed as described in the invoice.

Background information and summary of evidence:

A review of the final annual report of road construction invoiced for provincial road funding found that construction was completed on the Eagle Lake Road (4.6km) and Kanichee (7km) primary roads during 2017-18. The 2017-18 annual report reported only 4.4 km at Eagle Lake. Also, during 2019-20 11.35 km of total branch road construction were invoiced by EACOM and 1.5 km by Georgia Pacific under provincial roads funding annual report of road construction. The 2019-20 annual report reported no branch road construction. A review of the provincial roads funding invoice construction summary showed only 5.1 km of branch road construction.

- Road invoices are completed by each licence holder under agreements with the Ministry of Northern Development, Mines, Natural Resources and Forestry

Discussion: Review and discussion during the field audit proved that road construction was completed. However, there are discrepancies between what was invoiced for provincial roads funding and what was reported as constructed.

Conclusion: The reporting of kilometres constructed is not consistent with what the provincial roads funding program has paid. A careful review of road construction activities when roads invoices are approved for payment and summarized at year-end is required.

Finding: There are discrepancies between the kilometers reported as constructed in the 2017-2018 and 2019-2020 Annual Reports and what was invoiced to the Provincial Roads Funding Program.

Independent Forest Audit – Record of finding

Finding #12

Principle: 4 Plan Assessment and Implementation

Audit Criterion: 4.7 Access

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

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

Background information and summary of evidence:

Stops were made at several water crossings and on the following water crossings WC5594, WC5460, WC5020 grading of the road has created berms at road edges on slopes leading to the water crossing.



Picture #1: WC5594
WC5020



Picture #2: WC5460



Picture #3:

The Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales, Environmental Guidelines for Access Roads and Water Crossings and FMP, Ministry Of Northern Development, Mines, Natural Resources And Forestry/Department of Fisheries and Oceans water crossing protocol (as described in the Implementation Toolkit) describe standards stating that roads at crossings must be stabilized to prevent sediment from entering the stream.

Discussion: During regular road maintenance graders have created berms along the road edges forcing water during storms to run along the road to their lowest point near the stream. In each case described once the water flows to the lowest point water and sediment flow into the stream as indicated by the black arrow. At stream crossings, roads should be crowned with no berms at road edges to prevent water from channeling into streams during heavy rains.

Auditors noted the Lundy Primary Road was in rough condition with many washboard sections because there had been no recent operations on the road, however, this is a main access corridor for this plan period. During the site visit to Lundy 141, some water pooling was found as a result of natural drainage patterns being blocked by an operational road. It is important to note that during July and August 2021, before the field audit, the Temagami Management Unit

experienced above-average rainfall. We could not find a cross-drain culvert due to the high water. This was the only example of a road blocking natural drainage patterns noticed during the field audit.

Conclusion: Poor grading practices are contributing to sediment flow into watercourses. More training on proper road grading practices and careful compliance inspections are needed to address this issue. The Implementation Toolkit should be updated to include best practices for road grading to prevent sediment from flowing into watercourses.

Finding: Poor road grading practices are contributing to sediment flow into streams at water crossings.

Independent Forest Audit – Record of finding**Finding #13****Principle 6:** Monitoring

Audit Criterion: 6.4 Monitoring indicators of forest sustainability.

Procedure(s): 6.4.1 Assess whether programs are in place and are being implemented to provide sufficient data for all indicators identified in the FMP.

Background information and summary of evidence:

- 2019 Forest Management Plan 3.6 Management Objectives and Indicators
 - Management Objective 8.2 Reporting and signing of invasive species
- 2019 FMP Supplementary Documentation 6.3E_Climate Change
- FMP-19
- 2019 Annual Report
- FMPM 2017 Part A Section 1.2.2.
- Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales, Section 5.3

Discussion: The auditors noted that the 2019 Forest Management Plan for the Temagami Management Unit has a Management Objective 8 (which is unclear due to a spelling error), but no targets associated with reporting of invasive species. The Local Citizen's Committee and public input to the Independent Forest Audit raised concerns about climate change and specifically about invasive species. During the field audit, the presence of invasive species on or near the Temagami Management Unit was observed by auditors, including:

- Beech Bark Disease (Ministry staff identified)
- Purple loosestrife

The text of the 2019-2020 Annual Work Schedule does not mention the requirement for invasive species reporting nor does the 2019-2020 Annual Report mention climate change or report on invasive species (insects, pathogens, or plants) as required by FMP-10 Objective 8. Additionally, the 2019 FMP would be improved if it had included a discussion on known invasive species found on the Temagami Management Unit and some text related to climate change and forest management practices.

Section 5.3 of the Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales indicates that where specific pests threaten certain values, forest operations should strive to minimize the risk of spreading any invasive species. To achieve this, forest workers need to know what invasive species are in their local area and know what actions can be employed to minimize their spread (best management practice).

Education of forest industry, service provider and key Ministry staff to identify, report, prevent the spread and treat occurrences of invasive species (Best Management Practices) would assist with, at the very least, the identification of invasive species. Future annual reports should report on progress on Objective 8 in FMP-10 as required. Future annual work schedules should include some discussion/schedule around invasive species to help address the annual reporting requirement for invasive species.

Conclusion: The 2019 FMP does not discuss how Objective 8: monitoring invasive species will be done. The objective requires annual reporting but the 2019-2020 Annual Work Report does not include a discussion on this topic.

Finding: The 2019-2020 annual report does not include a discussion on progress on Management Objective 8 (invasive species monitoring) as per the 2019-2029 Forest Management Plan.

<p style="text-align: center;">Independent Forest Audit – Record of finding</p> <p style="text-align: center;">Finding #14</p>
<p>Principle 6 – Monitoring</p> <p>Audit Criterion: 6.4 Monitoring indicators of forest sustainability.</p> <p>Procedure(s): 6.4.1 Assess whether programs are in place and are being implemented to provide sufficient data for all indicators identified in the FMP.</p>
<p>Background information and summary of evidence:</p> <ul style="list-style-type: none"> • 2019 Forest Management Plan 3.6 Management Objectives and Indicators • Management Objective 9.2 Proportion of herbicide use per hectare of renewal activities • 2019 FMP Supplementary Documentation 6.1_B Analysis Package – 4.2.3 Strategic Silviculture Options • Table 1 – Summary of Public Comments • FMP-17: Planned Renewal and Tending Operations • FMP-10: Management Objective 9 • 2020 Annual Work Schedule, Aerial Spray Correspondence • FMPM 2017 4.4 Renewal and Tending Operations
<p>Discussion: The auditors noted that the 2019 Forest Management Plan for the Temagami Management Unit has a Management Objective 9.2 which indicates historical herbicide use and a target to measure herbicide use at the Year 5 Annual Report. The majority of public and Indigenous communities' concerns during the development of the Forest Management Plan and review of Annual Work Schedules and public consultation process for each, revolve around herbicide use. Table FMP-10 has no target for alternative silviculture treatments, nor are they discussed in the text. The Regional Science Advisor was not asked to assist in producing a strategy.</p> <p>The District should prepare a strategy to test and budget for alternative silvicultural treatments. The Local Citizen's Committee and Indigenous Task Team or Working Group should be consulted to assign a 10-year target to be reported at the 5 Year Annual Report.</p>
<p>Conclusion: The review of the 2019-2029 Forest Management Plan, Table FMP-10, found no target for alternative silviculture treatments to herbicide use or discussion in the text. Based on public and Indigenous concerns with herbicide use, the Forest Management Plan should include a discussion as to how Objective 9 will be achieved.</p>
<p>Finding: The objective to reduce herbicide use in the 2019-2029 Forest Management Plan does not propose a target and, as such, cannot address concerns raised by the public and affected Indigenous communities.</p>

APPENDIX 2: ACHIEVEMENT OF MANAGEMENT OBJECTIVES

2009-2019 Forest Management Plan		
OBJECTIVES	AUDITOR ASSESSMENT (Achieved, partially achieved, or not achieved)	AUDITOR ASSESSMENT AND COMMENTS
Objective 1. To ensure that forest management activities cause movement towards (or maintenance of) a more natural landscape patterns characteristic of Site District 4 E 4, in frequency and area distribution of disturbances by size classes.		
Natural Disturbances Pattern: Frequency distribution of harvested and natural forest disturbances area (by size class) that moves towards a natural disturbance pattern.	Partially achieved	A range of patch sizes was allocated for harvest designed to move the forest to more natural patterns. Due to the low level of harvest the overall targets were not achieved. There was achievement in 4 of the 7 size classes but in the smaller disturbance classes, the Forest moves away from a more natural disturbance pattern. The 2018 wildfires contributed to large disturbance patches on the landscape and provided some movement towards the desired forest condition but were not substantive.
Natural Disturbances Pattern: Area distribution of harvested and natural forest disturbance area (by size class) that moves towards a natural disturbance pattern.	Partially achieved	A range of patch sizes was allocated for harvest designed to move the forest to more natural patterns. The lack of harvest disturbance did not provide noticeable improvement towards a more natural disturbance pattern. The 2018 wildfires contributed to large disturbance patches on the landscape and provided some movement towards the desired forest condition. The Spruce budworm infestation has not resulted in stand-replacing disturbance and did not contribute to progress toward the natural benchmark.
Natural Disturbances Pattern: Frequency distribution of planned harvest areas. Percentage of planned clearcuts under 260 hectares in size by Phase (Phase II- 2016-2019)	Achieved	The distribution of actual harvest areas is within the target levels of 90% < 260 hectares. It was reported that for the previous objective there was a 12% increase in disturbance patches <100 ha and a 4% increase in disturbance patches 101-200 ha confirming actual harvest areas met this objective indicator. Auditors note this Indicator may conflict with the natural disturbance patch indicators above such that, by achieving one indicator it is not possible to achieve the other.

Objective 2. To move the current forest condition towards one that's forest composition and age class structure more closely resembles that of the natural benchmark forest by term (move towards forest health that has a balanced age class structure and its composition has more conifer with less intolerant forest area).		
Area by forest unit	Partially achieved	In the absence of harvesting and notable natural disturbance progress towards the natural benchmark is slower than expected. There was no significant difference between plan start and end.
Total area (ha) by even-aged forest unit in the mature development stage by the start of each planning term.	Achieved	Not meeting planned harvest levels and little stand-replacing natural disturbance, progress towards the natural benchmark is slower than expected. An analysis was not conducted because there is little change from plan start which stated the objective was achieved.
Objective 3. Using the <i>Old Growth Forest Definition for Ontario (MNR 2003)</i> , maintain old-growth total from the Crown forest by forest unit at or above the maximum ecological limit as a percentage of the natural benchmark forest by term.		
Amount and distribution of old-growth forest	Partially Achieved	Low harvest levels are contributing to old-growth exceeding the target and the simulated range of natural variation. This indicator was not assessed at Yr 10 but was assessed at Yr 7 and found 1/3 of the forest will not meet the target. Based on plan start levels for old-growth in 2019 FMP, the targets continue to be achieved for some forest units and not others.
Objective 4. Provide red and white pine forest area equal to or greater than 1995 levels; consistent with <i>the Conservation Strategy for Old-growth red and White Pine Forest Ecosystems (MNR 1995)</i> .		
Area of combined PRST, PWST, and PWUS total forest unit area(ha) over time.	Achieved	Actual forest unit area continued to increase for this indicator above the target of $\geq 64,774$ ha. Auditors observed good red & white pine regeneration in the forest.
Objective 5. To maintain the habitat of featured and endangered species		
Non-spatial assessment of the area of preferred wildlife habitat for the selected species by term. Area of habitat for forest-dependent provincially featured species.	Partially achieved	Overall, targets for featured species that rely on old-growth (e.g., Black Bear, Lynx) will be achieved but, habitat for species that require younger stands (e.g., moose) will not be met due to the lack of disturbance on the forest. Ministry did not conduct an assessment but based on plan start levels in 2019 FMP for moose, some forest types for moose cover did achieve targets.
Non-spatial assessment of the area of over-mature forest-dependent preferred wildlife habitat for the selected species by term for 100 years	Partially achieved	Targets for featured species that rely on old-growth (see examples above) were achieved while habitat for Moose and Pileated Woodpecker was not achieved due to a lack of harvest. Finding #6 addresses species at risk not identified.
Area of habitat for forest-dependent species at risk (SAR)	Not achieved	No significant change from plan start, for the habitat requirements for species at risk, due to the low levels of harvest. There is little change in habitat structure from plan start even with the 2018 wildfire. Finding #6 addresses species at risk not identified.

Area of habitat for forest-dependent locally featured species	Not achieved	Low harvesting levels during the current plan limits changes to forest cover and therefore habitat for locally featured species.
Objective 6. Create and maintain a forest landscape that ensures the long-term sustainability of suitable moose summer and winter habitat on the Temagami Management Unit as projected in OWHAM.		
Spatial (OWHAM) habitat assessment in Crown and private land over the next 10 years as measured by moose carrying capacity.	Partially achieved	Moose habitat assessment results have not changed due to low disturbance levels. The 2018 fire impacted some forest types but not all that contribute to moose carrying capacity.
Objective 7. Create and maintain a forest landscape that ensures the long-term sustainability of pileated woodpecker feeding, nesting, and roosting habitat on the Temagami Management Unit.		
Spatial (OWHAM) habitat assessment of pileated woodpecker habitat on Crownland over the next 10 years.	Achieved	No significant changes in pileated woodpecker (feature species) habitat since the plan start.
Objective 8. No numeric objective for road densities in the short term (10 years) or medium-term (20) year for either special (SMA) or integrated (IMA) management areas as defined by the Temagami Land Use Plan (TLUP). Assess change in road density for IMA and SMA at year 7 (2016) of the plan for the future objective setting process. For the long-term (100 years) objective, maintain percent road density in special management area at 0.55 km/km ² or lower subject to assessment in the future. Encourage the development of road use strategies including decommissioning SMA that maintain or decrease present road density.		
Kilometers of road per square kilometer of Crown forest	Partially achieved	Road density has increased marginally in the special management area but has not increased in the integrated management area
Objective 9. To effectively regenerate harvest areas to Free-Growing status consistent with successional objectives within the desirable levels.		
Percent of harvested forest area assessed as free growing.	Partially achieved	Efforts to address the backlog of area not surveyed for regeneration success is ongoing. Auditors observed that good progress has been made to address areas not successfully regenerated.
Objective 10. Regeneration of landings, and where appropriate, non-gravel roads that are constructed during the planning term (2009-2019) in areas of low mineral potential to increase the amount of Crown productive forest.		
Area of rehabilitated Crown productive forest	Achieved	Auditors saw landings and non-gravel roads were being regenerated.
Objective 11. To implement forestry operations in a manner that protects natural resource features, land use or values dependent on forest cover, ensuring that compliance levels correspond with the desired levels and targets, except where compliance levels are higher.		
Compliance with the prescription for the protection of natural resource features, land uses or values dependent on forest cover (% of	Partially Achieved	There were no non-compliances associated with Area of Concern prescriptions. Field audit observations found residual retention does not always meet requirements (Finding #9)

inspections in compliance)		and poor road grading practices (Finding #12).
Compliance with prescriptions for the protection of forest-dependent species at risk (% of inspections in compliance)	Partially Achieved	There were no non-compliances concerning AOC & species at risk protection. The audit did note forest management plan is missing some Species At Risk (Findings #6).
Objective 12. To recognize and respect the legitimacy and presence of other commercial business and to contribute to the economic viability of resource-based businesses in or adjacent to the Temagami Management Unit through protection of associated values, ensuring that compliance levels correspond with the desired levels and targets, except where compliance levels are higher.		
Compliance with prescriptions for the protection of resource-based tourism values (% of inspection in compliance)	Achieved	There were no non-compliances concerning the protection of resource-based tourism values.
Objective 13. To provide for sustainable and continuous harvest levels (area and volume) that, to the extent possible, meet the wood supply demands over the short, medium, and long terms by species group. Minimize fluctuation in the sustainable supply of wood throughout the next 100-year period.		
Long-term projected available harvest area	Achieved	The low level of harvest has not negatively affected the long-term available harvest area The forest management plan management strategy achieved this objective.
Long-term projected available harvest volume by species group	Achieved	The forest management plan management strategy achieved this objective.
Objective 14. To plan that actual harvest area and volume equals the available and forecast area		
Forecast harvest area, by forest unit	Achieved	98% of the forecast available harvest area was allocated for all forest units. Indicator assessed at LTMD stage.
Forecast harvest volume, by species	Achieved	Forecast Stand level volumes are greater than 90% of available harvest volumes. Indicator assessed at LTMD stage.
Planned harvest area for Phase II, 5-year Phase, by FU	Partially achieved	8 of 14 target levels have been met at draft plan stage for Phase II. Also, area not harvested in Phase I was carried over to Phase II.
Actual harvest volume by species	Not achieved	The actual annualized harvest volume by major species group is less than 30% of the planned volume. Each individual species group is well short of the planned volume.
Actual harvest area by species	Partially achieved	Actual harvest area not harvested in Phase I was carried forward to Phase II. Actual harvest area is 25.4% of planned. PJCC is 73.6% and POCC is 51.6% while PRST is 260% of planned. Refer to Section 4.4 and 4.8 of this report for comments on underutilization actions.
Objective 15. Encourage the maximum utilization of available forest fibre		

Percent of forecast volume utilized by mill	Not achieved	Only 1 of the 15 targets was fully met. Refer to Section 4.4 and 4.8 for comments on underutilization actions.
Objective 16. To maintain productivity of soil function, and to minimize adverse effects of forest operations on soil conditions consistent with the Forest Management Guidelines for the Protection of the Physical Environment, OMNR		
Compliance with management practices that prevent, minimize, or mitigate site damage (% of inspections in compliance)	Achieved	No issues of non-compliance were issued in the AOC category.
Objective 17. To minimize the adverse effects of forest practices on water quality consistent with the Timber Management Guidelines for the Protection of Fish Habitat, MNR 1988, Environmental Guidelines for Access Roads and Water Crossings, MNR 1990, and Code of Practice for Riparian Area, MNR 1994; ensuring that compliance levels correspond with the desired levels and targets, except where compliance levels are higher.		
Compliance with prescriptions developed for the protection of water quality and fish habitat (% of inspections in compliance)	Achieved	No non-compliances were issued related to water quality and fish habitat Water crossings observed met requirements but auditors noted poor road grading practices (Finding #12).
Objective 18. Maintain the area of Managed, Crown Productive Forest available for timber production at the highest possible level by minimizing the conversion of managed crown forest area to non-forest land.		
Managed, Crown forest available for timber production	Achieved	There have been no changes to the area available for harvest.
Objective 19. To facilitate more equal participation by Aboriginal peoples in the benefits derived from forest management and to increase the involvement of Aboriginal peoples in forest management by providing economic opportunities to Aboriginal communities		
Opportunities for involvement provided to, and involvement of, Aboriginal communities in plan development.	Achieved	North Bay District established an Indigenous Working Group (a.k.a. Indigenous Task Team) before starting the 2019 forest management planning process. Interviews with representatives from Indigenous communities confirm opportunities are provided (Best Practice #1). Temagami First Nation representative is a member of the Temagami Local Citizens Committee. All First Nations were represented on the 2019 FMP Planning Team.
Harvesting rights	Achieved	Temagami First Nation holds 2% of the allocation and recently obtained another 7% as a result of Tembec relinquishing its licence. The additional licence area is captured in the 2019 FMP as the Lands Set Aside area.
Silvicultural Contracts	Not Achieved	There are currently no silvicultural contracts being held by Aboriginal community members. The Lands Set Aside will provide additional opportunities for Temagami First Nation as they will control the forest management in this area.

Identification and protection of Native Values	Achieved	No issues were encountered regarding the identification and protection of Native Values. TFN received funding to complete values mapping for the current FMP. No MOAs are currently in place as suggested by the FMP. Metis Nation is currently working on values collection and has the opportunity to identify values during AWS review.
Objective 20. To have the Local Citizens Committee effectively participate in the development of the forest management plan.		
Local Citizens Committee's self-evaluation of its effectiveness in plan development	Achieved	LCC self-evaluation concluded that the LCC contributed effectively to the FMP development.
Objective 21. To implement and monitor forest operations according to the Annual Compliance Plan consistent with provincial legislation MNR policy, legal commitments, regional strategic direction, local land use and resource management plans; ensuring that compliance levels and targets, except where compliance levels are higher.		
Non-compliance in forest operations inspections (% of inspections in non-compliance, by category (minor, moderate and significant, as determined by MNR))	Achieved	No issues of non-compliance were issued in the plan period for values/environmental protection. Two findings have been issued related to road grading practices (Finding #12) and residual retention (Finding #9) to ensure continued compliance.
Objective 22. Provide the public with information about forestry. Propose to make use of public information centres, road signage and reporting on Recommendation No. 27 from the Temagami Comprehensive Planning Council Recommendations.	Achieved	The summary of public consultation showed good efforts were made to provide the public with information (Best Practice #1). FMP, AWS, and Annual Reports are available to the public online and at the District office. This objective was revised and carried forward to the 2019-2029 FMP (objective #22).
Objective 23. Provide greater emphasis on non-timber values of the Temagami Management Unit, including non-timber values such as sugar bush and cone collecting operations, mushroom collecting.	Achieved	Ministry of Northern Development, Mines, Natural Resources and Forestry is responsive to a communities' interest in non-timber forest products. Non-timber products from the forest continue to be discussed and promoted with interested individuals.
Objective 24. Provide areas for 'personal fuelwood collection.' Provide areas of standing timber, inaccessible locations, near communities and continue to permit the collection of fuelwood in areas of recent harvest within IMA's	Achieved	Public fuelwood areas were provided in each annual work schedule within this plan period.

Objective 25. Leave room for future economic activity such as biomass production (for energy). Recognize emerging markets, potential of biomass energy production in future and research opportunities.	Achieved	Low utilization levels have left additional volumes available for biomass production. Market conditions will need to improve before this fibre will be utilized. This objective was carried forward to the 2019-2029 FMP and investigations continue into opportunities for other forest products (objective #21).
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The 2019-2029 Forest Management Plan for the Temagami Management Unit contains 29 objectives and 100 indicators of sustainability including those for the Lands Set Aside. Several of the management objectives (#1, 3, 10, and 25) and parts of objectives #9, 11, 17, 18, 19, 23, 24 and 26 are assessed during plan development. The balance of objectives is assessed during plan implementation or development of the next forest management plan. The audit report (Section 4.7) noted deficiencies with FMP-10 for some objectives that did not have desirable levels or targets and did not include any discussion in the plan text explaining planning team decisions not to include targets for some of these objectives. Auditors believe the assessment of these objectives will be difficult without measurable targets and/or desirable levels; considering this assessment will be done by a new forest manager.

For those objectives assessed during plan development, the forest management plan concludes that on balance, plan objectives are being met and progress is being made towards the desired forest and benefits. The audit team concurs with this assessment two years into the implementation of the forest management plan. As described throughout this audit report, the forest managers are working hard to address long-standing issues related to underharvest and utilization of unmarketable or low-grade species and have implemented many new practices (e.g., Implementation Tool) to address recommendations from the previous Independent Forest Audit. In the first two years of implementation, harvest levels have increased to more than double what was achieved in the 2009 forest management plan. If that trend continues, habitat and spatial objectives, projected to be reached through the achievement of planned harvest levels, will be met. The audit found a high level of compliance for nearly all of the audit sites visited. This translates to Area of Concern prescriptions being applied correctly, water crossing installations done well, utilization requirements being met and minimal ground disturbance during harvesting or silviculture operations. However, the audit issued three findings, as discussed in Section 4.4, that could affect the full achievement of objective 16 related to non-compliance.

APPENDIX 3: COMPLIANCE WITH CONTRACTUAL OBLIGATIONS

Licence condition	Licence holder performance
Payment of Forestry Futures and Ontario Crown charges	Ontario Crown charges were paid in full
Wood supply commitments, MOAs, sharing arrangements, special conditions	Wood supply agreements exist with Rockshield, Georgia Pacific, Goulard Lumber, Rayonier AM Canada (formerly Tembec) and Temagami Cedar. A supply letter exists for KD Quality Pellets. None of the supply agreements annual volumes are fully utilized by the above mills. During this audit period, several business-to-business agreements have been made by wood supply agreement holders and EACOM (EACOM has no wood supply agreement on the Temagami Management Unit) to purchase conifer for the EACOM Elk Lake sawmill.
Preparation of FMP, AWS, and reports; abiding by the FMP and all other requirements of the FMPM and CFSA	Recommendation # 3 from the 2011-2016 IFA (ensure AWS is consistent with FMP) was addressed for the 2019 FMP. Annual work schedules and Annual reports followed the FMPM.
Conduct inventories, surveys, tests, and studies; provision and collection of information in accordance with the FIM and in the case of the Agreement in accordance with the Algonquin Forestry Authority Act	All information collected was compliant with FIM. In the Pw/Pr shelterwood stands, prescriptions were completed as required. A new forest resource inventory was available for the 2019 forest management plan.
Wasteful practices not to be committed	No wasteful practices were observed during the field audit and there were no non-compliance or unresolved issues for wasteful practices.
Natural disturbance and salvage SFL conditions must be followed	There was no salvage harvest during the audit period. During 2018 several fires burned more than 12,000 ha of forest but due to access were not salvage harvested.
Protection of the licence area from pest damage, participation in pest control programs	A small area (71 ha) of Spruce budworm damage was reported in 2019. No pest control programs were implemented during the audit period.
Withdrawals from licence area	There were no withdrawals from the licence area during the audit period. Ontario Power Generation has flooding rights on Lady Evelyn Lake, Fourbass Lake, Lake Timiskaming, Bay Lake, and the Montreal River. This has not impacted shoreline forests.

Action plan and progress towards the completion of actions as reported in annual reports or status reports prepared under previous versions of the IFAPP	An audit action plan status report was completed on 9 May 2019 for the 2011-2016 IFA within the required timeframe. This action plan addressed Recommendations 3,5,6,8,9,10 (all directed towards North Bay District Ministry. All other recommendations were directed at corporate Ministry of Northern Development, Mines, Natural Resources and Forestry.
Payment of forest renewal charges to the SPA	The Temagami Management Unit uses a special purpose account to collect forest renewal charges there are no outstanding charges.
SPA eligible silviculture work	All silviculture work was paid from the special purpose account.
SPA forest renewal charge analysis	A renewal charge analysis with forest resource licence holders was completed annually following the Temagami Management Unit – forest renewal charge setting process. This is based on the Ministry guidelines and renewal rate template.
SPA account minimum balance	The special-purpose account does not have a required minimum balance. North Bay District sets an annual arbitrary amount based on a review of money in the account and projections for the current year's silviculture program. In the analysis review of requirements to cover future liabilities, assuming no future revenues, is completed. This total ranges from about \$625,000 to \$950,000.
Silviculture standards and assessment program	Silviculture assessment was not completed during every year of the audit period because of fluctuating harvest levels. For the previous plan period (2009-2019) 2311 ha of 7,289 ha was confirmed as Free-to-Grow and another 1594 ha was declared Free-to-Grow in 2019. Establishment surveys are being conducted as required.
First Nations and Métis opportunities	The North Bay district has created levels of cooperation and communication with local First Nations and other stakeholders, and this is documented in a Best Practice Finding #1. In terms of opportunities Ministry of Northern Development, Mines, Natural Resources and Forestry has helped facilitate the formation of a Local Forest Management Corporation with a board comprised of members from Temagami

	First Nation. Ministry of Northern Development, Mines, Natural Resources and Forestry has also provided opportunities for Temagami First Nation through Daki Menan Lands and Resources Corp. including wood supply, forest resource licences and silviculture work. The volume allocated to Daki Menan is very low and reported as about 2% of the planned harvest according to the 2017 Native Background Information Report.
Preparation of compliance plan	The FMP describes a compliance strategy. At the annual work, schedule references are made to follow the 10yr compliance strategy in the FMP along with a list of compliance reporting areas planned for that annual work schedule.
Internal compliance prevention/education program	The forest management provider has a comprehensive web-based system (via an information portal) tracking block status and compliance inspections on a monthly basis. This is used to identify issue trends and when required set up training courses in a continuous improvement loop. There are also annual compliance meetings to review operating procedures.
Compliance inspections and reporting; compliance with compliance plan	On an annual basis, 22-39 compliance inspections were completed meeting the objectives of the compliance plan: 54% were for access, 39% were harvest, 1% were renewal, 6% were for maintenance. The web-based Temagami Management Unit information portal provides access to printable operations maps and data collection sheets to ensure all required compliance items are checked and documented on the map/datasheet.

APPENDIX 4: AUDIT PROCESS

Background

The audit process is a requirement of the Crown Forest Sustainability Act under Ontario Regulation 319/20 and the process to be used is clearly outlined in The Independent Forest Audit Process and Protocol.

The purpose of this is to assess the Temagami Management Unit's compliance with the Forest Management Planning Manual.

Risk Assessment

A risk-based approach is used to ensure critical risk factors associated with forest sustainability as outlined in the FMP are reviewed; while those factors that have low probability are reviewed on an optional basis.

The lead auditor completed a detailed review of annual reports, the previous IFA, and the FMP to understand where the focus of the IFA was required. From this, a risk assessment was completed and submitted to the Forestry Futures Trust Committee and the Ministry of Northern Development, Mines, Natural Resources And Forestry in April 2021. A summary of mandatory and optional principles that were to be reviewed is described in Table 2

Audit Plan

An audit plan was developed from the risk assessment and submitted to Forestry Futures Trust Committee, northeast region Ministry of Northern Development, Mines, Natural Resources And Forestry, North Bay district Ministry of Northern Development, Mines, Natural Resources And Forestry and the LCC in April 2021. The audit plan details the:

1. results of the risk assessment;
2. The audit schedule developed from the risk assessment, including the timing of the audit;
3. The associated procedures to be used during the audit; and,
4. A list of the auditors, their background and area of audit focus.

Public Participation

A key component of the audit plan and process is public consultation, the following was completed before and during the audit:

- A survey was distributed widely to the community of Temagami via municipal tax bills,
- A survey link was directly emailed to Local Citizen's Committee members and their member Associations, First Nations contacts, and Mayor's emails.
- Ten% of the entities on the North Bay District contact list received paper surveys through the mail, and two people replied.

A total of 24 replies were received, mainly through Survey Monkey, which was open for two months. The social auditor interviewed six of the eleven members of the Local Citizen's

Committee. The auditor interviewed three First Nation elders or councillors (Temagami First Nation and Matachewan First Nation).

Site Selection

Sites to assess key principles around forest management and compliance to the forest management plan were completed by the lead auditor in May/June of 2021. This process was a GIS exercise where multiple layers of forest information data were reviewed with the objective to:

1. Capture sites that represented a random sample;
2. Ensuring a sample size of 10% of the total area by activity; while,
3. Cover all the required mandatory and optional audit principles that required assessment.

This map was submitted to the Ministry and their forest management service provider to determine accessibility to the selected blocks. Comments received from Ministry and the forest management service provider were integrated into the final site selection (i.e. if selected sites were not accessible the lead auditor found alternative random sites that were accessible). The final site selection was reviewed in a conference call with the Ministry of Northern Development, Mines, Natural Resources and Forestry and their service provider on August 11th, 2021.

The sampling intensity based on this process is summarized in Table 5.

Table 4: Summary of Independent Audit Process and Protocol Audit Principles by Risk Category

Principle	Optional			Mandatory	Comments
	Applicable (#)	Selected (#)	% Audited	Audited (#) (100% Audited)	
1. Commitment	2	0	0	0	Was not audited. Ministry of Northern Development, Mines, Natural Resources and Forestry has well documented publicly available commitment policies.
2. Public consultation and First Nations and Métis involvement	7	4	57	0	Review of public consultation was completed before the field audit via phone email and video conference and also during the field audit where licence holders and representatives from Daki Menan were interviewed face to face. Daki Menan was pleased with the level of input they have in planning and forest operations.
3. Forest management planning	81	6	7	31	Review of forest management activities often overlapped during the field site visit. For example, while reviewing harvest activities water crossing and forest operation prescriptions were also reviewed.

4. Plan assessment and implementation	13	2	15	9	
5. System support	2	2	100	0	System support is reliant on a web-based information portal that all forest licence holder has access to. This portal provides operational maps, standards, and detailed guidelines for work around values and an operations notification system where operational status is listed for all activities.
6. Monitoring	21	8	38	9	
8. Achievement of management objectives and forest sustainability	14	0	0	14	The Temagami Management Unit has low utilization of the planned annual harvest area. Ministry of Northern Development, Mines, Natural Resources and Forestry, forest licence holders and wood supply agreement holders. Recent efforts to focus provincial roads funding on the construction of primary roads (Eagle Like road) help provide access to economical wood.
8. Contractual obligations	12	0	0	10	In an effort to increase harvest to meet forest management plan objectives wood supply agreement holders are working with forest resource licence holders. For example Georgia Pacific has been offering conifer harvest blocks to EACOM, Alex Welch Logging to increase harvest levels and wood utilization.
Totals	152	22	14	73	

Table 3: Field Sampling Intensity of Activities Assessed

Activity	Total in Audit Period (1)	Total Sampled	Actual sampling intensity (%)
Harvest (ha) Shelterwood Clear Cut	5866 152 5714	1172	20
Site Prep-Mech/Chem (ha)	4977	635	13
Natural Regeneration (ha)	4173	417	10
Planting (ha)	522	198	38
Seeding (ha)	1436	109	8
Tending (ha)	1330	504	38

Free to Grow (ha)	9788	2469	25
Primary/Branch road const (km)	5	5	100
New Crossings (#)	30	6	20
Forestry Aggregate Pits (#)	24	3	13

Notes:

- (1) Data derived from multiple sources including Annual Report Summary, FOIP, Temagami Management Unit Operators Information Portal

Preliminary Review and Field Site Audit

Prior to the field site audit each auditor carefully reviewed:

- the forest management plan and all its associated products (annual reports, annual work schedules);
- the compliance plan and inspections in the FOIP system;
- GIS map layers from the forest management plan, annual work schedule and annual reports,
- the Temagami Management Unit Forest Management Operators information portal.

This was required to assess many of the mandatory and optional principles and to provide background and direction for the site audit.

The field portion of the audit, where forest management activities during the period 2016-2021 were reviewed and assessed for compliance to the forest management plan and the CFSA, was completed during the week of Aug 15 – 20, 2021.

APPENDIX 5: LIST OF ACRONYMS

AOC - Area of Concern

AR – Annual Report

AWS – Annual Work Schedule

CFSA – Crown Forest Sustainability Act

CLUPA – Crown Land Use Policy Atlas [Crown Land Use Policy Atlas | ontario.ca](https://www.ontario.ca/clupa)

FMP – forest management plan

FMPM – forest management planning manual

FOIP – Forest Operations Inspection Program

GLSL – Great Lakes-St. Lawrence

LTMD – Long-Term Management Direction (can also be referred to as Management Strategy)

MOA – Memorandum of Agreement

NRIP – Natural Resources Information Portal

OWHAM – Ontario Wildlife Habitat Assessment Model

SAR – Species At Risk

SGR – Silvicultural Ground Rules

TFN – Temagami First Nation

APPENDIX 6: AUDIT TEAM MEMBERS AND QUALIFICATIONS

Sarah J. Bros, R.P.F. (Lead Auditor, forest management plan planning, Silviculture)

Sarah is a licenced professional forester in Ontario with over 37 years of experience in forest management and silviculture on both private and crown lands in the Boreal and Great Lakes-St. Lawrence forest regions. Sarah spent 17 years as a forest manager and silviculturalist in Ontario's forest industry. She currently serves as a member of the Board of the Algonquin Forest Authority. As an Independent Forest Audit (IFA) Analyst for the Forestry Futures Committee she observed in the field and critically reviewed audit reports for more than 70 audits. Since 2016, Sarah has led and/or participated in 7 IFA audits and more than 55 independent market certification audits, as a certified Lead auditor, for Forest Stewardship Council (FSC) and the Sustainable Forestry Initiative (SFI). Currently, Sarah is the Planning Forester on the Whitefeather Forest and is assisting the Nawinginiima Forest Management Company with the development of a Free, Prior and Informed Consent Agreement with First Nations on the Pic Forest.

Steve M. Bros, M.B.A., R.P.F. (Compliance, Forest Operations, Contractual Obligations)

Steve is a licenced professional forester in Ontario and British Columbia with over 37 years of experience in the forest industry across Canada. He has worked as a logging contractor implementing the operational parts of forest management plans on multiple forests and started 3 other resource-related businesses. This practical experience has allowed him to provide business and technical services to solve complex operational and business problems, on multiple forests, both private and Crown, for national and international business groups. He is also a certified compliance inspector and licenced scaler in Ontario.

Eleanor Reed, R.P.F. (Consultation, Forest Operations, Silviculture – GLSL)

Eleanor is a certified tree marker and a licenced professional forester in Ontario with more than 37 years of experience in private land and municipal forestry in the Great Lakes-St. Lawrence forest region. Eleanor has worked in both British Columbia and Alberta's forest industry before starting her own consulting company in Ontario. She consults to Forests Ontario, is a Managed Forest Plan Approver for the Managed Forest Tax Incentive Program and is an instructor at the University of Toronto's Civil Engineering field camp. Eleanor brings a wealth of knowledge and a fresh perspective to this audit team.

Robert Foster, Ph.D. (Values, Wildlife Management, Area of Concern Prescriptions, water crossings)

Dr. Robert Foster brings over 25 years of research and work experience in boreal and tropical ecosystems. Rob has a strong background in the design and implementation of field surveys, inventory and monitoring studies involving both plants and animals. Rob is co-author of the Wetland Ecosystem Classification for Northwestern Ontario. As a co-founder of Northern

Bioscience, based out of Thunder Bay, Rob has been involved in monitoring, environmental assessments and protected areas planning in Ontario, British Columbia, and Alberta on projects for major transmission lines, mining-related, hydro-electric, wind farms and solar farms. Rob has authored or co-authored numerous popular, technical, and scientific reports, including 25+ COSEWIC status reports. Rob has a doctorate from the University of Oxford, where he was a Rhodes Scholar.