

**Sapawe Forest**  
**Independent Forest Audit**  
**2012 – 2017**

**Arbex Forest Resource Consultants Ltd.**

**October, 2017**



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## 1.0 Executive Summary

This report presents the findings of an Independent Forest Audit (IFA) of the Sapawe Forest (SF) conducted by Arbex Forest Resource Consultants Ltd. The audit utilized a risk-based approach based on the 2017 Independent Forest Audit Process and Protocol (IFAPP). The audit scope covers 5 years from April 1, 2012 to March 31, 2017. It includes the implementation of years 3-7 of the 2010 Ten Year Forest Management Plan (FMP), the development of the 2015 Phase II FMP and the implementation of that plan until March 31, 2017. Procedures and criteria for the IFA are specified in the 2017 Independent Forest Audit Process and Protocol (IFAPP). The audit field site examinations were completed by helicopter and truck in September 2017.

The Sapawe Forest (SF) was managed by Rainy Lake Tribal Resource Management Inc. (RLTRMI) under an Enhanced Forest Resource Licence (eFRL) (# 552398) between 2012 and 2016. RLTRMI was assigned a Forest Resource Licence and a Forestry Agreement in 2017. A service provider contracted by RLTRMI had responsibility for the preparation of Annual Reports (ARs), the Forest Management Plans (FMPs) and Annual Work Schedules (AWS) during the audit term. The Ministry of Natural Resources and Forestry (MNR) Fort Frances District administers the SF out of its Atikokan Area Office.

In the audit term, the eFRL holder struggled with a number of issues including;

- A lack of markets,
- The lack of available harvest contractor capacity,
- Poor road infrastructure and limited road funding as a result of low harvest levels.

Continued poor markets for some species and products resulted in harvest levels achieving approximately 32% of the planned Phase II available harvest area. This lower than planned harvest resulted in some FMP objectives and associated targets being underachieved during the audit term.

As indicated, forest management operations were also challenged by a lack of harvesting contractor capacity and chronic low levels of roads funding available from the Ontario Provincial Roads Funding Agreement. This circumstance limited the capacity to construct and improve existing roads. A negative funding cycle was perpetuated since roads funding was dependent on harvest levels, but new harvest opportunities were constrained by the inability to build or upgrade roads. In recognition of the crippling effect of the limited funding MNR provided assistance to RLTRMI for road infrastructure including cost sharing and/or the full assumption of costs for some roads projects. Resolute FP also provided financial assistance for road maintenance. These restrictions on road construction and maintenance also required that most harvest areas be in the vicinity of the existing road network.

Despite the complexities associated with the MNRF transformation, the transfer of the unit to the Crown, the establishment of the eFRL, low harvest levels (i.e. roads funding), and the lack of contractor capacity, we found the Forest to be well-managed and that an effective silviculture program was implemented.

The previous audit found that the forest was sustainably managed and provided four recommendations to address identified forest management shortcomings. This audit made five findings. There is a corporate finding related to the late delivery of FRI products (Finding # 1). There was an ineffective slash management strategy (Finding # 2) and a number of forestry aggregate pits did not conform to the required standards (Finding # 3).

During the audit term, MNRF underwent a “transformation process” which resulted in some District staff positions being either vacant or filled on a contract basis. MNRF staffing capacity, both in terms of the number of staff and staff capability/experience contributed to a compliance effort shortfall during the audit term. However, a general lack of priority setting, and staff direction also contributed to a lack of MNRF presence and inspection reporting (Findings # 4 and # 5).

The area renewed exceeds the area harvested and a high level of regeneration success has been achieved (100%). Silviculture success, although low at 46%, is in the opinion of the audit team, more reflective of the restrictive regeneration standards in SGRs and other issues related to the timing of the assessment vis a vis the stand’s successional trajectory and a lack of historic records related to past silvicultural ground rules and/or prescriptions. We understand that a Provincial Silvicultural Program Initiative Committee is currently reviewing the SEM program so a finding related to silviculture success is not provided.

Undoubtedly the lack of harvest (particularly in hardwood forest units) will delay the achievement of the desired future forest condition, and other planned objectives (e.g. supply of wildlife habitat for certain species, movement towards desired forest disturbance size class frequencies). It is noteworthy that the opening of the Rentech Inc. pellet production facility in Atikokan has provided a significant market for wood fibre, which will markedly improve utilization levels in future management terms.

In spite of the slow progress with respect to meeting FMP harvest targets, we concluded that the achievement of long term forest sustainability as assessed by the IFAPP is not at risk.

The audit team concludes that management of the Sapawe Forest was generally in compliance with the legislation, regulations and policies that were in effect during the term covered by the audit, and the MNR met its legal obligations. The forest is being managed consistently with the principles of sustainable forest management, as assessed through the Independent Forest Audit Process and Protocol.

*Bruce Byford*

Bruce Byford R.P.F.  
Lead Auditor



## 2.0 Table of Findings

Table 1 Findings

<b>Concluding Statement on Licence Extension:</b>
<p>The audit team concludes that management of the Sapawe Forest was generally in compliance with the legislation, regulations and policies that were in effect during the term covered by the audit, and the MNRF met its legal obligations. The forest is being managed consistently with the principles of sustainable forest management, as assessed through the Independent Forest Audit Process and Protocol.</p>
<b>Findings</b>
<p><b>Finding # 1:</b></p> <p>The delivery of FRI products was late.</p> <p><b>Finding # 2:</b></p> <p>The slash management strategy of igniting linear rows of slash was ineffective in reducing the loss of productive forest land.</p> <p><b>Finding # 3:</b></p> <p>FMP operational standards for forestry aggregate pits were not consistently met.</p> <p><b>Finding # 4:</b></p> <p>There is no evidence of broader MNRF District priority setting and risk assessment for the allocation of available resources in the Annual District Compliance Plan.</p> <p><b>Finding # 5:</b></p> <p>MNRF failed to file compliance inspections in the FOIP database and had an inadequate compliance presence during the audit term.</p>



### **3.0 Introduction**

This report presents the findings of an Independent Forest Audit (IFA) of the Sapawe Forest (SF or the Forest) conducted by Arbex Forest Resource Consultants Ltd. for the period of April 1, 2012 to March 31, 2017. The audit utilized a risk-based approach based on the 2017 Independent Forest Audit Process and Protocol (IFAPP). The audit scope is five years from April 1, 2012 to March 31, 2017. It includes the implementation of years 3-7 of the 2010 Ten Year Forest Management Plan, the development of the 2015 Phase II FMP and the implementation of that plan until March 31, 2017.

The Sapawe Forest (SF) is managed by Rainy Lake Tribal Resource Management Inc. (RLTRMI) under an Enhanced Forest Resource Licence (eFRL) (# 552398) between 2012 and 2016.<sup>1</sup> RLTRMI was assigned a Forest Resource Licence and a Forestry Agreement in 2017. A service provider (RW Forestry Inc.) contracted by RLTRMI had responsibility for the preparation of Annual Reports (ARs), the Forest Management Plans (FMPs) and Annual Work Schedules (AWS) during the audit term. The Ministry of Natural Resources and Forestry (MNR) Fort Frances District administers the SF out of its Atikokan Area Office.

The Forest is not certified under any of the three forest management certification standards adopted in Ontario.

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

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

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<sup>1</sup> The Sapawe Forest SFL (#542441) was granted to Atikokan Forest Products Ltd. on June 10, 1998. This SFL was cancelled by the Minister on August 10, 2011. On April 30, 2012 an enhanced Forest Resource Licence was issued to 8173460 Canada Ltd. to take on forest management responsibilities on the Sapawe Forest, this licence was intended to bridge the period until a Sustainable Forest Licence (SFL) was issued for the forest. Per Articles of Amendment dated July 10, 2012 the name "8173460 Canada Ltd." was changed to "Rainy Lake Tribal Resource Management Inc."

with any subsequent changes to the audit scope requiring agreement between the FFC, MNRF and the Lead Auditor.

The procedures and criteria for the delivery of the IFA are specified in the 2017 Independent Forest Audit Process and Protocol (IFAPP). The audit generally assesses licence holder and MNRF compliance with the Forest Management Planning Manual (FMPM) and the CFSA in conducting forest management planning, operations, monitoring and reporting activities. The audit also assesses the effectiveness of forest management activities in meeting the objectives set out in the forest management plan (FMP). The audit further reviews whether actual results in the field are comparable with planned results and determines if the results were accurately reported. The results of each audit procedure are not reported on separately but collectively provide the basis for reporting the outcome of the audit. The audit provides the opportunity to improve Crown forest management in Ontario through adaptive management. Findings of “*non-conformance*” are reported. A “*Best Practice*” is reported when the audit team finds the forest manager has implemented a highly effective and novel approach to forest management or when established forest management practices achieve remarkable success.

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

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

The Sapawe Forest is located northwest of Lake Superior, approximately 200 km west of the City of Thunder Bay. Communities which receive a wood supply from the Forest include Thunder Bay, Atikokan, Ignace and Fort Frances. Quetico Provincial Park borders the Forest on the south (Figure 1). The Crossroute Forest is situated along the Forest’s southern and western boundaries. The SF is a diverse area possessing an abundance of natural resources that attract a variety of resource users. There are a significant number of remote commercial tourism values.

The Forest occupies an area of 3,015 square kilometres of which 22% is water. Less than 1% is comprised of patent land. Parks, protected areas and conservation reserves occupy approximately 6% of the land base (17,188 hectares (ha)). Much of the Forest is situated within the Quetico section of the Great Lakes – St. Lawrence Forest Region, although a portion of the management unit is located in the Upper English River section of the Boreal Forest Region. The broad character of the forest is Boreal in nature. Elements of the Great Lakes – St. Lawrence Forest Region are exemplified by the presence of white and red pine. Production forest land occupies 196,738 hectares (ha). Table 2 provides an area summary of managed Crown land by land type.

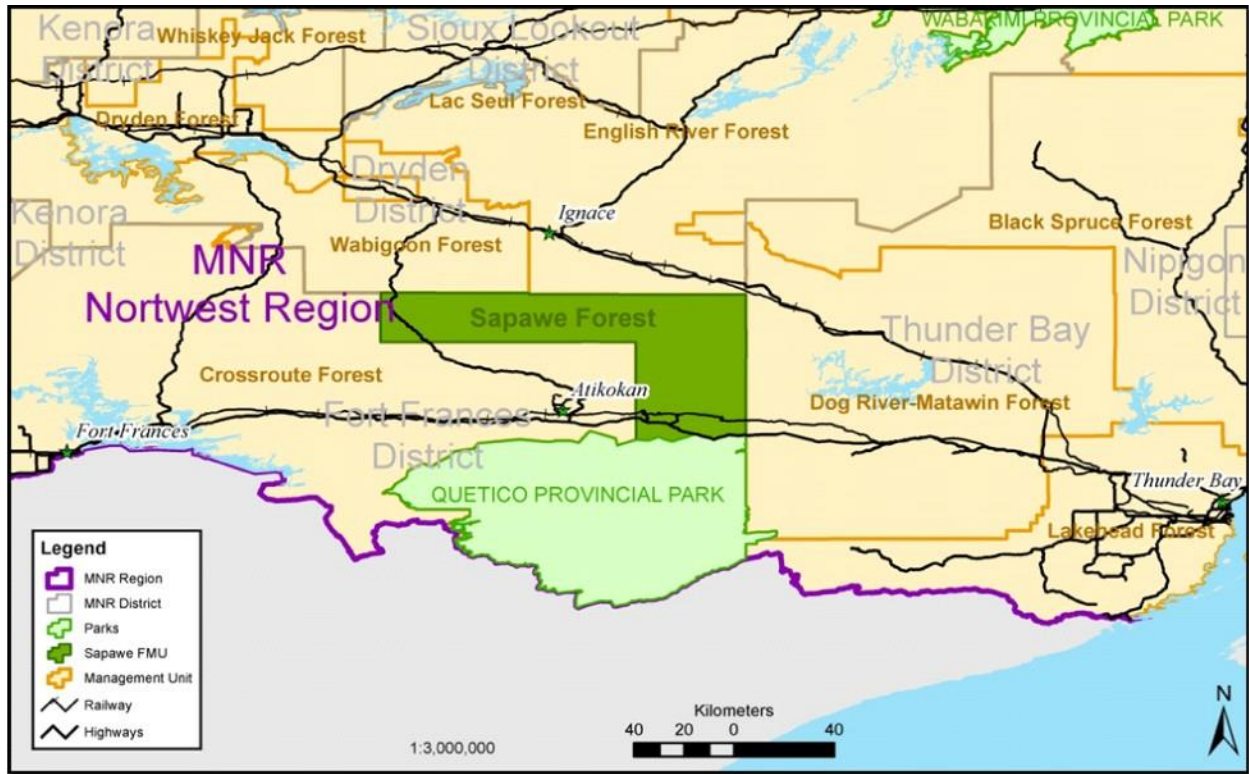


Figure 1 Location of the Sapawe Forest

One Local Citizens Committee (LCC) is associated with the Forest (Atikokan Resource Management Advisory Committee (RMAC)).

Although none of the communities are located within the boundaries of the Forest, there are four First Nation communities with interests on the SF; the Lac Des Mille First Nation (FN), Lac La Croix FN, Seine River FN and the Wabigoon Lake Ojibway Nation. The Atikokan and Area Métis Community and the Sunset Country Métis Community also have an identified interest in the Forest.

An imbalance in the age class structure exists which can be characterized as disproportionately mature to old. Relative to the other age classes, there are age class area deficiencies in the 41-60 and 101-120 year age classes. There is also a disproportionate area in the 81-100 year age class. The large proportion of mature forest has negative implications for the provision of a balanced wood supply and the habitat for some wildlife species in subsequent planning terms, as the forest transitions to younger age classes through harvesting, natural succession and/or natural disturbances. The age class imbalance is more pronounced for conifer dominated forest units.

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

Managed Crown Land Type	Area (Ha)
Non-Forested	69,562.8
Non-Productive Forest	13,887.9
Protection Forest <sup>2</sup>	1,926.1
Production Forest <sup>3</sup>	
Forest Stands	169,218.3
Recent Disturbance	12,234.1
Below Regeneration Standards <sup>4</sup>	15,286.5
<b>Total Production Forest</b>	196,738.9
<b>Total Forested:</b>	212,552.9
<b>Total Crown Managed:</b>	282,115.7

Source: Table 1 2010 FMP

Wildlife resources are abundant due to the location of the Forest in the transition zone between forest regions. Common species include moose, black bear, marten and lynx. Small game species include snowshoe hare, ruffed grouse, spruce grouse and a variety of waterfowl. Species at Risk (SAR) that are known to occur (or thought to have been present) include the eastern cougar, little brown myotis, northern myotis, barn swallow, grey fox and the whip-poor-will.

With the downturn in the forestry sector, the overall demand for wood from the Sapawe Forest decreased significantly during the audit term. The Resolute FP sawmills in Ignace and Sapawe are significant consumers of spruce, jack pine and balsam fir from the Sapawe. With the opening of its pellet production facility in Atikokan (2014/2015) Rentech Inc. (RTK WP2 Canada, ULC) has become the most significant consumer of wood fibre. Red and white pine is delivered to several small specialty facilities.

<sup>2</sup> Protection forest land is land on which forest management activities cannot normally be practiced without incurring deleterious environmental effects because of obvious physical limitations such as steep slopes and shallow soils over bedrock.

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

<sup>4</sup> Areas where regeneration treatments have been applied but the new forest stands have yet to meet free-to-grow standards

## **4.0 Audit Findings**

### **4.1 Commitment**

MNRF has updated policy and mission statements which have been widely distributed by internal newsletters and are prominently displayed on office bulletin boards and the MNRF website. Staff were aware of MNRF direction, sustainable forestry commitments and Codes of Practice.

Beginning in 2012, the SF was managed by Rainy Lake Tribal Resource Management Inc. In interviews, RLTRMI and its service provider staff affirmed their commitment to sustainable forest management.

All IFAPP Commitment requirements were met.

### **4.2 Public Consultation and Aboriginal Involvement**

#### Aboriginal Involvement in Forest Management Planning

Indigenous communities and organizations associated with the Forest are listed in Section 3.2. Our sample of documents indicated that for the development of the 2015 Phase II FMP MNRF met all FMPM requirements with respect to notices and invitations to participate to Indigenous communities. Offers were made for information sessions and community meetings. Aboriginal background information and updated values information was available for the planning process.

The MNRF produced Condition 34 Reports and Condition 56 (as of 2014-15) as required for each year of the audit term. The report format and content met all requirements. We note that the licence holder is an Indigenous company that provides considerable direct and indirect employment to aboriginal peoples.

All IFAPP requirements for the participation of Indigenous peoples in the forest management planning process were met.

#### Issue Resolution and Individual Environmental Assessment

There were no Individual Environmental Assessment or Dispute Resolution requests during the preparation of the Phase II Planned Operations.

#### Local Citizens Advisory Committee

The Resource Management Advisory Committee (RMAC) located in Atikokan is the Local Citizens committee (LCC) associated with the Sapawe Forest. This is a standing committee whose members are appointed by the MNRF District Manager. The Terms of Reference for the LCC was regularly updated and conform to FMPM requirements.

The RMAC was actively involved in FMP development and our review of agendas/ meeting minutes over the term of the audit show on-going involvement in plan implementation activities (e.g. Annual Work Schedules) as well as participation on the planning team.

RMAC members expressed a high level of satisfaction with efforts by the MNRF and RLTRMI to keep them informed and respond to their concerns.

Our assessment is that the RMAC fully met FMPM requirements.

### **4.3 Forest Management Planning**

The strategic portion of the 2010-2020 FMP was developed and produced by Atikokan Forest Products (AFP)<sup>5</sup>. Phase II operational planning was completed by RLTRMI with the assistance of Resolute FP Canada Inc. We found the planning for the 2015 Phase II FMP met FMPM requirements. As required by the FMPM, for Phase II planning the values maps and AOC prescriptions developed for the 2010 Phase I FMP were reviewed, updated and made available to the public for comment. AOC prescriptions were changed to incorporate updated values information and implement relevant direction provided by new or updated forest management guides including the Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales (SSG).

We note that there was a strong commitment to the protection of resource based tourism values in the 2010 Phase I and Phase II FMP and operations. When MNRF assumed management responsibilities (in July 2011 following the cancellation of the Atikokan Forest Products (AFP) SFL), information contained in outstanding Resource Stewardship Agreements between tourism operators and AFP was not available to the MNRF. For the balance of the Phase I FMP, MNRF and RLTRMI contacted Resource Based Tourism Outfitters (RBTO) to try to ensure that their values were reflected by Area of Concern (AOC) designations. For the production of the Phase II FMP, MNRF and RLTRMI sent letters to all RBTOs (followed up with a second mail-out and informal emails, phone calls and face-to-face meetings) in order to identify and protect values. These values were protected by AOC prescriptions; no RSAs were signed during the development of the Phase II plan. We concluded that the use of AOC prescriptions provided an effective means to protect RBTO identified values.

Species at Risk (SAR) listed under the endangered Species Act were appropriately considered during planning. Habitat descriptions, the application of guidelines and operational prescriptions were provided in the plan text and supplementary documentation.

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<sup>5</sup> Former Buchanan Group Company.

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

We note, as is the case on most management units in Ontario, that the Forest Resource Inventory is substantially late. The SF was flown to capture imagery for an Enhanced Forest Resources Inventory (eFRI) in 2008 with the delivery of the inventory product scheduled for May 2015. The eFRI was received by the MNRF on August 30, 2017 (Finding # 1). In spite of the fact that the inventory is in excess of two years late, our interviews with MNRF staff indicated that the late delivery of the product is not expected to delay the 2020-2030 planning process.

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

The full implementation of the FMPs was negatively impacted by the economic downturn in Ontario's forestry sector. Lower than planned harvest levels resulted in the underachievement of planned targets for post-harvest silvicultural treatments.

##### **Harvest**

Audit term harvest levels were below planned (~32%) due principally to the economic downturn in the forestry sector which closed or idled several receiving mills. Operations were also challenged by a lack of harvesting contractor capacity and chronic low levels of roads funding available from the Ontario Provincial Roads Funding Agreement.<sup>6</sup> This circumstance has required that most harvest areas be located in the vicinity of an existing road network, and limited the Company's capacity to upgrade or improve existing roads.

Table 3 presents the planned vs. actual harvest area by forest unit. Conifer utilization levels exceeded hardwood utilization levels. Table 4 presents a summary of the planned vs. actual volume utilization between 2012 and 2016.

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<sup>6</sup> Funding is based on a rolling five-year average harvest. Since the Forest is small and has had very low harvest levels money available from the program is very limited.

Table 3 Planned vs. Actual Harvest Area (2012-2016)

Year	Planned 5 Year Harvest (Ha)	Actual 5 Year Harvest (Ha)	Planned Vs Actual %
2012 - 2013	2,130	619	29
2013 - 2014	2,130	488	23
2014 - 2015	2,130	494	23
2015 - 2016	1,935	688	36
2016 - 2017	1,935	979	51
<b>Total</b>	<b>10,260</b>	<b>3,268</b>	<b>32</b>

Table 4 Planned vs. Actual Volume (000's m<sup>3</sup>) (2012-2016)

Species group	Planned Volume (000 m <sup>3</sup> )	Actual Volume (000 m <sup>3</sup> )	% of Planned
Conifer	842,580	227,099	29
Hardwood	507,426	43,157	9
Bio Harvest	0	78,945	0
<b>Total</b>	<b>1,350,006</b>	<b>349,201</b>	<b>26</b>

No salvage harvest operations were undertaken during the audit term.

Our site inspections indicated that, on balance, harvest operations were properly implemented. All inspected harvest blocks were approved for operations in the AWSs. Harvest prescriptions were implemented in accordance with the SGRs. There was little evidence of site or environmental damage. AOC prescriptions were properly implemented.

### Slash Management

Our site investigations revealed that the management of logging slash could be improved. Instances of incomplete burning of linear rows of slash were commonly observed (Finding # 2).



## Area of Concern Management

AOC prescriptions to protect identified values were completed as required in the 2015 Phase II FMP. A review of AWSs indicated that prescriptions from the Phase I plan were properly implemented. We sampled AOC prescriptions (10) and confirmed that they conformed to the appropriate MNRG guidelines. Document reviews and audit interviews revealed that public input with respect to values protection was documented, verified and where appropriate added to values maps.

We concluded that AOC prescriptions were appropriate for the protection and/or maintenance of the identified values and were implemented in accordance with the FMPs and the AWSs. Our review of FOIP records indicated few compliance issues associated with AOCs during the audit term.

## **Renewal, Tending and Protection**

### Site Preparation (SIP)

During the audit term, SIP treatments achieved 16% of the planned FMP targets due to the lower than planned harvest level and sites being suitable for renewal without SIP treatments (Table 5). Mechanical site preparation treatments comprised 81% of the implemented SIP treatments. Chemical site preparation treatments were conducted on 472 ha. The inspected areas treated by mechanical site preparation exhibited good mineral soil exposure. There was no evidence of environmental damage on inspected sites. Chemical treatments were effective in achieving early competition control.

Table 5 Area (Ha) of Planned vs. Actual Site Preparation (2012-2016)

<b>SIP Treatments</b>	<b>Planned Ha</b>	<b>Actual Ha</b>	<b>Planned Vs Actual %</b>
Mechanical SIP	7,564	1,984	26
Chemical SIP	7,564	472	6
<b>SIP Total</b>	<b>15,128</b>	<b>2,456</b>	<b>16</b>

### Renewal

The 2010 FMP forecast an area of 4,546 ha of natural regeneration and 5,928 ha of artificial renewal (Table 6). FMP renewal targets were not achieved due to the lower than planned harvest. However, the area treated for renewal exceeds the area harvested. Regeneration assessments indicate a high level of regeneration (100%) but the silviculture success is low (46%) (See Section 4.6).

All renewal treatments observed in the field were consistent with the FMP SGRs. Approximately 33% of the harvest area was renewed by natural treatments. Our site

inspections of harvest blocks managed for natural renewal found the blocks were typically well-stocked to conifer.

Artificial renewal treatments were most frequently adopted during the audit term. Tree planting was the most frequently adopted renewal technique reflecting the higher harvest of upland conifer sites which are more conducive to planting operations. Our site inspections found planted areas to be well-stocked.

The area treated by seeding was well below the FMP forecast area, achieving only 35% of the FMP target due principally to low harvest levels. Seeding was typically used to augment natural ingress and our site inspections found these treatments were effective.

Table 6 Area (Ha) of Planned vs. Actual Renewal Treatments (2012-2016)

<b>Treatments</b>	<b>Planned Ha</b>	<b>Actual Ha</b>	<b>Planned Vs Actual %</b>
Natural Renewal	4,546	1,070	24
Artificial Renewal -Plant	4,832	2,337	48
Artificial Renewal - Seed	1,096	386	35
<b>Total Renewal</b>	<b>10,474</b>	<b>3,793</b>	<b>36</b>

*\*Natural renewal is based four years of data.*

Based on our field site inspections, we concluded that an excellent renewal program was being implemented.

### Tending

Herbicide tending treatments were implemented on 76% of the planned area during the current plan term (Table 7). Our site inspections found that the herbicide treatments were very effective in controlling competing vegetation and no compliance issues related to the chemical herbicide spray program were reported. Recommendation # 2 of the previous audit required the MNRF to improve its chemical tending program and to address a backlog in area requiring treatment. Our assessment is that this recommendation was addressed and resolved.

Table 7 Area (Ha) of Planned vs. Actual Tending Treatments (2012-2016)

<b>Treatment</b>	<b>Planned Ha</b>	<b>Actual Ha</b>	<b>Planned Vs Actual %</b>
Aerial Herbicide Tending	7,376	5,595	76
<b>Total Tending</b>	<b>7,376</b>	<b>5,595</b>	<b>76</b>

## Protection

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

## **Access Planning and Management**

As previously stated, forestry operations have been challenged by chronic low levels of roads funding available from the Ontario Provincial Roads Funding Agreement. This circumstance limited the capacity to construct or improve existing roads during the audit term. A negative cycle was perpetuated over the audit term since roads funding was dependent on harvest levels, but new harvest opportunities were constrained by the inability to build or upgrade roads. In recognition of the crippling effect of the limited funding MNR provided assistance to RLTRMI for road infrastructure including cost sharing or the full assumption of costs for some roads projects. Resolute FP also provided funding assistance for road maintenance.

We note that in 2017 MNR amended the traditional allocation process to allow for the investment of crown (public) forest access road infrastructure on low-volume or inactive management units. This program (Low Volume- MU Allocation) will directly benefit all resource users and allow for the repair and replacement of Crown road infrastructure that has been inactive for some time and that could be deemed unsafe or non-compliant (i.e. washouts leading to siltation).

Access planning was in accordance with the requirements of the FMPM. During the audit term 21.6 kilometers (kms) of primary road and 18.3 kms of branch roads were constructed. We inspected four of the twenty-seven water crossings installed during the audit term. All of the inspected crossings were well-constructed. No instances of environmental damage or public safety concerns related to access or water crossing installations were observed. Our review of FOIP records confirmed this finding.

No access controls were implemented during the audit term.

Activities invoiced under the “*Forest Roads and Maintenance Agreement*” were inspected and no non-conformities were observed.

During the field audit, we visited eleven aggregate pits. FMP operational standards for forestry aggregate pits were not consistently met (Finding # 3).

## **Renewal Support**

Renewal support on the SF principally consists of cone collection. RLTRMI is a member of the Superior Woods Tree Improvement Association. Renewal support activities were sufficient to meet the projected renewal program requirements.

## 4.5. System Support

RLTRMI in collaboration with its forest management service provider (RW Forestry Inc.) implements an effective document and records control system that includes a Geographic Information System. Both the MNRF and RLTRMI implemented training programs over the audit term.

During the audit term, MNRF underwent a “transformation process” which resulted in some District staff positions being either vacant or filled on a contract basis. MNRF staffing capacity, both in terms of the number of staff and staff capability/experience, contributed to a compliance effort shortfall during the audit term (See Finding # 5).

## 4.6. Monitoring

RLTRMI prepared a monitoring plan as required by the FMPM and in accordance with the Guidelines for Industry Compliance Planning. Annual inspection targets were appropriate for the extent of harvesting and an in-compliance rate of 87% was achieved. A review of a sample (10) industry submitted inspection reports indicated that they generally conformed to the *Forest Compliance Handbook (2014)* timing requirements.

MNRF compliance planning was completed on an annual basis and included targets and identified individuals responsible for completing the work. The format and content of the plans met compliance guidelines. However, our investigations revealed that the content of the annual plans consisted primarily of individual MNRF staff listing priorities for their specific programs. While these are District wide compliance plans there was no evidence that MNRF managers reviewed the plan, overlaid district priorities, engaged in a “risk management analysis” and approved or adjusted individual staff priorities. This issue is discussed in Finding # 4. The Annual Reports (ARs) indicate that MNRF did not complete any inspections between 2012 and 2015 (Finding # 5). We note that there was a compliance inspection in 2014 but it was not recorded in the AR, and that nine FOIP reports were submitted in 2016<sup>7</sup>.

### Monitoring of Silvicultural Activities

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

### Free to Grow Survey (FTG)

<sup>7</sup> The 2016 AR is not required until November 15, 2017.

During the audit term FTG surveys took place in 2011/12 and 2014/15. Six thousand six hundred and thirty-one ha were assessed, and 96% percent of the surveyed area was declared FTG. Our field sampling (visual assessments) of FTG survey blocks substantiated the stand descriptions and reported forest unit designations.

### Silviculture Success

Regeneration is considered a “*silviculture success*” when all the standards contained in the SGR applied to that stand have been met and the projected forest unit is achieved. A “*regeneration success*” occurs when the regeneration meets all the standards of an SGR but the stand has regenerated to a forest unit other than the projected unit.

A high level of regeneration success (100%) was achieved but the silviculture success is low (46%) was achieved (Table 8). The area classified as “*not successfully regenerated*” had yet to achieve the minimum height and stocking requirement or required additional tending.

Table 8 Silviculture and Regeneration Success by Forest Unit (2010-2016).

Forest Unit	Total Area Assessed (Ha)	Area Regenerated to the Projected Forest Unit (Ha)	Area Regenerated to Another Forest Unit (Ha)	Area Regenerated (Ha)	Area Not Successfully Regenerated (Ha)	% Area Silviculture Success
CoMx1	1,134.5	526.8	607.8	1,134.5	0	46
CoMx2	1,109.3	166.5	942.9	1,109.3	0	15
HwMx1	389.8	179.7	210.1	389.8	0	46
HwMx2	957.9	363.8	594.0	957.7	0	38
PjDom	2,218.3	1,474.5	743.8	2,218.3	0	66
PoDom	61	1.9	59.1	61.0	0	2
PrDom	39.2	0	39.2	39.2	0	0
PrwMx	28.7	0	28.7	28.7	0	0
PwMx	65.0	0	65.0	65.0	0	0
SbLow	46.2	42.6	3.6	46.2	0	92
SpDom	310.0	147.1	162.9	310.0	0	47
<b>Total:</b>	<b>6,359.9</b>	<b>2,902</b>	<b>3,428.9</b>	<b>6,359.9</b>	<b>0</b>	<b>46</b>

The determination of silvicultural success and understanding its implications is complex. Renewal to forest units other than the projected forest unit can frequently still result in

acceptable future forest conditions. In many instances the condition of the stand at the time of FTG will not be the condition of the stand at maturity, as shorter lived and less shade tolerant hardwoods are replaced in stand succession by shade tolerant conifers. The Trends Report Author also cites restrictive definitions of forest units (i.e. percent species composition is too restrictive at 10%), the timing of the assessment vis a vis the stands successional trajectory and the lack of historic records related to past silvicultural ground rules and/or prescriptions as problematic for the determination of silviculture success. In spite of the reported low level of silvicultural success, the relative proportion of cover types on the SF has been relatively stable over several management terms. We understand that a Provincial Silvicultural Program Initiative Committee is currently reviewing the SEM program so a finding related to low achievement of silviculture success is not provided.

### Silvicultural Effectiveness Monitoring

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

### Exceptions Monitoring

Exceptions monitoring is carried out to determine the effectiveness of prescriptions included in forest management plans that are “*not recommended*” in the MNRF forest management guides. Monitoring was undertaken to assess the impacts of full tree logging on shallow soil sites (Ecosites 11 and 12) in accordance with the “Full Tree Harvesting of Ecosites 11 and 12 in Northwestern Ontario: Monitoring Procedures and Best Management Practices” protocol. Some 458 ha were harvested during the 2010 FMP term. Appropriate Best Management Practices were utilized to minimize ground disturbance and avoid nutrient loss from those sites during harvest operations.

Monitoring of Ecosites 19 and 21 seeded without jack pine seed shelters also occurred on three harvest blocks during the audit term. Seeding was undertaken on 5.4 ha (ES 21) and was monitored in accordance with the FMP direction.

### Forest Renewal Trust Specified Procedures Report

We inspected 18% of the area invoiced in the “*Forest Renewal Trust Specified Procedures Report*” (SPR) to verify conformity between invoiced and actual activities. There was a minor issue with the tabulation in the 2015 AR for the area treated by mechanical site preparation. RLTRMI is aware of the problem and it is to be corrected in the 2016/17 AR.

### Access Monitoring

The SF was the responsibility of the MNRF prior to the assignment of the eFRL in 2012. After 2012, forest management roads became the responsibility of RLTRMI. A negotiated process between MNRF and RLTRMI was adopted to develop and implement a protocol to assign and/or share responsibilities for all other roads. Information on responsibilities for tracking and monitoring roads is provided in the FMP.

The MNRF and RLTRMI staff monitored roads and water crossings through the course of normal operations and in accordance with the direction in the FMP. Bridges on active haul routes are inspected once a year. Roads not used for timber operations are monitored on the basis of a risk assessment with emphasis on values that could be impacted (e.g. fish habitat) and public safety concerns. On average 321 km of roads were monitored each year of the audit term. The Trends Report indicates an average of 63 water crossings were monitored annually.

Our sampling of the invoices submitted to the Forest Roads and Maintenance Agreement (FRMA) indicated that they were complete and accurate.

#### Annual Reports

ARs were available for each year in the audit scope except for the 2016-2017 AR, which is not required until November 15, 2017. Schedules for the submission and review of the ARs were generally adhered to although some minor delays occurred in the review of documents. The audit team was satisfied with the rationale for the delay(s) and does not make a finding with regard to AR reporting. The content of the reports generally met FMPM requirements, although some minor tabulation errors occurred. As required, the ARs were presented to the RMAC.

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

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

The Trends Analysis Report identified the following trends as significant:

- Planned harvest levels (area and volume) have not been achieved resulting in plan targets for silviculture activities linked with the harvest to be underachieved.
- Conifer utilization was significantly higher than hardwood utilization. Actual hardwood utilization has trended considerably lower than planned.
- Planned harvest volume levels have remained relatively stable over the past two management terms.

- The area harvested, and the area renewed, are in balance. In spite of the low reported level of silviculture success (for some forest units) the proportion of forest cover types has been relatively stable over several management terms.

The Report Author concludes that forest sustainability is not at risk from the implementation of forest management activities and that planning objectives are meeting or are within an acceptable tolerance of desired levels in order to maintain progress towards sustainability. In our assessment of forest sustainability, we examined factors such as the achievement of plan objectives, progress towards the desired future forest condition, and the level of benefits derived from the implementation of the forest management plan. Our field site visits, document and record reviews and interviews also informed our sustainability conclusion. Undoubtedly the lack of harvest (particularly in hardwood forest units) will delay the achievement of the desired future forest condition, and other planned objectives (e.g. supply of wildlife habitat for certain species, movement towards desired forest disturbance size class frequencies). In spite of the slow progress with respect to FMP harvest targets, we concluded that the achievement of long term forest sustainability as assessed by the IFAPP is not at risk. Our conclusion was premised on the following:

- Forest management was planned and implemented in accordance with the Crown Forest Sustainability Act (CFSA) and FMP targets are consistent with the achievement of plan objectives and forest sustainability.
- Our site inspections indicated that an effective silviculture program was implemented.
- Despite the lower than planned harvest, FMP objectives and targets are being achieved or progressing towards their achievement.
- The area renewed exceeds the area harvested. A high level of regeneration success has been achieved. In spite of the reported low level of silvicultural success, the relative proportion of cover types on the SF has been relatively stable over several management terms. MNR and RLTRMI implemented an excellent renewal program during the audit term.
- We did not observe any instances of environmental damage associated with forestry operations and our site inspections confirmed that AOC prescriptions were appropriately implemented.
- FOIP results indicate a high in-compliance rate was achieved for forest management activities (87%). Our site inspections confirmed this finding.



- Silvicultural Ground Rules (SGRs), Silvicultural Treatment Packages (STPs) and Forest Operations Prescriptions (FOPs) were appropriate for the forest cover types and site conditions.

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

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

The IFAPP requires auditors to assess the effectiveness of the actions developed to address the recommendations of the previous audit. The previous IFA resulted in four recommendations to address forest management concerns. We concluded that the recommendations had been appropriately addressed.

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

Over the audit term, the delivery of forest management on the Sapawe Forest was adversely affected by;

- The continued downturn in the forest sector economy of northwestern Ontario
- Staff capacity at the MNRF due to the “transformation process”.
- A lack of harvest operator capacity.
- Low levels of roads funding due to low harvest levels.

Continued poor markets for some species and products resulted in harvest levels achieving approximately 32% of the planned Phase II available harvest area. The lower than planned harvest resulted in some FMP objectives and associated targets being underachieved during the audit term. The opening of the Rentech Inc. pellet production facility in Atikokan has provided a significant market for wood fibre from the SF which will markedly improve utilization levels going forward.

During the audit term, MNRF underwent a “*transformation process*” which resulted in some District staff positions being either vacant or filled on a contract basis. MNRF staffing capacity, both in terms of the number of staff and staff capability/experience, contributed to a compliance effort shortfall. Despite the complexities associated with the MNRF transformation, the transfer of the unit to the Crown, the establishment of the eFRL, low harvest levels (i.e. roads funding) and the lack of harvest operator capacity, we found the forest to be well managed and that an effective silviculture program was implemented.

The audit team concludes that management of the Sapawe Forest was generally in compliance with the legislation, regulations and policies that were in effect during the term covered by the audit, and the MNRF met its legal obligations. The forest is being

managed consistently with the principles of sustainable forest management, as assessed through the Independent Forest Audit Process and Protocol.

## **Appendix 1**

### **Findings**



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

**Principle:** 3. Forest Management Planning

**Criterion:** 3.3.2. Forest Resource Inventory

**Procedures:**

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

**Background Information and Summary of Evidence**

The Sapawe Forest was flown to capture imagery for the FRI in 2008 and the inventory product was scheduled for delivery in May 2015. The FRI was received by the MNRF on August 30, 2017. The late delivery of the product is not expected to delay the 2020-2030 planning process.

**Discussion:**

The delivery of FRI products is late. This circumstance is not unique to the Sapawe Forest. Up-to-date and accurate forest inventory information is critical for reliable inputs and informed decision-making in the forest management planning process.

**Finding # 1:**

The delivery of the FRI product was late.

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

**Principle:** 4. Plan Assessment and Implementation

**Criterion:** 4.3. Harvest

**Procedures:**

1. Review and assess in the field the implementation of approved access activities. Include the following:
  - Whether harvest operations were conducted to minimize site disturbance.

**Background Information and Summary of Evidence**

The FMP states that the goals for logging debris management are:

- Limit the loss of productive land area to roadside debris
- Successfully regenerate the productive land area recovered
- Make use of the roadside logging debris for bio-energy feedstock
- Respect social considerations by reducing the “visual impacts” of the debris.

The FMP prescribes various treatments for the management of slash;

- Piling (slash only)
- Burning (slash only)
- Mechanical site preparation (furrows) through the slash (slash and chipper debris)
- Mechanical rowing and aligning (slash and chipper piles)
- Redistributing across the cutover (slash only)
- Utilized for brush mat and road construction
- Spreading of chipper piles.

**Discussion:**

Site investigations revealed that the management of logging slash could be improved. Instances of incomplete burning of linear rows of slash were commonly observed. Piling and burning or other alternative treatments would likely be more effective in reducing the loss of productive forest land.

**Finding # 2:**

The slash management strategy of igniting linear rows of slash was ineffective in reducing the loss of productive forest land.

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

**Principle:** 4. Plan Assessment and Implementation

**Criterion:** 4.7 Access

**Procedures:**

2. Review and assess in the field the implementation of approved access activities. Include the following:
  - select a representative sample of each type of access activity (road construction, various types of water crossings - winter, culverts, bridges, road maintenance, decommissioning, and reclamation) from primary, secondary/branch and tertiary/operational roads constructed during the five-year period of the audit; include category 14/forestry aggregate pits for new roads and existing roads

**Background Information and Summary of Evidence**

Appendix VII of the FMPM (2009) details the operational standards that apply for the extraction of aggregate resources for Forestry Aggregate Pits. Included in the standards are requirements that:

- no undercutting of the working face is permitted and; the working face must be sloped at the angle of repose,
- all trees within 5 metres of the excavation face must be removed,
- when the pit is inactive, all pit faces must be sloped at the angle of repose.

The FMPM further states that final pit rehabilitation must include:

- sloping of all pit faces to a minimum of 3:1 (horizontal : vertical);
- re-spreading of any topsoil or overburden that was stripped from the site;
- mitigation measures, to the satisfaction of MNR, to prevent erosion.

**Discussion:**

Site investigations revealed that operational standards for forestry aggregate pits were not consistently met (~30%). Issues observed at non-conforming pits included steep slopes or the undercutting of the working face or trees within 5 metres of the excavation face.

**Finding # 3:**

FMP operational standards for forestry aggregate pits were not consistently met.



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

**Principle:** 6 Monitoring

**Criterion:** 6.1 MNRD Districts should prepare District Compliance Plans that include monitoring and auditing forest operations and dealing with the results of compliance inspections.

**Procedure(s):** ... review and assess whether an MNRD compliance program has been developed and implemented to effectively monitor program compliance in accordance with MNRD manuals, policies and procedures. Assess whether the actual level of the overall monitoring program was in accordance with the FMP/plans.

**Background Information and Summary of Evidence:**

The MNRD District prepares an annual compliance plan in the form of an Excel spreadsheet. The spreadsheet has columns that include: description of activity, risk assessment, scheduling, strategy, action taken and follow-up. For forest operations compliance, there are separate categories for harvest blocks, water crossings, silviculture and roads.

Our investigations determined that a senior technician approaches the various program specialists (e.g. lands, forestry, wildlife, fisheries) and records the compliance work priorities for each program for the coming year. In the case of forest compliance, work priorities are primarily based on the AWS, identified issues (e.g. harvest, access), contractor work history, MNRD priorities, etc. The collected information is then amalgamated in the Excel spreadsheet. We were unable to track the compliance planning process from that point onwards. There is access to the files for all staff. Interviews with MNRD staff indicate that while they submit information to the plan, they have no knowledge of district-wide priority setting either within their particular program or across programs. No staff had been approached with respect to altering their stated priorities or had seen an “approved” plan.

**Discussion:**

A common theme we heard from all parties was that MNRD did not have a sufficient staff to carry out their legislated mandate. Our understanding is that the MNRD “transformation” and move to “risk based management” was driven by the requirement to work smarter and do more with less. This understanding is based on numerous MNRD interviews in this, and previous audits we conducted during the transformation process. As well, the annual compliance plan, with direct input from field staff, forms the basis from which managers are able to understand issues and risks, set compliance priorities both within and across programs, and provide clear direction to their work force. That process does not appear to have occurred. We did

not encounter any evidence of broader district priority setting or distribution of resources. It appears that most MNRF staff have the same work responsibilities as prior to the “transformation” and are working on these tasks with fewer resources.

**Finding # 4:**

There is no evidence of broader MNRF District priority setting and risk assessment for the allocation of available resources in the Annual District Compliance Plan.

## Independent Forest Audit – Record of Finding

### Finding # 5

**Principle:6** .... the monitoring program... as well as associated reporting obligations met the requirements of manuals, policies, procedures and the SFL...

**Criterion: 6.1** ... review and assess whether an MNRF compliance program has been developed and implemented to effectively monitor program compliance in accordance with MNRF manuals, policies and procedures.

**Procedure(s):** ...assess whether the actual level of the overall monitoring program was in accordance with the FMP/plans.

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

The Trends Analysis Report indicates that an overall compliance rate of 87% was achieved for the reported period. FOIP inspections reported in the ARs indicate that MNRF did not complete any inspections between 2012 and 2016. We were informed that there was a compliance inspection in 2014 which was not reported in the AR and that nine FOIP reports were submitted in 2016. Industry completed 37 inspections during the audit term.

During the audit term, there was one MNRF certified compliance inspector with responsibility on Sapawe Forest. This individual also had compliance responsibilities on the eastern portion of the Crossroute Forest. Issues with the merchandizing of wood on the Crossroute Forest in 2014-15 and 2015-16 became an MNRF compliance priority for that individual.

Forest industry compliance inspectors are legally required to report all incidents of real or suspected non-compliance on their management unit, regardless of who the responsible party is, to MNRF within specified timelines. The Compliance Handbook requires MNRF to verify and evaluate all non-compliance reported by the forest industry, and determine if enforcement action is necessary and apply appropriate remedies as required.

The Handbook also requires industry to notify MNRF of harvest block start-up, suspensions and releases. These requirements are met by sending weekly updates to the MNRF in an "Operations Report". Submissions are collected and submitted by RLTRMI for their contractors. These weekly Operations Reports (compiled in a spreadsheet) keep MNRF District staff up to date on activities on the Forest. These reports are also used to complete annual aerial inspections of the identified blocks to identify any issues (e.g. wood left in bush). MNRF staff completed an aerial reconnaissance during each year in the audit term. We are aware that MNRF conducted compliance verification inspections, and engaged with industry inspectors. but inspection reports were not submitted into the FOIP as required.

**Discussion:**

On Crown management units, MNRF remains directly responsible for delivering all aspects of the forest operations compliance program from inspections to reporting. Industry compliance inspectors completed 37 compliance inspections during the audit term reflecting the limited forestry management activity that occurred on the unit during the audit term. MNRF staff completed annual aerial surveillances of harvest blocks and did conduct compliance verification checks but did not file FOIP program reports of these activities. The failure to record these field verification checks resulted in no compliance activities being recorded in the Annual Reports.

**Finding # 5:**

MNRF failed to file compliance inspections in the FOIP database and had an inadequate compliance presence during the audit term.



**Appendix 2**

**Management Objectives Table**



2010 FMP OBJECTIVES	ASSESSMENT OF OBJECTIVE ACHIEVEMENT (MET, PARTIALLY MET, NOT MET, UNCERTAIN)	AUDITOR COMMENTS
<p><b>Objective: 1</b>  <b>To provide forest diversity in a manner that emulates a natural landscape pattern &amp; frequency distribution.</b></p> <p>Indicator: 1.1  Percent frequency distribution of forest disturbances by size class.</p> <p>Indicator: 1.2  Percent of suitable marten habitat arranged in core areas.</p>	<p>PARTIALLY MET</p>	<p>In general, during production of the 2010 FMP, movement towards the natural template was achieved and the area of suitable marten habitat in core areas will increase over the next 60 years.</p> <p>The 2017 Trends report observed that It is difficult to move the forest to within all the natural template ranges within a period of one 10-year FMP. Also, the size and shape of the management unit, as well as considerations such as tourism values and guideline direction for 80% of planned clearcuts to be less than 260 hectares in size, makes it difficult to achieve natural disturbances in larger size classes.</p> <p>The low harvest levels also inhibit progress on achieving the natural disturbance template. The Rentech facility in Atikokan has become a significant consumer of wood from the forest and it is anticipated that this market will result in improved utilization levels in future management terms.</p>
<p><b>Objective: 2</b>  <b>To provide for a forest structure, composition &amp; abundance that is representative of the forest condition under a natural disturbance regime &amp; similar to the historic forest condition (bounds of natural variation).</b></p> <p>Indicator: 2.1  Total area of Crown</p>	<p>MET</p>	<p>In the 2010 FMP, overall, the desirable levels &amp; targets for this objective were projected to be achieved. FMP modeling noted however, that as a result of the dynamics occurring in other forest units, the HwMx1 Total forest unit area does not necessarily decrease to the degree desired over the long- term. The area of Young forest appears to have the biggest influence in the achievement of the Total forest by forest unit long-term desirable levels.</p> <p>Desirable levels &amp; targets were projected to be achieved.</p>



<p>productive forest by forest unit</p> <p>Indicator: 2.2 Area of Young Crown productive forest by forest unit.</p> <p>Indicator: 2.3 Area of Mature Crown productive forest by forest unit.</p> <p>Indicator: 2.4 Area of Old Growth Crown productive forest by forest unit</p>		<p>In 2010 FMP modeling, the desirable levels &amp; targets for each forest unit were projected to be achieved for the majority of the forest units.</p> <p>Desirable levels &amp; targets were projected to be achieved. The old growth area by forest unit was maintained at or above all the minimum levels for all forest units for the next 100 years, with the exception of the PwMx forest unit.</p>
<p><b>Objective: 3</b> <b>To provide forest diversity that meets the habitat needs for values dependent on Crown Forest cover.</b></p> <p>Indicator: 3.1 Area &amp; distribution of preferred habitat for forest-dependent provincially &amp; locally featured species &amp; species at risk</p>	<p>MET</p>	<p>In 2010 FMP modeling the desirable levels &amp; targets were projected to be achieved. More specifically, the 2017 Trends report observed that “harvest progress during the period of this assessment was only 21%, therefore no significant progress toward or away from selected BNV has been made at this time.”</p>
<p><b>Objective: 4</b> <b>To provide for a sustained level of harvest.</b></p> <p>Indicator: 4.1 Long-term projected annual available harvest area.</p> <p>Indicator: 4.2 Long-term projected available harvest volume by major species group</p>	<p>MET</p>	<p>In 2010 planning the projected annual available harvest area and the projected available harvest volume for the major species groups over the short, medium and long-terms were projected to be achieved.</p>

<p>Indicator: 4.3 Percent of forecast volume utilized by mill(s)</p>	<p>NOT MET</p>	<p>The target of 90% utilization of available volume has not been achieved. Reasons include a global economic downturn in 2008; the bankruptcy of Buchanan Forest Products and subsequent closure of the Atikokan Forest Products mill; and the closure of the Resolute FP mill in Fort Frances.</p>
<p>Indicator: 4.4 Available &amp; forecast harvest area, by forest unit</p>	<p>MET</p>	<p>In 2010 planning the desirable level and associated target level were achieved.</p>
<p>Indicator: 4.5 Forecast &amp; actual harvest area, by forest unit</p>	<p>NOT MET</p>	<p>The target maximization of available planned harvest area was not achieved. Reasons include a global economic downturn in 2008; the bankruptcy of Buchanan Forest Products and subsequent closure of the Atikokan Forest Products mill; and the closure of the Resolute FP mill in Fort Frances.</p> <p>Operations were also challenged by a lack of harvesting contractor capacity and chronic low levels of roads funding available from the Ontario Provincial Roads Funding Agreement. This circumstance required that most harvest areas be located in the vicinity of an existing road network, and limited the Company's capacity to upgrade or improve existing roads for harvest and other forest management operations.</p> <p>This lower than planned harvest resulted in some FMP objectives and associated targets being underachieved during the audit term and will undoubtedly delay the achievement of the desired future forest condition, and other planned objectives (i.e. supply of wildlife habitat for certain species, movement towards desired forest disturbance size class frequencies). The opening of the Rentech Inc. facility has provided a significant market for</p>

		wood fibre, and will markedly improve utilization levels in future management terms.
Indicator: 4.6 Available & forecast harvest volume, by species	MET	Modelling indicated that species group volumes exceeded or came close to what was available.
Indicator: 4.7 Forecast & actual harvest volume, by species	NOT MET	<p>Audit term harvest volumes achieved 26% of the FMP forecast. Conifer utilization exceeded hardwood utilization.</p> <p>Operations were also challenged by a lack of harvesting contractor capacity and chronic low levels of roads funding available from the Ontario Provincial Roads Funding Agreement. This circumstance required that most harvest areas be located in the vicinity of an existing road network, and limited the Company's capacity to upgrade or improve existing roads for harvest and other forest management operations.</p> <p>This lower than planned harvest resulted in some FMP objectives and associated targets being underachieved during the audit term and will undoubtedly delay the achievement of the desired future forest condition, and other planned objectives (i.e. supply of wildlife habitat for certain species, movement towards desired forest disturbance size class frequencies).</p> <p>The opening of the Rentech Inc. facility has provided a significant market for wood fibre which will markedly improve utilization levels in future management terms.</p>
<b>Objective: 5</b> <b>To maintain &amp; enhance forest ecosystem condition &amp; productivity through silvicultural practices</b>  Indicator: 5.1 Percent of harvested forest	MET	<p>The 2007 FMP forecast an annualized area of 4,546 ha of natural regeneration and 5,928 ha of artificial renewal (Table 6). FMP targets for natural and artificial were not achieved due to the lower than planned harvest. However, the area renewal exceeded the area harvested.</p> <p>Regeneration assessments indicate a</p>

<p>area assessed as free-growing.</p>		<p>high level of regeneration (100%) but the silviculture success is low (46%)). In spite of the low reported level of silviculture success (for some forest units) the proportion of forest cover types has been relatively stable over several management terms. The determination of silvicultural success and understanding its implications is complex. This issue is discussed in some detail in Section 4.6 of this report.</p> <p>Six thousand six hundred and thirty-one ha were assessed, and 96% percent of the surveyed area was declared FTG. Our field sampling (visual assessments) of FTG survey blocks substantiated the stand descriptions and forest unit designations reported.</p>
<p><b>Objective: 6</b>  <b>To contribute to a healthy forest ecosystem by minimizing the potential for adverse effects of forest management practices.</b></p> <p>Indicator: 6.1  Level of compliance and non-compliance (% of forest operation inspections) with prescriptions developed for: the protection of water quality &amp; fish habitat; the protection of natural resource features, land uses or values dependent on forest cover; &amp;, the prevention, minimization or mitigation of site damage</p>	<p>MET</p>	<p>The target for this Objective was 95% of forest operation inspection reports in compliance, with zero moderate or significant level of non-compliance instances during the implementation of the 2010-2020 FMP. The compliance rate during the period of the Trend Analysis was 87%, based on five operational issues identified in 39 reports that include five operational issues. This rate has the potential to meet target levels at plan end (2020). Our field inspections did not identify any non –compliance issues.</p>
<p>Indicator: 6.2  Level of compliance and non-compliance (% of forest operation inspections) with prescriptions developed for the protection of resource-based tourism values.</p>	<p>MET</p>	<p>There were no non-compliance instances related to the protection of resource-based tourism values during implementation of the 2010-2020 FMP. Our field inspections did not identify any non –compliance issues.</p>
<p><b>Objective: 7</b></p>	<p>MET</p>	<p>The 2017 Trends analysis reports that</p>

<p><b>To contribute to community well-being</b></p> <p>Indicator: 7.1 Kilometres of SFL responsible forest access roads per square kilometre of Crown land.</p>		<p>“assessment of this objective is very difficult because the source of the data and the values used to determine this ratio are not readily available. Attempts to reproduce this ratio have not been successful.”</p> <p>The Trends author felt that the target will be met since “it is unlikely this will increase the ratio by more than 20%”.</p>
<p>Indicator: 7.2 Area of managed Crown forest available for timber production.</p>	<p>MET</p>	<p>With harvest was only (~32%) of planned, and a decline in area available for timber production of greater than 2% in the short term is very unlikely.</p>
<p>Indicator: 7.3, Provide Aboriginal communities with opportunities for involvement in the development of the forest management plan.</p>	<p>MET</p>	<p>All Aboriginal communities were contacted six months prior to the commencement of public consultation for the 2010 -2020 FMP. Contact continued throughout the development of the 2010-2020 FMP.</p>
<p>Indicator 7.4 Provide opportunity for Aboriginal representation on the 2010 planning team - create of a position for each of the Communities in or adjacent to the Sapawe Forest.</p>	<p>MET</p>	<p>A position was made available on the planning team for a representative from each Aboriginal community. Two communities had representation on the planning team.</p>
<p>Indicator 7.5 Incorporate/consider the updated Aboriginal Background Information Reports &amp; updated information regarding the identified Aboriginal Values in the preparation of the 2010- 2020 FMP</p>	<p>MET</p>	<p>The draft Aboriginal Background Information Reports and any other identified Aboriginal Values were considered in the FMP development.</p>
<p>Indicator: 7.6 Local citizens committee's (RMAC) self-evaluation of its effectiveness in FMP development</p>	<p>MET</p>	<p>LCC survey respondents indicated they effectively participated in FMP development.</p>



## **Appendix 3**

### **Compliance with Contractual Obligations**





Licence Condition	Licence Holder Performance
Payment of Forestry Futures and Ontario Crown charges.	Forest Futures and Crown charges were paid on time.
Wood supply commitments, MOAs, sharing arrangements, special conditions.	<p>There are two wood supply commitments:</p> <p>A conditional offer to RTK WP2 Canada - 43,000 m<sup>3</sup> of Poplar and 41,000 m<sup>3</sup> of White Birch.</p> <p>There is also a commitment to provide logging opportunities to Ontario 897452 (T &amp; M Logging) through a Memorandum of Agreement (MOA).</p> <p>Licence commitments were met.</p>
Preparation of FMP, AWS and reports; abiding by the FMP, and all other requirements of the FMPM and CFSA.	<p>Phase I and II FMPs were completed in accordance with the FMPM and met the requirements of the CFSA.</p> <p>The AWSs and ARs met reporting and format requirements.</p>
Conduct inventories, surveys, tests and studies; provision and collection of information in accordance with the FIM.	All required surveys and data collection were completed and information was collected and provided in accordance with the FIM.
Wasteful practices not to be committed.	There were no reported incidences of wasteful practices during the audit term.
Natural disturbance and salvage SFL conditions must be followed.	There were no salvage operations during the audit term
Protection of the licence area from pest damage, participation in pest control programs.	There were no pest control programs implemented during the audit term.
Withdrawals from licence area.	There were no licence area withdrawals during the audit term.
Audit action plan and status report.	The Action Plan and the Action Plan Status Report were prepared and submitted on time.
Payment of forest renewal charges to Forest Renewal Trust (FRT).	There were no outstanding Forest Renewal charges.
Forest Renewal Trust eligible silviculture work.	Our site inspections determined that work was completed and appropriately invoiced in the SPA report. A minor tabulation error related to the area treated by SIP is to be

Licence Condition	Licence Holder Performance
	corrected on 2016/17 AR.
Forest Renewal Trust renewal charge analysis.	Forest Renewal Trust renewal charge analysis work was completed annually by MNRF.
Forest Renewal Trust Account minimum balance.	The minimum balance of \$ 632,000 was not met for two years. Payments to address the shortfall were made. As of March 31, 2017 the minimum balance was met.
Silviculture standards and assessment program.	Silviculture assessment work was completed on an annual basis.
Aboriginal opportunities.	RLTRMI is owned by six First Nations.
Preparation of compliance plan.	A compliance plan was prepared and implemented. The MNRF prepared the required plan however it was not fully implemented and there was a significant lack of MNRF presence on the Forest (Finding # 4 & # 5).
Internal compliance prevention/education program.	RLTRMI implemented training programs in response to identified issues.
Compliance inspections and reporting; compliance with compliance plan.	RLTRMI Compliance operations were conducted in accordance with their compliance plan.

**Appendix 4**  
**Audit Process**



## Audit Process

This IFA consisted of the following elements:

**Audit Plan:** An audit plan describing the schedule of audit activities, audit team members, audit participants and the auditing methods was prepared and submitted to the RLTRMI, MNRF Fort Frances District, Northwestern Region MNRF Office, Forestry Futures Trust Committee and the LCC Chair on August 18, 2017.

**Public Notices:** Public participation in the audit was solicited through the placement of public notices in the Ignace Driftwood (September 6, 2017) and the Atikokan Progress (September 5, 2017) and a random mailing to 100 individuals/organizations listed on the FMP mailing list. All Indigenous and Métis communities with an interest in the Forest were contacted by mail to participate and/or express their views. Indigenous community leaders received several follow-up telephone calls and/or e-mails.

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

**Field Site Selection:** Field sample sites were selected randomly by the Lead Auditor in August 2017. Sites were selected in accordance with the guidance provided in the IFAPP (e.g. operating year, contractor, geography, forest management activity, species treated or renewed, and access) using GIS shapefiles provided by the RLTRMI Service Provider (RW Forestry Inc.). The sample site selections were reviewed by RLTRMI, RW Forestry Inc. and MNRF District Staff and the Lead Auditor during a conference call and a GoToMeeting session on August 30, 2017.

**Site Audit:** The audit team spent 5 days on the SF in September 2017 conducting the field audit, document and record reviews and interviews. The field audit was designed to achieve a minimum 10% of the forest management activities (including road construction and maintenance) that occurred during the audit term (see the IFA Field Sampling Intensity on the SF below).

Not every hectare of the area sampled is surveyed, as this is not feasible. Individual sites are initially selected to represent a primary activity (e.g. harvesting, site preparation) but all associated activities that occurred on the site are assessed and reported in the sample table. The audit team also inspected the application of Areas of Concern prescriptions, aggregate pit management and rehabilitation and water crossing installations. Areas listed in the "*Road Construction and Maintenance Agreement*" were visited to ensure conformity between invoiced and actual activities. The field inspection included site-specific (intensive) and landscape-scale (extensive helicopter) examinations. The Closing Meeting was held on September 22, 2017.

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

Procedures Audited by Risk Category

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

## IFA Field Sampling Intensity on the Sapawe Forest

Activity	Total Area (Ha) / Number	Planned Sample Area (Ha)	Actual Area (Ha) Sampled	Number of Sites Visited	Percent Sampled
Harvest	3,268	1,634	1,634	16	50
Plant	2,337	282	282	8	12
Seeding	386	195	195	2	19
Natural Renewal	1,070	132	132	12	12
Site Preparation	2,456	245	247	5	10
Tending	5,595	810	810	12	15
FTG	2,554	776	776	10	30
Water Crossings (# of Crossings)	27	4		4	15
Forest Resource Aggregate Pits (# of Pits)	117 <sup>8</sup>	11		11	10
SPA Activities	1,494	149	269	4	18

Source: RW Forestry Shapefiles

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

#### **Public Stakeholders**

Public participation in the audit was solicited through the placement of a public notice in the Ignace Driftwood and the Atikokan Progress. These notices directed interested individuals to contact the audit firm with comments or complete a survey questionnaire on forest management during the audit term on the Arbex website. No responses were received.

One hundred individuals/organizations on the FMP mailing list received a letter and the survey questionnaire. One response was received.

An additional sample of stakeholders was contacted directly by telephone. Comments were received from resource-based tourism operators. All respondents indicated that they had been made aware of FMP processes and opportunities to engage in the planning process were provided. The comments received included a range of opinions with some respondents being satisfied with the performance of the MNR and RLTRMI

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<sup>8</sup> Includes open, closed and surrendered pits

and their relationship with the organizations while other respondents expressed concerns about their relationship with RLTRMI/MNRF and other issues associated with forest management operations and land use.

Some specific comments made to the auditors included:

- An opinion that harvest contractors should provide boat landings when forest operations are in close proximity to game fish lakes.
- Concerns by remote tourism operators over access creation/control and operational timing.
- An opinion that in general there was a good working relationship amongst operators, MNRF and RLTRMI.
- A tourism operator indicated that he would like to see a process that would allow the taking of gravel for private roads.
- An opinion that the Buchanan bankruptcy and subsequent changes in forest managers had created considerable confusion as to who to deal with regarding tourism interests.

### MNRF

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

- Issues with staffing and staff workloads associated with the MNRF transformation process.
- A general high level of satisfaction with the working relationship between MNRF, RLTRMI and the RMAC.
- General concern with the low level of harvest and the inability of the eFRL to access sufficient roads funding for road construction and maintenance.

### RLTRMI

RLTRMI and its service provider staff were interviewed and participated in the field audit. General comments made to the audit team included:

- Concern with the level of roads level funding.



- Concern with the low level of harvest achievement and the lack of harvest operator capacity on the Forest.
- General satisfaction with the relationship with the MNRF.

### RMAC Members

Individual members of LCC received a letter inviting their participation in the audit. Five members of the LCC were interviewed and an LCC member attended the field audit for two days. Three members of the audit team attended a regularly scheduled RMAC meeting. General comments included:

- They were pleased with the relationship with RLTRMI and MNRF.
- Members were very concerned about the past and possible future downturns in the industry and the economic impacts on the local communities.
- They indicated they had opportunities for full participation in plan development and implementation.

### First Nations and Métis Organizations

All Indigenous communities with an identified interest in the Forest and the Métis Nation of Ontario were contacted by mail, telephone and/or email and asked to express their views on forest management during the audit term and/or participate in the field audit. Two individuals were interviewed. General concerns included:

- A desire for increased benefits (e.g. employment, contracting opportunities) from forest management activities on the Forest.
- A concern that social and cultural values/activities be recognized and protected.
- General confusion with respect to the different types of forest management audits that they were asked to get involved with (i.e. IFA, certification audits).

### Harvest Contractors

Contractors operating on the unit were sent an email inviting their participation in the audit and inviting comment on forest management activities of the MNRF and RLTRMI during the audit term. No responses were received.



## **Appendix 5**

### **List of Acronyms Used**



## List of Acronyms Used

AFP	Atikokan Forest Products
AOC	Area of Concern
AR	Annual Report
AWS	Annual Work Schedule
B.Sc.F.	Bachelor of Science in Forestry
CFSA	Crown Forest Sustainability Act
eFRI	Enhanced Forest Resource Inventory
eFRL	Enhanced Forest Resource Licence
FMP	Forest Management Plan
FFC	Forestry Futures Committee
FMPM	Forest Management Planning Manual
FN	First Nation
FOIP	Forest Operation Inspection Program
FOP	Forest Operations Prescription
FRI	Forest Resource Inventory
FRT	Forest Renewal Trust
FTG	Free-to-Grow
Ha	Hectares
IEA	Individual Environmental Assessment
IFA	Independent Forest Audit
IFAPP	Independent Forest Audit Process and Protocol
KM	Kilometer
LCC	Local Citizens Committee
m <sup>3</sup>	Cubic Metres
MNRF	Ministry of Natural Resources and Forestry

MOA	Memorandum of Agreement
NDPEG	Natural Disturbance Pattern Emulation Guideline
RBTO	Resource Based Tourism Outfitters
RLTRMI	Rainy Lake Tribal Resource Management Inc.
R.P.F.	Registered Professional Forester
RSA	Resource Stewardship Agreement
RTK WP	Rentech Inc.
SAR	Species at Risk
SEM	Silvicultural Effectiveness Monitoring
SF	Sapawe Forest
SFL	Sustainable Forest Licence
SGR	Silvicultural Ground Rule
SIP	Site Preparation
SPR	Specified Procedures Report
STP	Silvicultural Treatment Package
SSG	Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales
VS	Versus

**Appendix 6**  
**Audit Team Members and Qualifications**





## Appendix 6

### Audit Team Members and Qualifications

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

			experience on 33 IFA audits.
<b>Mr. Trevor Isherwood R.P.F.</b> Arbex Senior Associate	Silviculture, Forest Operations and Contractual Compliance Auditor	Review and inspect silvicultural practices and related documentation. Review and inspect documents related to contractual compliance.	B.Sc.F. Former General Manager of an SFL. 47 years of experience in forest management and operations. Previous work experience on 30 IFA audits.