

Spanish Forest Independent Forest Audit 2010 – 2016

Arbex Forest Resource Consultants Ltd.

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1.0. Executive Summary

This report presents the findings of an Independent Forest Audit (IFA) of the Spanish Forest (SF) conducted by Arbex Forest Resource Consultants Ltd. The audit scope is six years and includes 5 years' implementation of the Phase I FMP and 1 years' implementation of the Phase II FMP. The development and planning process for the Phase II FMP is included in the audit scope. Procedures and criteria for the IFA are specified in the 2016 Independent Forest Audit Process and Protocol (IFAPP). Forest Management Plans (FMP) were reviewed in relation to relevant provincial legislation, policy guidelines and Forest Management Planning Manual (FMPM) requirements. Audit field site examinations were completed by helicopter and truck in July 2016.

The Spanish Forest (SF) is managed by EACOM Timber Corporation (EACOM) under Sustainable Forest License (SFL) # 542391. The MNRF Sudbury District has lead management responsibilities for the Forest with assistance from the Chapleau and Timmins District Offices. Forest management records are maintained at the EACOM offices in Timmins and Nairn Centre and in the Sudbury District Office (MNRF).

There is one Local Citizens Committee (Spanish Forest Local Citizens Committee) associated with the SF. Forest Stewardship Council (FSC) certification for the SF was voluntarily suspended by EACOM in November of 2014. Sustainable Forestry Initiative (SFI) certification was obtained in January 2016 and EACOM retains an ISO 14001 registered Environmental Management System (EMS).

The downturn in the forest sector economy negatively impacted the delivery of forest management on the SF. Harvest levels over the audit term achieved approximately 49% of the planned Phase I available harvest area forecast due to poor markets, mill downtime and low demand for some species. Despite the constrained harvest the area renewed kept pace with the area harvested.

Public input to the audit process, was solicited by a notice in the Sudbury Star and through a mail survey sent to 103 individuals/organizations on the 2010 FMP mailing list. Local Citizens Committee (LCC) members, First Nations communities (with an interest in the SF) were notified of the audit by letter and invited to participate in the field audit and/or express their views on forest management during the audit term. A sample of individuals, businesses and organizations involved with or impacted by forest management activities were also interviewed.

We found the Spanish Forest to be well-managed. Forest management was planned and implemented in accordance with the Crown Forest Sustainability Act (CFSA). The Phase I FMP long term management direction (LTMD) was appropriately adjusted for Phase II planning to more realistically reflect levels of renewal, tending and protection activities based on the Phase I harvest levels.

The LCC was well managed, and provided significant benefits to the forest management process. The working relationship between the auditees and the LCC was

exemplary. We also concluded that EACOM and MNRF staff with management responsibilities are professional and knowledgeable.

An effective silviculture program was delivered during the audit term. While we did observe instances where the tending program had achieved variable results (including some sites where crop trees had been damaged by chemical spray treatments) we concluded that EACOM staff were well aware of the issues associated with the chemical tending program and were proactively working to resolve the problems. We provide a recommendation that EACOM formally report its findings and address this issue in the Year 7 Annual Report (Recommendation # 2, Appendix 1).

The MNRF District and SFL holder met their obligations for the monitoring of silviculture activities and forestry operations with the exception that the MNRF District Offices did not meet Silvicultural Effectiveness Monitoring Core Task requirements consistently on an annual basis (Recommendation # 5). Our review of Forest Operations Inspection Program (FOIP) activities indicated that forest management activities were implemented in accordance with relevant manuals, guidelines and FMP requirements but Annual Compliance Operations Plans (ACOPs) were not prepared by all the Districts on an annual basis (Recommendation # 4). We also found that the Action Plan and the Action Plan Status Report were not submitted in accordance with IFAPP timelines (Recommendation # 6, Appendix 1).

The long-standing inability to implement a timely and effective nuisance beaver control program has resulted in significant financial costs to repair washouts, unplug culverts and poses potential risks to public safety. We encourage the MNRF to work to address issues related to the trapping of nuisance beavers by local trappers and in cooperation with EACOM investigate options to improve the current nuisance beaver management program in Recommendation # 3.

We also provide a recommendation that Corporate MNRF should engage the Ministry of Environment and Climate Change (MOECC) to ensure MOECC decisions on Individual Environmental Assessment Requests (IEA) are made within the agreed (normal) timelines (Recommendation # 1, Appendix 1).

Based on our document reviews, interviews and field site inspections the audit team concluded that forest sustainability as assessed through the 2016 Independent Forest Audit Process and Protocol (IFAPP) is being achieved, and that the Spanish Forest was generally in compliance with the legislation, regulations and policies that were in effect during the term covered by the audit. We recommend that the Minister extend the term of the Sustainable Forest Licence # 542391 for a further five years.

2.0. Table of Recommendations

TABLE 1. RECOMMENDATIONS

Conclusion:
<p>The audit team concluded that forest sustainability as assessed through the 2016 Independent Forest Audit Process and Protocol is being achieved. The audit team recommends the Minister extend the term of the Sustainable Forest Licence # 542391 for a further five years.</p>
Recommendation Directed to EACOM
<p>Recommendation # 2.</p> <p>In the Year 7 Annual Report, EACOM should formally report on the causes and remedial actions taken to address damage to crop trees arising from its chemical herbicide tending program.</p>
Recommendation Directed Jointly to MNRF Districts and EACOM
<p>Recommendation # 3.</p> <p>The MNRF District(s) and EACOM should investigate options to improve the current nuisance beaver management program to ensure the timely and effective implementation of the program vis-a-vis forest industry access roads.</p>
Recommendations Directed to the MNRF District Offices
<p>Recommendation # 4.</p> <p>The MNRF District Managers in Sudbury, Timmins and Chapleau must ensure that Annual Compliance Operations Plans are prepared.</p> <p>Recommendation # 5.</p> <p>The MNRF Districts must ensure that silvicultural effectiveness monitoring (SEM) of forest operations prescriptions is conducted in accordance with FIM direction.</p>

Recommendation # 6:

As the Lead District, the Sudbury MNRF must ensure that the IFA Action Plan and Action Plan Status Report is submitted, reviewed and approved in accordance with the schedule established in the Independent Forest Audit Process and Protocol (IFAPP).

Recommendation directed to Corporate MNRF**Recommendation # 1:**

Corporate MNRF should engage the MOECC to discuss actions that would help with the rendering of a MOECC decision on Forest Management Plan IEA requests within agreed (normal) timelines.

3.0. Introduction

This report presents the findings of an Independent Forest Audit (IFA) of the Spanish Forest (SF or the Forest) conducted by Arbex Forest Resource Consultants Ltd. for the period of April 1, 2010 to March 31, 2016. The SF is managed by EACOM under the authority of Sustainable Forest Licence (SFL) # 542391. The Forest boundary overlaps the Chapleau, Sudbury and Timmins Districts of the Ontario Ministry of Natural Resources and Forestry (MNR) within the Northeast Region. The Sudbury District has lead management responsibilities for the Forest with assistance from the Chapleau and Timmins District Offices. Forest Stewardship Council (FSC) certification for the SF was voluntarily suspended by EACOM in November of 2014. Sustainable Forestry Initiative (SFI) certification was obtained in January 2016 and EACOM retains an ISO 14001 registered Environmental Management System (EMS).

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. Arbex Forest Resource Consultants Ltd. undertook the IFA utilizing a four-person team. Profiles of the audit team members, their qualifications and responsibilities are provided in Appendix 6.

The audit reviews the applicable Forest Management Plans (FMP) in relation to relevant provincial legislation, policy guidelines and the Forest Management Planning Manual (FMPM) and its regulated manuals. The audit 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. Recommendations within the report “*set out a high level directional approach to address a finding of non-conformance*”¹. In some instances, the audit team may develop recommendations to address situations where “*a critical lack of effectiveness in forest management activities is perceived even though no non-conformance with the law or policy has been observed*”². 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. A further discussion of the audit process is provided in Appendix 4.

The procedures and criteria for the delivery of the IFA are specified in the 2016 Independent Forest Audit Process and Protocol (IFAPP). The audit scope was six years and included 5 years’ implementation of the Phase I FMP and 1 years’ implementation of the Phase II FMP. The development and planning process for the Phase II FMP was also included in the audit scope.

¹ 2016 Independent Forest Audit Process and Protocol.

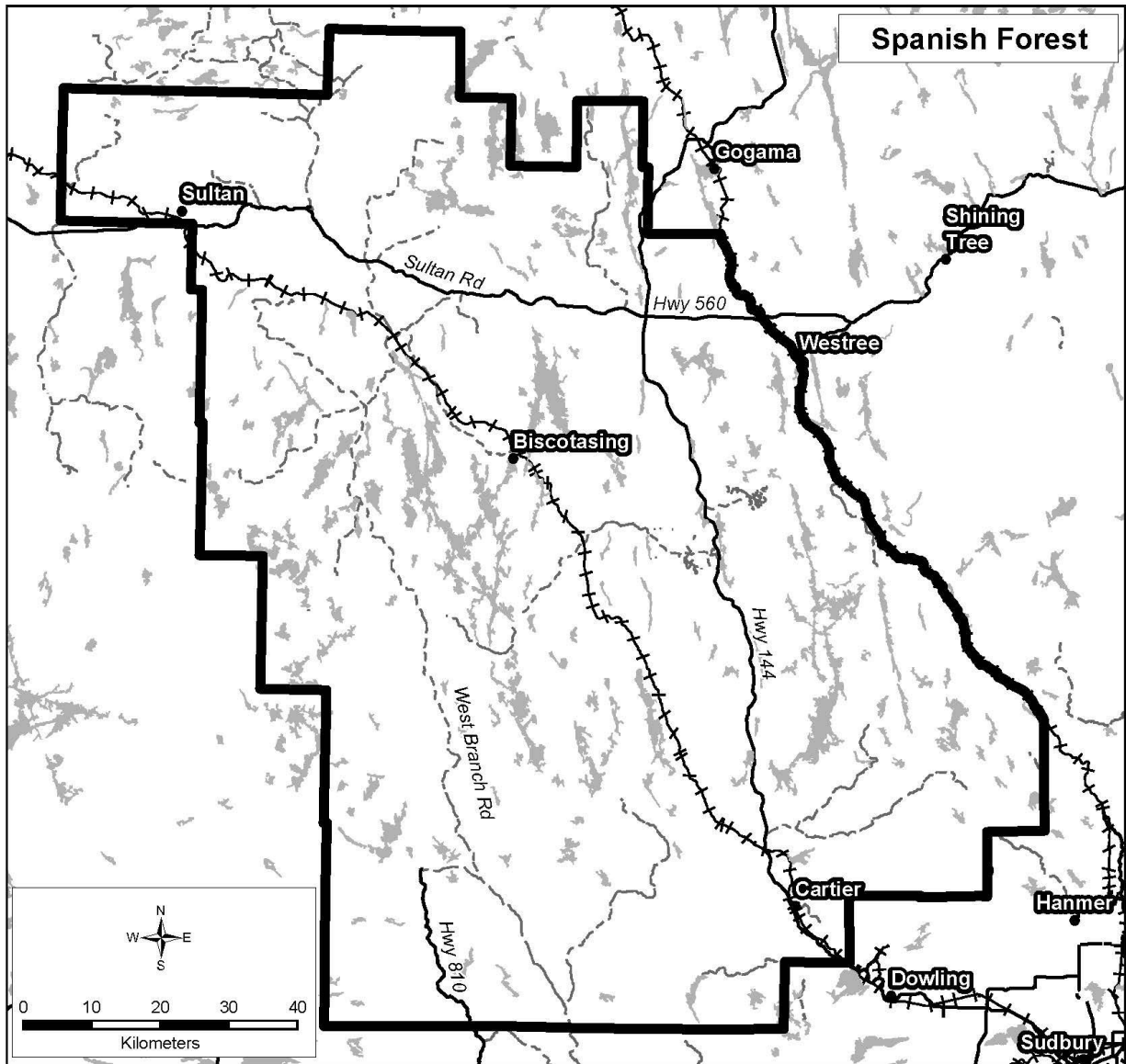
² Ibid

3.2. Management Unit Description

The SF is located along the Highway 144 corridor, north of the city of Sudbury and south of the town of Gogama (Map 1). Communities within the Forest boundary include Sultan, Cartier and Bicostasing. Eight First Nation (FN) communities are associated with the SF; Mattagami FN, Sagamok Anishnawbek, Wikwemikong Unceded Indian Reserve # 6, Chapleau Ojibwe FN, Brunswick House FN, Serpent River FN, Atikameksheng Anishnawbek FN and the Mississauga FN.

The SF encompasses a total area of 1,087,670 hectares (ha) of Crown land of which 994,625 ha is forested land and 93,044 ha is classified as non-forested (Table 2). The Forest is situated within the transition zone between the Boreal Forest and the Great Lakes -St. Lawrence Forest Regions and has distinct elements of both forest regions. The northern portion is dominated by boreal species such as jack pine, trembling aspen, white birch, black spruce and white spruce. Southern portions have concentrations of tolerant hardwood species and stands of red and white pine. Figure 1 shows the distribution of provincial forest types.

Species at Risk (SAR) associated with the SF include the Canada Warbler, Olive-sided Flycatcher, Whip-poor-will, Chimney Swift, Golden-winged Warbler, Blandings Turtle, Snapping Turtle and Monarch Butterfly.



MAP 1. LOCATION OF THE SPANISH FOREST

TABLE 2. AREA SUMMARY OF MANAGED CROWN LAND BY LAND TYPE

Managed Crown Land Type	Area (Ha)
Water	84,496
Other Land (Grass & Meadow, Unclassified Land)	8,548
Subtotal Non-Forested Land	93,044
Non-Productive Forest Land³	
Non-Productive Forest	73,740
Protection Forest ⁴	9,358
Production Forest⁵	
Forest Stands	804,911
Recent Disturbance	48,192
Below Regeneration Standards ⁶ (Older Low Stocked Stands/Recent Not Yet FTG)	58,422
Subtotal Production Forest	911,526
Subtotal Forested Land	994,625
Total Crown Managed Land	1,087,670

Source: Table 1 2010 FMP

The age class area distribution of forest units is shown in Figure 2. An age class area imbalance occurs with the majority of the forest being concentrated in the 81-100 and the 101-120 year age classes largely reflecting the fire history of the unit. More mature and older forest area is present than would occur under a natural disturbance regime. The relative lack of area in the 21-40, 41-60 and 61-80-year age classes will affect wood supply and negatively affect the supply of habitat for some wildlife species for a 40-year period (See Section 4.4).

³ Non-Productive Forest is land within a forested area which is currently incapable of commercial timber production owing to its very low productivity or competing vegetation cover.

⁴ 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.

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

⁶ Lands Below Regeneration Standards are lands comprised of older stocked stands, areas of natural disturbance and depleted areas that have not yet met the free-to-grow standard for height and/or stocking.

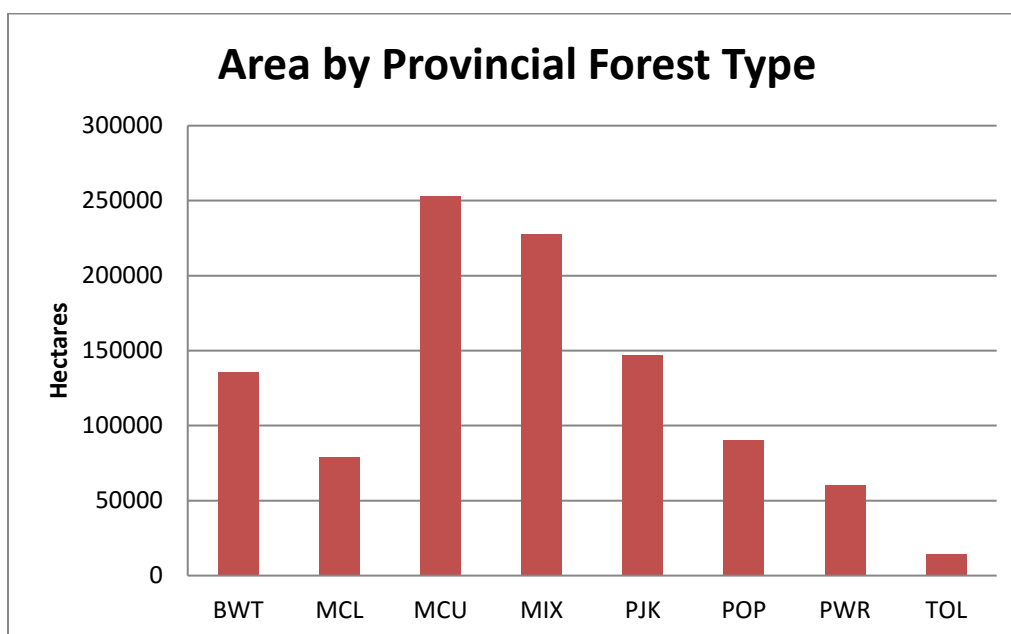


FIGURE 1. AREA OF MANAGED CROWN PRODUCTION FOREST BY PROVINCIAL FOREST TYPE
Source: FMP-2, 2010 FMP⁷

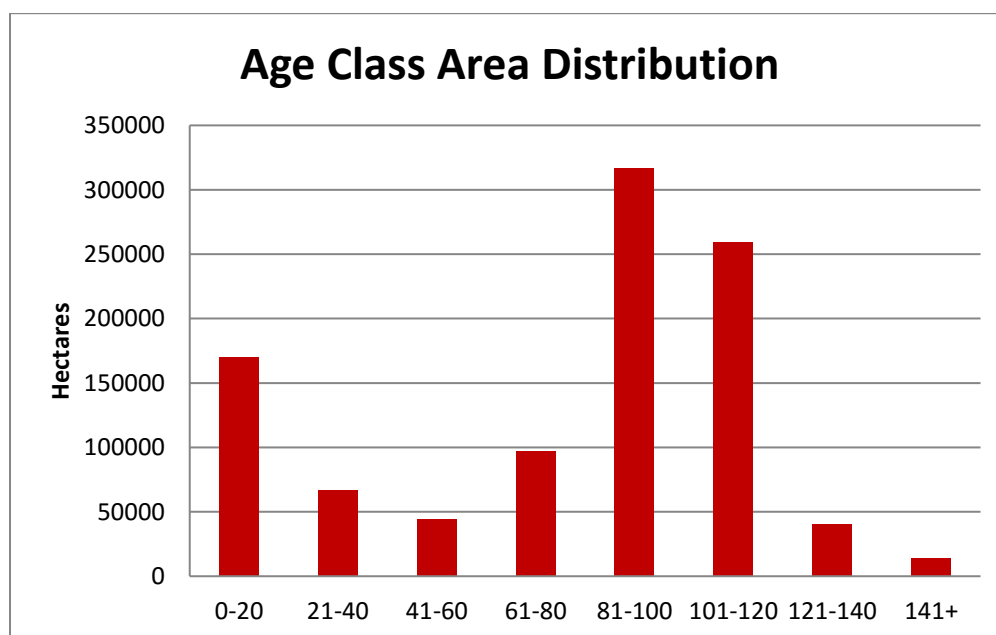


FIGURE 2. AGE CLASS AREA DISTRIBUTION (CROWN MANAGED LAND)

⁷ Provincial Forest Types are as follows: BWT=White Birch/Tolerant MCL=Mixed Conifer Lowland, MIX=Mixedwoods, MCU=Mixed Conifer Upland, PJK=Jack Pine, POP=Poplar, PWR=White and Red Pine and TOL=Tolerant Hardwoods.

3.3. Current Issues

Our document review and discussions with EACOM and MNRF staff identified the following issues;

Inability to Achieve Planned Harvest Levels: The lack of markets has resulted in the underachievement of planned harvest area targets (Section 4.4).

Nuisance Beaver Management: The long-standing inability to implement a timely and effective nuisance beaver control program has resulted in significant financial costs to repair washouts, unplug culverts and poses potential risks to public safety (Section 4.6, Recommendation # 3, Appendix I).

Tending: The effectiveness of tending treatments examined during the field audit was inconsistent. Damage to crop trees by chemical spray treatment(s) was also noted at some sites. EACOM staff are well aware of the issues associated with the chemical tending program and are proactively working to resolve these issues. We provide a recommendation (Recommendation # 2, Appendix 1) to track actions taken to resolve the issue of damage to crop trees.

MNRF Staffing Levels: The transformation process at MNRF affected its forest management performance in the delivery of some tasks (i.e. preparation of Annual Compliance Operations Plans (ACOPs), IFA Action Plan and Action Plan Status Report and Silvicultural Effectiveness Monitoring (SEM) tasks) (Recommendations #'s 5 and 6, Appendix 1)

Age Class Area Imbalance: The age class area distribution of the SF is skewed towards the younger (0-20 year) and older (80-120 years) age classes. The relative lack of area in the 21-80-year age classes will affect wood supply and negatively affect the supply of habitat for some wildlife species for a 40-year period.

Hardwood Utilization and Management: The lack of markets for hardwoods is an on-going management challenge given the significant area occupied by mixedwood forest types. Haul distances to mills utilizing hardwoods and a lack of harvest contractors present challenges for the use of the hardwood resource. Residual hardwoods within harvested mixedwood stands can negatively affect stand renewal and other silviculture treatments such as tending.

3.4. Summary of Consultation and Input to the Audit

Details on the public consultation process for this audit are provided in Appendix 4. Comments and opinions on the forest management activities of EACOM and the MNRF were solicited from the general public, Aboriginal communities, tourism operators and

other stakeholders using a combination of a direct mail out⁸, a notice in a local newspaper, and telephone contacts.

EACOM and MNRF (District and Regional) staff participated in the field audit and/or were interviewed by the audit team. Members of the LCC also participated in the field audit and/or were interviewed.

4.0. Audit Findings

4.1. Commitment

The IFAPP requires both the SFL holder and MNRF to have policy statements and display operational performance that demonstrates the organizations' commitment to sustainable forest management.

EACOM maintained forest management certifications (SFI certification (2016) FSC certification (up to 2014)) and ISO 14001 Environmental Management System (EMS) certification during the audit term. IFAPP requirements related to the commitment principle were met.

MNRF policy and mission statements were available on the MNRF website. All interviewed MNRF staff were aware of MNRF direction, sustainable forestry commitments and Codes of Practice. Our assessment is that MNRF met the requirements of the IFAPP commitment principal.

4.2. Public Consultation and Aboriginal Involvement

FMPM public consultation requirements for the development of the Phase II FMP, the Annual Work Schedules (AWS), and Plan Amendments for the audit period were met. Representatives of the constituencies we contacted during the audit indicated that they had been made aware of the FMP process and that they were provided with opportunities to become involved and to identify values.

Public consultation during the development of the Phase II FMP was consistent with the approved FMP Project Plan. The Notice of Inspection of MNRF Approved Phase II Planned Operations was later than the anticipated date but the delay did not affect the timing of the Plan approval.

During plan production and related consultation, 22 comments were received from 11 correspondents. These inquiries were documented and tracked. Planning team responses to the comments were timely and comprehensive.

⁸ A random sample of 100 individuals and organizations listed in the 2008 FMP mailing list received a letter and questionnaire requesting input to the audit process.

Issue Resolution and Individual Environmental Assessment

Opportunities to make a request for Issue Resolution (IR) or an Individual Environmental Assessment (IEA) were clearly identified during the Phase II planning process. There was one request for Issue Resolution which was resolved at the Regional Director Stage. There was also a request for an IEA. The Ministry of Environment and Climate Change (MOECC) decision was considerably delayed which resulted in a requirement to adjust the timing of planned operations (Recommendation # 1, Appendix 1).

Local Citizens Advisory Committee (LCC)

The Spanish Forest Local Citizens Committee is a standing committee with members appointed by the MNRF District Manager. Committee membership reflects the range of stakeholder interests on the Forest. Aboriginal representation is lacking; however, there is clear evidence of repeated efforts by the MNRF and the LCC to recruit First Nation participation. Participation within the LCC by its members was excellent and a sample of minutes confirmed that there was a quorum at meetings. As required by the FMPM the LCC Terms of Reference (TORs) were updated for FMP development.

The Committee was actively involved in the implementation of the Phase I and II FMPs (i.e. review of Annual Work Schedules, Annual Reports, etc.) and the planning of the Phase II FMP (representation on the Planning Team). Minutes of committee meetings show a further active involvement in other resource management (e.g. fisheries, wildlife management).

Interviews indicated that Committee members were very satisfied with the efforts by the MNRF and EACOM to respond to questions, provide information and solicit their input on the management of the forest. The LCC statement in the FMP states: “ *The SFLCC is in general agreement with the Final Phase 2 Planned Operations for the Approved Spanish Forest 2010 – 2020 FMP.*” Committee members also held the opinion that their involvement provided benefit to the forest management program, MNRF and EACOM staff concurred with that assessment. Our assessment is that this is a very effective LCC and the relationship with the MNRF and EACOM is exemplary.

Aboriginal Involvement in Forest Management Planning

Five First Nation communities were invited to participate in the Phase II planning process. MNRF meet all FMPM requirements for Aboriginal involvement in the planning process (i.e. communities were informed and updated on the planning process and Aboriginal values maps were updated (based on available information). Those maps were appropriately utilized for the development of the management plan.

Condition 34 of the Class Environmental Assessment requires MNRF District Managers to conduct negotiations with Aboriginal peoples to identify and implement ways of achieving a more equitable participation in the benefits provided through forest management planning. Condition 34 reports were available for each year of the audit term and met the required FMPM format and content requirements.

Our assessment is that all IFAPP requirements for Aboriginal participation in the forest management planning process were met.

4.3 Forest Management Planning (Phase II)

The Terms of Reference (TOR) for the 2010 Phase II FMP was approved by the Regional Director on March 29 2014 and met all FMPM requirements. It included documentation of schedules, procedures and was updated with changes during the planning process. It identified planning team membership including representation from the Local Citizen's Committee and First Nations. Plan advisors included people with the necessary skills and experience. A Steering Committee was appointed as required by the FMPM.

For the development of a Phase II FMP, the 2009 FMPM requires that the Year 3 Annual Report (AR 2012-2013) include an analysis of the validity of basing Phase II planning on the Phase I FMP long term management direction (LTMD). That analysis was completed and endorsed by the Regional Director as "*substantially valid*". In order for planning for operations for the second five-year term to proceed "*minor*" adjustments to the level of renewal, tending and protection activities were required. We concluded that these adjustments were made and were appropriate.

The Planning Team met four times between July 2013 to May 2014; many formal and informal meeting of task team members occurred between Planning Team meetings. The meetings were well documented and were generally well attended. One First Nation's member accepted an appointment to the PT and discussions related to First Nation values did occur outside Planning Team meetings.

The PT appropriately reviewed the Phase I FMP background information and confirmed its use for the production of the Phase II plan. Appropriate modifications to operational prescriptions for Areas of Concern (AOC) were made to ensure consistency with the *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* (Stand and Site Guide). During Phase II planning MNRF reviewed and made changes to the classification of many self-sustaining cold water lakes.⁹

No modifications and additions to the 2010 FMP Silvicultural Ground Rules (SGRs) were required. It is noteworthy that each Silvicultural Treatment Package (STP) was modeled in the Sustainable Forest Management Model (SFMM) to result in a target forest unit but also a suite of related forest units that could potentially develop from the same STP, as field experience had shown that a percentage of the area treated would not regenerate to the preferred forest unit.

Operational planning for Phase II harvest areas appropriately considered the most current values information, relevant guidelines (i.e. *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales*), the requirements of the Natural Disturbance Pattern Emulation Guideline (NDPEG) and public input. We found the

⁹ Some of the classifications remain under review.

rationale for the projected AHA, and the selection process for the allocation of harvest blocks was well documented. The harvest areas identified in the Phase I plan required some changes for the Phase II plan in order to reflect the lower than planned achievement of harvest targets, requirements of the Stand and Site Guide (SSG), operational considerations and updated mill and market requirements. The Phase II Available Harvest Area (AHA) is approximately 7% higher than forecast in the Phase I plan to accommodate the harvest area which was not achieved during the Phase I operations. No salvage harvests were forecast in the Phase II plan.

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

All requirements for the protection of resource based tourism values were addressed, from initial consultations through to the protection of values by use of AOC's and Resource Stewardship Agreements (RSAs). One RSA was signed during the production of the Phase II FMP.

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

Our review of 25% of the FMP amendments and AWS revisions found that they were appropriate and well-documented. Although there was some variation amongst the three MNR District Offices in their approaches to AWS approvals and plan amendments our overall assessment of the process is that it is efficient.

4.4. Plan Assessment and Implementation

Our field assessments confirmed that Silvicultural Ground Rules¹⁰ (SGRs), Silvicultural Treatment Packages¹¹ (STPs) and Forest Operations Prescriptions (FOPs) were appropriate for the forest cover types and site conditions encountered on the SF.

Table 3 presents the planned vs. actual area treated by silvicultural activity over the audit term. A discussion of the silvicultural program is provided in the sections below.

¹⁰ Silvicultural Ground Rules specify the silvicultural systems and types of harvest, renewal and tending treatments that are available to manage forest cover and the type of forest that is expected to develop over time.

¹¹ A Silvicultural Treatment Package is the path of silvicultural treatments from the current forest condition to the future forest condition. STPs include the silvicultural system, harvest and logging method(s), renewal treatments, tending treatments and regeneration standards.

TABLE 3. AREA (HA) OF PLANNED VS. ACTUAL SILVICULTURE TREATMENTS 2010-2014.

Treatments	Planned Ha	Actual Ha 2010-2014	Planned Vs Actual %
Natural Renewal	24,399	10,982	45
Artificial Renewal			
Plant	15,391	9,657	63
Seed	13,480	5,810	43
Total Renewal	53,270	26,450	50
Site Preparation	28,871	13,943	48
Tending -Release	27,427	13,040	48
Tending - Thinning	3,750	4,214	112
Total	113,318	57,648	51

Harvest

The downturn in the forest sector economy negatively affected the achievement of plan targets. Demand for poplar, white birch, and white and red pine timber was low as a result of mill closures and reduced production levels at operating mills that traditionally processed the species. The low demand for intolerant hardwoods was particularly acute in the northern portion of the unit which had the affect of forcing harvest operations into purer conifer dominated forest units. A 2011 fire at the Timmins sawmill also reduced demand for spruce-pine-fir sawlogs.

Most harvesting operations utilized the clear cut harvesting system, with cut-to-length harvesting¹² (CTL) being the most frequently utilized logging method. The Northeast Region Operations Guide for Marketability Issues (2013) was effectively used as a tool to ascertain if stands with limited or no available markets would be partially cut or deferred from cutting. During the audit term harvest focused mainly on the Pj1, Pj2, SP1 and MW1 forest units.¹³

Table 4 presents the actual harvest area by forest unit. Overall 49% of the AHA was harvested, with no harvest in excess of the AHA for any individual forest unit. Table 5 presents a summary of the planned vs. actual volume utilization between 2010 and 2015. Conifer utilization achieved 72% of the planned volume (3,167,966 m³) while hardwood utilization achieved 37% of the planned volume forecast (745,620 m³). Pre-commercial thinning operations were completed on 4,214 ha.

¹² In cut-to-length harvesting trees are felled, de-limbed and bucked to various assortments directly at the stump.

¹³ Pj1=Jack Pine, Pj2=Jack Pine/Black Spruce, SP1=Black Spruce/Jack Pine, Mw1=Jack Pine/Birch/Aspen.

TABLE 4. PLANNED VS. ACTUAL HARVEST AREA BY FOREST UNIT¹⁴ (2010-2015)

Forest Unit	Total Planned Phase I (ha)	Actual (Ha)	Planned Vs Actual %
BW1	9,092	3,489	38
LC1	205	6	3
MW1	6,144	3,387	55
MW2	6,110	2,391	39
PJ1	7,288	5,868	81
PJ2	9,321	5,454	59
PO1	6,643	2,656	40
PRWSH	193	45	23
PRWST	697	50	7
SB1	977	286	29
SF1	1,859	674	36
SP1	4,691	2,664	57
THSE	810	0	0
THSH	756	0	0
Total	54,786	26,970	49

TABLE 5. PLANNED VS. ACTUAL VOLUME UTILIZATION (M³) 2010-2015

SPECIES GROUP	PLANNED (PHASE 1) M ³	ACTUAL M ³	% OF PLANNED
SPRUCE/PINE/FIR	4,008,818	3,106,575	77
WHITE/RED PINE	351,072	61,208	17
CEDAR	25,770	74	0
LARCH / HEMLOCK	0	107	N/A
SUB-TOTAL CONIFER	4,385,660	3,167,966	72
POPLAR	1,350,069	500,264	37
WHITE BIRCH	567,768	229,824	40
TOLERANT HARDWOOD	71,547	15,531	22
SUB-TOTAL HARDWOOD	1,989,384	745,620	37
MIXED BIOFIBRE	649,474	6,331	1
TOTAL	7,024,518	3,919,917	56

All the harvest areas we inspected were approved for operations in the AWSs. Harvest prescriptions were implemented in accordance with the SGRs, and individual FOPs were prepared and appropriately implemented for each harvest block.

¹⁴ Forest Units are as follows: BW1= White Birch, LC1= Black Spruce/Cedar/Larch, MW1=Jack Pine /Birch/Aspen, MW2= Black Spruce/Aspen, PO1= Aspen, SF1= Spruce/Fir/Cedar, SP1= Black Spruce/Jack Pine, PJ2=Jack Pine/Black Spruce, PJ1=Jack Pine, SB1= Black Spruce Lowland, BOG = Black Spruce Bog, THSH = Tolerant Hardwood Shelterwood, THSE= Tolerant Hardwood Selection, PRWST = White/Red Pine Seed tree PRWSH = White/Red Pine Shelterwood

There was little evidence of site or environmental damage arising from harvest operations. AOC prescriptions were properly implemented. Harvest block configurations were designed to meet landscape level objectives and NDPEG requirements were met (to the extent possible given existing forest structure).

Our field sample included an inspection of a 2012 cut-to-shore harvest (Block 2062). The Sudbury District MNRF, EACOM and the LCC were actively involved in the process to establish a harvest protocol and the approval process for the harvest at this site. MNRF and EACOM staff expended considerable time and effort working with the harvest contractor to convince the operator that harvesting was permitted in the 30 m lake AOC and providing guidance as to where and how the harvest was to occur. Best Management Practices (BMPs) were developed and implemented to direct operations within riparian zones eligible for harvest operations. Our site inspection indicated that the AOC prescription was appropriately implemented and that BMPs had been utilized to minimize any risks of soil disturbance and/or shoreline erosion (e.g. there was no evidence of machine traffic in the riparian zone).

The cut-to-length (CTL) harvest system mitigates the loss of productive forest land to slash and logging debris. The system was utilized in approximately 50% of all harvest operations. Our field site inspections of harvest operations utilizing the tree-length harvest system found that an effective slash piling program was implemented. Interviews with SFL and MNRF staff did indicate an issue with respect to a lack of standardization across the three MNRF Districts for low intensity burn criteria for slash pile burning. The Sudbury District requires that mineral soil be exposed around piles to reduce the fire risk to local values, while the other Districts do not make this requirement. EACOM currently piles slash with grapple loaders in order to “fluff” the piles and reduce the amount of soil and other debris in the piles, which can inhibit combustion. While the use of log loaders typically facilitates a more robust pile burn, the equipment is not as effective in exposing mineral soil as excavators or bulldozers. We do not provide a recommendation to address this issue, as EACOM and MNRF staff are in discussions to resolve concerns relating to the slash pile burning program.

Area of Concern Management

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. EACOM distributes “flash cards” to operators that contain photographs, descriptions and detailed directions to assist when operating around water, within AOCs, and in the vicinity of other values (e.g. stick nests). Many of the more common Stand and Site Guide directions are presented in simple table formats that include buffer distances and identification keys to identify bird nests. Our review of FOIP records indicated there were no compliance issues associated with AOCs during the audit term.

Renewal, Tending and Protection

Renewal

The 2010-2020 FMP forecast 48,797 ha of natural regeneration and 57,741 ha of artificial renewal¹⁵. Renewal forecasts were not achieved as a result of the lower than planned harvest level. The Phase II FMP appropriately forecast increases in the renewal area in conjunction with increases to the planned harvest area. Renewal treatments were consistent with the SGRs.

The annualized area treated for renewal approximates the area harvested (5,394 ha harvested vs. 4,887 ha renewed) over the audit term. Renewal achieved 46% of the planned target for the audit term.

Artificial renewal treatments were utilized more frequently than natural renewal. The focus on artificial renewal reflected the focus of harvest operations in conifer dominated stands (due to market availability) which are typically regenerated by planting or seeding treatments. The low level of natural regeneration was a result of the deferred harvest of stands scheduled for natural renewal and in part to the longer time period required to assess and report on the success of natural renewal. All inspected renewal sites were approved in the AWSs and renewal activities were in accordance with the applicable SGR and STP.

Our site inspections found that an effective renewal program was implemented. Areas renewed by planting were (on balance) adequately stocked and there was evidence of efforts by tree planters to appropriately space planting stock when natural ingress was present. Species selections were appropriate for the inspected sites.

We did encounter one site (Stop # 14) where multiple trees were found to be occupying single planting microsites. We were informed by EACOM staff that this situation was the result of an issue with the initial sowing of seeds at the nursery and quality control problems with the grower. The grower no longer supplies nursery stock for the Spanish Forest.

Tending

Chemical tending operations utilizing either VisionMax™ or Forza™ were conducted on 13,040 ha (48% of Phase I forecast). The lower than planned achievement in the area treated by tending reflected the lower level of harvest and the reduced area treated by artificial renewal. During the audit term EACOM maintained a commitment to reduce its use of pesticides by 5% in order to satisfy voluntary forest certification requirements and FMP objectives related to the use of pesticides.

Our field site inspections indicated variable results with respect to the efficacy of the chemical tending program. Some treated areas exhibited good competition control while in other areas the herbicide application was less effective. EACOM staff are aware of this issue, and have explored several strategies (including varying the concentration

¹⁵ The Phase I 5-year forecast was 24,339 ha of natural regeneration and 28,871 ha of artificial renewal.

of water as the diluent or dispersing medium in the herbicide solution) to improve herbicide performance. We do not provide a recommendation with respect to the efficiency of the herbicide tending program as EACOM staff are aware of the issue and are implementing appropriate silviculture treatments (e.g. subsequent tending, infill planting etc.) as required to ensure adequate site stocking, release crop trees and ensure that the SGR is met.

An additional concern investigated during the field audit was the apparent damage to conifer crop trees (Stop #s 18, 41, 47, 84) arising from herbicide applications. EACOM staff are actively investigating the cause of the damage (i.e. herbicide concentration, diluent concentration, weather conditions etc.) but had not been able to definitively identify the cause(s). We provide a recommendation requiring the company to formally report its findings on their investigations as to the cause(s) of the damage and the remedial actions taken in the Year 7 Annual Report (Recommendation # 2, Appendix 1). This requirement will enable IFA auditors to track and assess the progress made in addressing the issue in the next IFA.

EACOM implemented an effective pre-commercial thinning (PCT) program during the audit term utilizing funding made available by the Forestry Futures Trust. FMP targets for PCT were overachieved (3,750 ha planned vs. 4,214 ha actual). Our site inspections found the thinning program effective in achieving density control of desired crop trees.

Site Preparation (SIP)

FMP targets for mechanical and chemical site preparation were not achieved (48% of the Phase I forecast area) principally due to the reduced harvest level. We concluded that mechanical SIP treatments were effective in exposing mineral soil and had created sufficient plantable microsites. There was no evidence of environmental or site damage within the treated areas.

Three hundred and three hectares were treated by a chemical site preparation treatment. Our field audit indicated that the chemical SIP treatment was effective as an early vegetation control measure.

Protection

No areas were identified in the Phase II plan for insect pest management. No pest management other than monitoring and reporting activities occurred during the audit term.

Access Planning and Management

Forest access planning for the Phase II FMP met FMPM requirements. During the audit term 50.7 kilometres (kms) of primary and 13 kms of branch roads were constructed and approximately 3,982 kms of road maintenance work were completed. Our review concluded that FMP access planning was comprehensive and included input from the public and LCC.

The previous IFA found that measures to control access were hampered by low levels of enforcement. We concluded that control measures were being implemented in a practical manner given the realities of the Forest (Section 4.6).

Water crossings were inspected by helicopter and during our on-the-ground site visits. All inspected water crossings were well-constructed. No instances of environmental damage or public safety concerns were observed. Our review of FOIP records confirmed this finding. We did note that there is a long standing issue associated with nuisance beaver management (See Section 4.6, Access Monitoring).

Our sampling of forestry aggregate pits found relatively few operational issues¹⁶. Our review of FOIP records for the audit term supports this conclusion.

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

Renewal Support

Renewal support includes the activities necessary to support the forecast types and levels of renewal and tending operations. Renewal support activities were sufficient to meet renewal program requirements. Audit term activities included cone (seed collection) and tree improvement activities at two seed tree orchards. Tree improvement activities were completed through EACOM's participation in the Northeast Seed Management Association tree improvement cooperative.

4.5. System Support

EACOM met the IFAPP Human Resources principle through its SFI and FSC certifications. EACOM also implements an Environmental Management System (EMS) as a component of its ISO14001 certification. The EMS includes the delivery of a wide range of training programs to staff and contractors.

The MNRF transformation process posed management challenges for the Districts during the audit term with respect to the delivery of some of its forest management obligations (i.e. Silviculture Effectiveness Monitoring). The multiple MNRF jurisdictions also required EACOM to deal with three different organizations and, to varying degrees, this complicated the delivery of its management responsibilities. However, on balance, we concluded that those challenges were successfully met by both organizations. We further concluded that the SF is managed by competent professional staff at EACOM and the MNRF and that there is a good working relationship between the organizations.

Document and Record Quality Control

The MNRF District Offices and EACOM (Timmins and Nairn Centre) had effective programs for record and document management.

¹⁶ There were minor issues with slopes with Pits 2570, 2933, and 1913.

4.6. Monitoring

SFL and District Compliance Planning and Associated Monitoring

District Compliance Planning and Monitoring

Each MNRF District is responsible for the preparation of an Annual Compliance Operations Plan (ACOP). The Districts produced ACOPs the last year of the audit term (2015-2016) period but no District completed the plans for all years in the audit scope¹⁷. The failure of the Districts to complete the formal ACOPs occurred during the years of the MNRF “*transformation process*” when uncertainty of roles and responsibilities (staff, Districts, Region), long-term vacancies, acting roles, newly appointed staff, etc. created confusion. However, the production of the ACOP is a requirement and we provide a recommendation to address this shortcoming (Recommendation # 4, Appendix 1).

We note that despite the lack of formal ACOPs for some audit years, the Districts demonstrated effective communication, planning and priority setting with respect to the compliance program. All Districts held regular internal compliance strategy sessions, and there were meetings amongst District compliance staff and on-going communication/meetings with EACOM staff and specific operators. Compliance targets were established and targets were assigned to staff.

MNRF completed approximately 23% of the compliance inspections during the audit term (106 of 455 inspections). Our assessment is that this was an appropriate percentage based on the harvesting activity and past compliance history. There was evidence of an appropriate MNRF prioritization of work and the implementation of “*risk based*” management decisions with respect to the compliance program (i.e. the Spanish Forest received somewhat less compliance surveillance than other Forests under the Districts administrative control)¹⁸.

The previous IFA reported issues with late submissions of FOIP reports. The Action Plan Status Report responding to that issue indicated corrective action had been taken. We randomly selected 10 MNRF submitted FOIPs from this audit period to ascertain compliance with submission timelines. Our assessment is that submission timelines were generally met.

SFL Compliance Planning and Monitoring

EACOM completed compliance plans as required by the guidelines and the plans met content and format requirements. We reviewed compliance plans in the AWS's and the format and content met FMPM requirements.

¹⁷ Chapleau District completed an ACOP in 2015-2016, Timmins completed ACOPs in all years but the 2014-2015 ACOP was a draft only and the Sudbury District only completed ACOPs in 2014-2015 and 2015-2016.

¹⁸ Sudbury District assigned approximately 10% of its compliance effort to the Spanish Forest with other Forests receiving considerably more attention.

A high rate of compliance for forest operations was achieved¹⁹. We were informed that operational issues exist (some of which have resulted in warning letters or compliance orders) but EACOM and MNRF staff have worked collaboratively to resolve or avoid potential compliance issues as they are identified in the field. We are of the opinion that this good compliance record reflects experienced staff, ongoing and issue specific training, and regular communications between EACOM, operators and the MNRF.

All EACOM contractors are required to have access to a certified inspector; they do their own inspections supported by EACOM overview and MNRF surveillance audits. We determined that the process is effective. A random sample of 20 industry submitted FOIPs indicated that there was generally adherence to required timelines.

Our assessment is that EACOM and its contractors produced appropriate compliance plans and delivered an effective compliance program on the Forest.

Monitoring of Silvicultural Activities

Monitoring activities completed by EACOM included; plantation survival assessments, regeneration surveys, competition assessments and Free-to-Grow (FTG) surveys. Tracking of silviculture work was facilitated by the geographic information system (GIS). We concluded that an effective monitoring program was in place.

Free to Grow (FTG) Survey

During the audit term EACOM assessed 94% of the Phase I FMP target (41,093 ha) for free-to-grow status. Our field sampling (visual assessments) of FTG sites substantiated the stand descriptions and forest unit designations reported by EACOM.

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.

Table AR-13 indicates a silviculture success rate of 69% (Table 6). Overall 100% of the area assessed, was successfully regenerated. The levels of regeneration and silvicultural success are reflective of a modeling strategy where silvicultural treatment packages reflect the target forest unit and a suite of related forest units which could potentially develop from the application of the STP. This modeling approach appropriately reflected the field experience on the unit that indicated a percentage of the area treated would not regenerate to the preferred forest unit.

¹⁹ The audit period AR's contain summary tables of inspections by EACOM and the MNRF. Four hundred and fifty-five compliance inspections are reported with an in-compliance rate of 99%.

TABLE 6. EACOM REPORTED SILVICULTURE AND REGENERATION SUCCESS BY FOREST UNIT

Forest Unit ²⁰	Total Area Assessed (Ha)	Area Regenerated to the Projected Forest Unit (Ha)	Area Regenerated to Another Forest Unit (Ha)	Area Not Successfully Regenerated (Ha)	% Area Silvicultural Success
BW1	2,872	2,205	667	0	76.8
LC1	540	308	232	0	57.0
MW1	7,797	4,758	3,039	0	61.0
MW2	6,195	4,617	1,578	0	74.5
PJ1	5,294	4,441	853	0	83.9
PJ2	11,470	8,045	3,425	0	70.1
PO1	7,526	5,203	2,323	0	69.1
PRWSH	6	2	4	0	33.3
PRWST	160	158	2	0	98.8
SB1	1,680	439	1,241	0	26.1
SF1	866	652	214	0	75.3
SP1	3,088	2,004	1,084	0	64.9
Total:	47,494	32,832	14,662	0	69.1

Source: AR-13 Summary of Assessment of Regeneration and Silvicultural Success.

Our field sampling confirmed the levels of regeneration and silvicultural success reported.

Silviculture Effectiveness Monitoring

Silviculture effectiveness monitoring (SEM), as described in the Silviculture Effectiveness Monitoring Manual for Ontario (MNR 2001), directs the forest manager to assess the renewal effort and the effectiveness of approved Silvicultural Ground Rules (SGRs) for the management unit. Silvicultural assessments are conducted on areas depleted through harvest and salvage activities, to determine if the regeneration standards of the prescribed SGRs have been met. Knowledge of the effectiveness of forest operations prescriptions in achieving the desired forest unit must be understood

²⁰ BW1=White Birch, LC1=Black Spruce/Cedar/Larch, MW1=Jack Pine/Birch/Aspen, MW2=Black Spruce/Aspen, PJ1=Jack Pine, PJ2=Jack Pine/Black Spruce, Po1=Aspen, PRWSH=White/Red Pine Shelterwood, PRWST=White/Red Pine Seed tree, SB1=Black Spruce Lowland, SF1=Spruce/Fir/Cedar, SP1=Black Spruce/Jack Pine

to facilitate reporting on forest sustainability and to provide reliable information for forest management planning (e.g. development of SGRs, SFMM inputs). As identified in the FMPM and the Forest Information Manual (FIM) the SFL holder is required to provide information on the outcomes of its silviculture program to the MNRF. MNRF is required to substantiate the reported results and evaluate the effectiveness of the silviculture program.

The previous IFA included a recommendation that the MNRF complete SEM program tasks and complete an annual summary report for the management unit. During this audit term the MNRF Districts did not meet all Silvicultural Effectiveness Monitoring (SEM) Core Task requirements during all years of the audit term²¹ (Recommendation # 5, Appendix 1). We note that during the last two years of the audit scope all the Districts met their SEM obligations.

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. The only exception identified in the Phase II FMP was the commercial thinning of jack pine²². No commercial thinning operations were planned or occurred during the audit term.

Forest Renewal Trust Specified Procedures Report

We surveyed an additional 10% of the area invoiced in the “*Forest Renewal Trust Specified Procedures Report (SPR)*”. SPA silvicultural work was consistent with the approved plan documents, records were maintained and the reported and mapped activities reflected conditions in the field. No non-conformities were found between activities invoiced in the “*Forest Renewal Trust Specified Procedures Report (SPR)*” and actual activities

Access Monitoring

EACOM monitors roads and water crossings through the course of normal operations. Monitoring is primarily confined to areas of active operations.

The previous IFA found that measures to control access were hampered by low levels of enforcement. We concluded that access control measures were being implemented in a practical manner given the realities of the SF (e.g. size of the unit, labour and budgetary constraints etc.) and that restricted access roads were posted with clear signage. An MNRF Enforcement staff review of the Compliance Activity Violation Reporting System (CAVRS) further indicated that “*there was no clear significant information to show that illegal access was an issue*”²³.

²¹ Omitted years are as follows: Timmins District 2011; Sudbury District 2010, 2013; Chapleau District 2010, 2012, and 2013.

²² SGR PJ1-6 and PJ2-6

²³ 2010 Action Plan pg.4.

MNRF and EACOM staff and members of the LCC reported that there is a long standing issue with nuisance beaver management. The inability to implement a timely and effective nuisance beaver control program has resulted in significant financial costs to repair washouts, unplug culverts and poses potential risks to public safety.

We note that a number of strategies are implemented to manage nuisance beavers including the use of beaver bafflers, and screens in conjunction with a regular maintenance. We were informed by EACOM staff that these techniques were costly and time consuming and that trapping was the most effective and cost efficient means of beaver control.

Local trappers are retained by EACOM through MNRF to remove the nuisance animals on an as needed basis, with compensation provided for travel and the removal of the animal. However, this option is becoming less effective than in the past as response times for animal removal are often inadequate. Factors include the distances trappers must travel from their homes to their trapline, or other employment commitments which may limit the trapper's availability. In addition, compensation amounts by EACOM may also be providing a disincentive to trap animals in impoundments near access roads during the open season.

MNRF is responsible for the authorization and regulation of trapping activity; thus the resolution of beaver trapping issues ultimately resides with the MNRF.

There has been a general preference within MNRF to have the SFL holder and the trapper/trappers Council resolve issues without the intervention MNRF staff. While some nuisance beaver problems have been effectively addressed on specific traplines, many have not been satisfactorily resolved. We are concerned with the persistence of the issue, the costs of inaction by trappers and the potential for risks to public safety. We provide a recommendation to address this concern (Recommendation # 3, Appendix 1).

Annual Reports (ARs)

ARs were available for each year in the audit scope with the exception of the 2015-2016 AR, which is not required until November 15, 2016. Production and approval of the ARs generally met the schedules prescribed in the 2009 FMPM. There were minor delays related to the schedule for MNRF comments with respect to the 2013 and 2014 ARs, but the delays were minor. Report content requirements were met. As required, the reports were presented to the LCC.

4.7. Achievement of Management Objectives & Sustainability

The IFAPP requires the preparation of an updated Year Ten AR using Section 4.0 of the 2009 FMPM. The Report Author identified the following trends:

- Actual harvest and volume utilization have not achieved planned levels during any management period. This trend principally reflects the downturn in the forest sector economy.

- Harvest areas have been satisfactorily regenerated.

The Report Author concluded that forest sustainability was not at risk. We concur with this assessment. In our assessment of forest sustainability, we examined factors such as the achievement of plan objectives, progress towards the desired future forest condition, the level of benefits derived from the implementation of the Phase I and II FMPs, our field observations and other audit evidence (e.g. trends in regeneration and silviculture success etc.).

In Appendix 2, we present our assessment of the achievement of the Phase I/II FMP management objectives. FMP targets for most operations linked to harvesting were not achieved however, all of the longer term forest diversity objectives were being met.

We concluded that the achievement of long-term sustainability as assessed by the IFAPP is not at risk. This conclusion is premised on the following findings:

- 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. The targets for timber production were an appropriate compromise between wood supply and wildlife habitat requirements.
- Short-term reductions in harvest levels will not constitute a threat to the long-term wood supply or the achievement of the LTMD. The underutilization of the wood supply implies that predicted wood supply gaps may be delayed or mitigated.
- EACOM had FSC and SFI certification during the audit term.
- The area renewed approximates the area harvested.
- There was a high in-compliance rate for forest operations. We did not observe any instances of environmental damage associated with forestry operations.
- AOC prescriptions were appropriately implemented to protect/maintain identified values.
- Silvicultural Ground Rules (SGRs), Silvicultural Treatment Packages (STPs) and Forest Operations Prescriptions (FOPs) were appropriate for the forest cover types and site conditions.
- An effective field silviculture program was delivered.
- The contractual obligations of the SFL holder were generally met.

- Appropriate actions were implemented to address the recommendations of the 2010 IFA with the exception of the recommendation related to annual SEM monitoring.

On balance, an effective silviculture program was implemented during the audit term. Sites inspected for renewal were typically well-stocked to the desired species, and the SGRs and STPs adopted in planning and operations were appropriate. No significant backlogs in silviculture treatments exist and our site inspections confirmed that there were not any significant environmental impacts arising from operations during the audit term.

Our field inspections indicated that the tending treatments had achieved variable results over the audit term. We determined that EACOM staff were aware of the issues associated with the delivery of the tending program and were proactively working to improve herbicide performance. An effective monitoring program was in place that evaluated requirements for tending treatments and assessed the efficacy of the treatments. In combination, these circumstances lead us to conclude that the sustainability of the forest was not being jeopardized as a result of the uneven effectiveness of tending treatments associated with the audit term.

The SF was managed in compliance with the terms and conditions of the SFL and we found that forest operations were conducted with a high level of compliance. AOC prescriptions to maintain or preserve identified values were also appropriately implemented during field operations.

4.8. Contractual Obligations

Appendix 3 presents our findings with respect to EACOM's forest management obligations. It is our assessment that the EACOM was substantially in compliance with the terms and conditions of its SFL. The Action Plan and Action Plan Status Report to address the recommendations of the previous audit were submitted late (Recommendation # 6, Appendix 1).

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 six recommendations, including the recommendation for licence extension. Three of the recommendations were directed at the MNRF. Our assessment is that with the exception of completing SEM program tasks and completing an annual summary report of SEM results the MNRF appropriately addressed the issues identified in the last audit.

The 2010 IFA also required EACOM and MNRF to address issues related to the delivery of the compliance program on the Forest (i.e. preparation of annual compliance plans and to adhere to compliance reporting deadlines). We concluded that the identified issues and concerns were appropriately addressed.

An FRL holder is in arrears with payments to Forestry Futures, Ontario Crown Charges and the Forest Renewal Trust. We do not provide a recommendation as the MNRF has initiated collection measures.

We did note a difference in the wording of Recommendation # 5 between the Appendix 1 and the Table 2 Table of Audit Findings text in the last audit report. Appendix 1 linked the recommendation to the AWS, while the Table 2 recommendation was much broader in scope. The Action Plan developed by the MNRF Districts and EACOM addressed the Appendix 1 version of the recommendation. Based on the wording of the recommendation and the actions implemented, we determined that the failure to produce ACOPs during some years of the audit term was outside of the scope of the previous IFA recommendation. In this audit we do provide a recommendation requiring the annual preparation of ACOPs (Recommendation # 6, Appendix 1).

4.9. Conclusions and Licence Extension Recommendation

EACOM and the MNRF are effectively managing the Spanish Forest. Most of the planned forest management targets were achieved (to the extent possible given prevailing market conditions), and there were few compliance issues associated with operations. The contractual obligations of the SFL holder and obligations of MNRF as the administrator of the Forest were met.

The audit team concludes that management of the Spanish Forest was generally in compliance with the legislation, regulations and policies that were in effect during the term covered by the audit, and the Forest was managed in compliance with the terms and conditions of the Sustainable Forest Licence held by EACOM. Forest sustainability as assessed through the 2016 Independent Forest Audit Process and Protocol is being achieved. The audit team recommends the Minister extend the term of the Sustainable Forest Licence # 542391 for a further five years.

Appendix 1

Recommendations

Independent Forest Audit – Record of Finding

Recommendation # 1

Principle: 2 PUBLIC CONSULTATION AND ABORIGINAL INVOLVEMENT

Criterion: 2.4 Environmental Assessments

Procedure(s): 1. Review the opportunities provided for, and the actual incidence of, requests for IEAs. Include the following:

Whether any IEA requests were made and if so, whether the IEA procedures in the applicable FMPM were followed where a decision has been made, whether appropriate action has been taken in relation to any conditions associated with the decision.

Background Information and Summary of Evidence:

On January 7, 2015 a request for an IEA of the Phase II 2010 Forest Management Plan was submitted to the Ministry of the Environment and Climate Change (MOECC).

In processing the IEA request, FMPM procedures were followed except that the timing of MOECC's decision was considerably delayed from an agreed upon normal timeline. This, and related timelines are identified in the 2009 FMPM and supplemented by an MNRF/MOE (2013) Procedure for the Review of Individual Environmental Assessment (IEA) Requests Under MNRF's Forest Class Environmental Assessment Approval.

	Agreed Upon (normal) Timelines in 2009 FMPM	Actual Timelines
MOECC receives request for IEA		January 7, 2015
MOECC notifies MNRF		January 22, 2015
MOECC confirms detailed information required of MNRF		February 11, 2015
MNRF responds to MOECC	Within 15 days	February 27, 2015 (16 days)
MOECC makes a decision	Within 45 days	July 23, 2015 (149 days)

This delay in receiving the MOECC decision on the IEA request resulted in the need to adjust the timing of some planned forest management operations.

Discussion:

Although IEA procedures in the 2009 FMPM were generally followed, there was a significant slippage in MOECC desired decision timelines. This delay in processing the IEA request resulted in the need to adjust the timing of some planned forest management operations.

We have observed this inability to meet desired IEA response times in many other Forests. If FMPM timelines cannot be met, perhaps the timelines should be revised to ones that are more feasible to minimize the potential for disruptions to planned operations.

Conclusion:

In processing the IEA request; the timing of MOECC's decision was considerably delayed from agreed upon timelines.

Recommendation:

Corporate MNRF should engage the MOECC to discuss actions that would help with the rendering of a MOECC decision on Forest Management Plan IEA requests within agreed (normal) timelines.

Independent Forest Audit – Record of Finding

Recommendation # 2

Principle: 4 Plan Assessment and Implementation

Criterion: 4.5 Tending and Protection

Procedure(s): 4.5.1. Review and assess in the field the implementation of approved tending and protection operations and determine if actual operations were appropriate for the site conditions encountered.

Background Information and Summary of Evidence:

Our field site inspections indicated variable results with respect to the efficacy of the chemical tending program. Some treated areas exhibited good competition control while in other areas the herbicide application was less effective. EACOM staff are aware of this issue, and have explored several strategies (including varying the concentration of water as the diluent or dispersing medium in the herbicide solution) to improve herbicide performance.

An additional concern, was damage to conifer crop trees potentially arising from herbicide applications. EACOM staff are actively investigating the cause of the damage (i.e. herbicide concentration, diluent concentration, weather conditions etc.) but had not been able to ascertain the cause.

Discussion:

Vegetative competition poses a significant challenge for the establishment and growth of conifers. Timely and effective chemical tending is frequently required in order to ensure conifer renewal and the LTMD desired future forest condition.

Conclusion:

While EACOM staff are aware of the issue of variable efficacy in the herbicide tending program and are implementing appropriate silviculture treatments to:

- ensure adequate site stocking,
- release crop trees and,
- ensure that the SGR is met

We note that EACOM staff are actively investigating potential causes of the damage we observed to crop trees. (i.e. herbicide concentration, diluent concentration, weather conditions, tree planting issues etc.), but at the time of the audit had not ascertained a cause.

We provide a recommendation requiring the company to formally report their findings of their investigations as to the cause(s) of the damage and the remedial actions taken in the Year 7 Annual Report. This requirement will enable future IFA auditors to track and assess the progress made in addressing the issue.

Recommendation:

In the Year 7 Annual Report, EACOM should formally report on the causes and remedial actions taken to address damage to crop trees arising from its chemical herbicide tending program.

Independent Forest Audit – Record of Findings Recommendations # 3

Principle: 4 Plan Assessment and Implementation

Criterion: 4.7 Access

Procedure(s): 1 ...*assess whether roads have been constructed, maintained...to minimize environmental impacts and provide for public safety*

...*assess whether the planned monitoring program for roads and water crossings ...was effective in determining any environmental or public safety concerns.*

Background Information and Summary of Evidence:

EACOM has an effective road construction and maintenance program with routine monitoring by staff and contractors. One of the ongoing issues continues to be flooding and road/culvert washouts caused by beaver. The company employs several strategies to address nuisance beaver issues including regular maintenance and the use of screens and “beaver bafflers”. These options are often less effective and more costly than trapping the problem animals.

The issue of regulating nuisance beavers by trapping resides with MNRF. Each of the three MNRF Districts has a process in place to contact local trappers to deal with specific beaver problems brought to their attention by EACOM, MNRF and members of the public. Due to government privacy policies, the MNRF arranges a contact between the trapper and EACOM, or contacts the trapper/trapper council directly to deal with the problem. The basic intent of the fur management program is that trappers will reduce the beaver population while filling their assigned beaver quota during the open trapping season. During the closed season, trappers have MNRF authorization to remove problem animals with EACOM providing reimbursement for travel expenses and payment of a negotiated fee for each beaver removed.

With some exceptions, the program is not particularly effective at proactively removing potential problems. During the field inspections, we observed several active beaver houses adjacent to main roads, as well as partially blocked culverts. Culvert and road washouts and flooding caused by beaver continue to delay operations and result in direct financial costs to EACOM and contractors.

Discussion:

MNRF District staff, EACOM staff and LCC members all indicated that nuisance beaver are a long-standing problem and attempts at resolution have met with limited success.

From our perspective there are different elements to this long standing issue;

- Proactively dealing with impending problems by aggressively trapping beaver adjacent to roads and culverts during the open trapping season.
- Reacting to existing problems (plugged culverts, rising water, etc.) in a timely manner.
- Dealing fairly with the trapper(s) licenced for the area.
- An on-going need for the Company to utilize mitigating measures in high risk areas (e.g. culvert cleaning, screens, beaver bafflers).

The licenced trapper(s) in the area is key to success. However, the issues confounding the problem are that:

- Increasingly trappers tend to live in urban communities and travel to and from the trapline on a periodic basis (weekends or 2 – 3 times a week).
- Trapping has become a secondary source of income and many trappers have other jobs that limit their available time on the trapline.
- EACOM payment for removal of a nuisance beaver requires less effort and provides substantially more revenue than removal during the legal season (e.g. the company pays for travel and removal).
- A trapping licence is a legal document assigning specific rights.
- There is a long-standing general preference on the part of the MNRF to have the Company and the trapper/trappers Council resolve issues among themselves.
- There does appear to be a greater focus on the individual trappers “rights” than on the industry costs associated with ongoing culvert/road issues and associated public safety.

Both EACOM and MNRF staff agreed that the lack of timely and effective removal of problem beaver has significant financial costs and involves an element of employee and public safety. They also indicated that while there are areas where the problem is being effectively addressed the reason tends to be based more on the individual trapper’s personality/circumstances rather than a proactive MNRF policy. We note that in some areas railway and energy companies have negotiated arrangements where their employees or a paid trapper remove beaver as required. We also note that the Fish and Wildlife Conservation Act under protection of property states:

31. (1) If a person believes on reasonable grounds that wildlife is damaging or is about to damage the person’s property, the person may, on the person’s land,

(a) harass the wildlife for the purpose of deterring it from damaging the person's property; or

(b) capture or kill the wildlife. 1997, c. 41, s. 31 (1).

Agents

(2) The person may use an agent to harass, capture or kill the wildlife under subsection (1) if the agent has the authorization of the Minister or belongs to a class of agents prescribed by the regulations. 1997, c. 41, s. 31 (2).

While the Company does not own the public land it does own the culverts and bridges and certainly has significant legal responsibilities/accountability attached to the roads and their use. We question why some accommodation has not been made to address problem beaver.

We wonder if providing industry staff/employee with O2 or O3 status on traplines in areas adjacent to current haul roads (perhaps 100 meters) would be a simple solution. A financial accommodation could be made with the licenced trapper and it would allow the industry to deal quickly with developing problems. It will require MNRF to "*to think outside the box*" and it will require leadership.

Conclusion:

MNRF's mission statement includes "...*promoting economic opportunities in the resource sector...*" and that suggests problem beaver should be managed to minimize the financial impact on the local/regional economy and potential threat to public safety. The MNRF has the ultimate authority to resolve the problem. The relative economic balance between the trapping and forest industry sectors and their impact on the local/regional economy should be an integral part of the decision making process.

Recommendation:

The MNRF District(s) and EACOM should investigate options to improve the current nuisance beaver management program to ensure the timely and effective implementation of the program vis-a-vis forest industry access roads.

**Independent Forest Audit – Record of Findings
Recommendations # 4**

Principle: 6 Monitoring

Criterion: 6.1

...review and assess whether....a compliance program has been developed and implemented.

...Districts should prepare District Compliance Plans....these are annual plans

Background Information and Summary of Evidence:

The Forest Compliance Handbook (2014) states that MNR districts are responsible for establishing the level of their Compliance Monitoring effort for active operations on the forest. It states, *“The primary purpose of the annual district forest compliance plans is to outline the Compliance Monitoring plan for the applicable year of the FMP implementation. It is where the district will rationalize the distribution and work effort of its staff and resources using a risk based approach”*.

A District's Compliance Monitoring program is based on the licensee's operational activities and its Compliance Monitoring program as laid out in the AWS. The forest Compliance Monitoring plan for the MNRF takes the form of an Annual Compliance Operations Plan. Usually this is a spreadsheet that documents the program, compliance category, action, reporting and assigns targets and responsibilities.

District forest compliance plans can be independent documents (forestry) or they can be part of an integrated district compliance monitoring plan that covers other natural resource program areas. On the Spanish Forest each of the Districts plans for the area of the Forest under their jurisdiction are integrated into a broader District wide plans.

Each of the Districts did prepare an annual compliance plan in response to the Companies operations and AWS compliance program. However, for some years those plans were not consolidated into a formal document that provided an overview of District direction and targets. The Chapleau District prepared an ACOP in 2015-2016. The Sudbury District prepared ACOPs in 2014-2015 and 2015-2016. The Timmins District prepared ACOPs during all years of the audit term but the 2014-2015 ACOP was a draft only.

Discussion:

This failure to produce the formal integrated document occurred during the MNRF's "*transformation*" when there were changes in reporting and responsibilities (District vs Region) and numerous staff vacancies/acting appointments.

We determined that the forest compliance programs in each of the Districts was appropriately planned and delivered; however, a formal document was not produced.

Conclusion:

The Districts did prepare annual compliance plans but for some years in the audit term however, those plans were not consolidated into a formal document that provided an overview of the District direction and compliance targets.

Recommendation:

The MNRF District Managers in Sudbury, Timmins and Chapleau must ensure that Annual Compliance Operations Plans are prepared.

Independent Forest Audit – Record of Finding

Recommendation # 5

Principle: 6 Monitoring

Criterion: 6.3. Silvicultural Standards Assessment Program

Procedure(s): Review and assess, including in the field, achievement and reporting of the silvicultural standards for the specific SFL/management unit.

Background Information and Summary of Evidence:

Silviculture effectiveness monitoring (SEM), as described in the Silviculture Effectiveness Monitoring Manual for Ontario (MNR 2001), directs the forest manager to assess the renewal effort and the effectiveness of approved Silvicultural Ground Rules (SGRs) for the management unit. Silvicultural assessments are conducted on areas depleted through harvest and salvage activities, to determine if the regeneration standards of the prescribed SGRs have been met. Knowledge of the effectiveness of forest operations prescriptions in achieving the desired forest unit must be understood to facilitate reporting on forest sustainability and to provide reliable information for forest management planning (e.g. development of SGRs, SFMM inputs).

As identified in the FMPM and the Forest Information Manual (FIM) the SFL holder is required to provide information on the outcomes of its silviculture program to the MNRF. MNRF is required to substantiate the reported results and evaluate the effectiveness of the silviculture program. The MNRF Districts did not meet all Silvicultural Effectiveness Monitoring (SEM) Core Task requirements during all years of the audit term with work not done by the Timmins District in 2011, the Sudbury District in 2010 and 2013 and the Chapleau District in 2010, 2012 and 2013.

We note that the previous IFA also included a recommendation that the MNRF complete SEM program tasks and complete an annual summary report for the management unit.

Conclusion:

SEM Core Task requirements were not undertaken by the MNRF Districts during all years of the audit term.

Recommendation:

The MNRF Districts must ensure that silvicultural effectiveness monitoring (SEM) of forest operations prescriptions is conducted in accordance with FIM direction.

Independent Forest Audit – Record of Finding

Recommendation # 6

Principle: 8. Contractual Obligations

Criterion: 8.1.9 Audit action plan and status report

Procedure(s): submitted for approval within 2 months of receiving the final audit report.

Background Information and Summary of Evidence:

The 2010 IFA Report was received in March 2011. The Action Plan was due in May 2011 but was submitted in August 2011 approximately 3 months late. The Action Plan Status Report was due in August 2013 but was not approved until July 2014 (11 months late).

We were informed that EACOM had met its responsibilities for the production of the Action Plan and the Action Plan Status Report. Changes in staff resulted in MNRF delays in the review and approval of the Action Plan. The transformation at MNRF, including the closure of the Espanola Area Office, resulted in other activities being afforded a higher priority than the approval of the Action Plan Status Report.

Conclusion:

The IFAPP schedule for the submission of the Action Plan and Action Plan Status Report were not met.

Recommendation:

As the Lead District, the Sudbury MNRF must ensure that the IFA Action Plan and Action Plan Status Report is submitted, reviewed and approved in accordance with the schedule established in the Independent Forest Audit Process and Protocol (IFAPP).

Appendix 2

Achievement of Management Objectives

2010 FMP OBJECTIVES ²⁴	ASSESSMENT OF OBJECTIVE ACHIEVEMENT	AUDITOR COMMENTS
Objective 1²⁵ <i>Move toward a distribution of disturbances that more closely resembles the expected natural disturbance template.</i>		
<u>Indicator 1.1:</u> Area distribution of NDPEG forest disturbances	BEING MET	Through the FMP assessment it was identified that 5 out of 7 measures were achieved by Area Distribution. All seven of the area distribution indicators showed movement towards the expected natural disturbance template, except for the 10-100 and 1,000-5,000 ha size class. The 10-100 size class exceeded the necessary movement toward the target, while the target for the 1,000-5,000 size class indicator was lower than the desired level.
<u>Indicator 1.2</u> Frequency distribution of NDPEG forest disturbances	BEING MET	Through the FMP assessment it was identified that 7 out 7 measures were achieved by Frequency Distribution. All of the indicators showed movement towards the expected natural disturbance template, except for the 500-1,000 ha size class which was lower than the desired level.

²⁴ Note: Forest Diversity objectives, as created and tested in the production of the 2010 FMP are by their design, long term. For most of the diversity objectives inadequate time has elapsed since approval of the 2010 FMP for the effects of limited natural disturbance and limited harvesting to have a measurable impact on forest diversity. In the case where inadequate time has elapsed to assess the achievement of an FMP objective and in the absence of other relevant information, we have assigned it a status of "BEING MET", based on testing of the objective during 2010 FMP preparation.

²⁵ Overall, this objective has 14 measures of achievement. Of the 14 measures, 10 were estimated as achievable during Phase I planning. The achievement of all measures was not possible at this time due to the temporal-spatial configuration (i.e. age, size and distribution) of the disturbances on the initial 2010 land base resulting from previous forest management policies and practices.

Objective 2 <i>To maintain the area of forest cover types that would occur naturally on the Spanish Forest, similar to the expected natural landscape dynamics.</i>		
<u>Indicator 2.1:</u> Total area of Forest Unit by term	MET	The targets of increasing the combined area of the PWRSH and PWRST forest units by 23,231 ha (within 90 years) were met during the 2010 Phase I planning.
Objective 3 <i>To provide for a forest age class structure that maintains mature and over-mature ecosystem conditions, similar to the expected natural landscape dynamics.</i>		
<u>Indicator 3.1</u> Area of Forest Unit in a mature state by term	BEING MET	Through the FMP assessment it was identified that all measures of assessment were achieved. All forest units were expected to achieve levels greater than or equal to 70% of the Natural Benchmark SFMM run, by term.
<u>Indicator 3.2</u> Area of Forest Unit in an over-mature state by term.	MET	The old growth target for this indicator was met during the FMPI planning phase.
Objective 4 <i>To maintain wildlife habitat for forest- dependent provincially and locally featured species on the Spanish Forest.</i>		

<u>Indicator 4.1</u> Area of preferred habitat for selected wildlife species by term.	MET	The target to maintain levels of the preferred wildlife habitat by term was achieved during the FMP planning.
<u>Indicator 4.2</u> Area of over-mature forest-dependent preferred wildlife habitat for the selected species by term.	MET	The target to achieve levels of the preferred wildlife habitat by term was achieved during the FMP I planning.
<u>Indicator 4.3</u> Compliance with AOC Prescriptions for provincially and locally featured wildlife species	MET	As of 2015, the target was achieved.
<u>Objective 5</u> <i>To maintain 10% to 20% of the forest, which has the capability to produce marten habitat, in suitable conditions in core area.</i>		
<u>Indicator 5.1</u> Percent of capable marten habitat in suitable condition in cores.	MET	The FMP targets for marten core area of 12% for 2010-2030, 10% for 2030-2050, and 10% for 2050-2070 are predicted to be achieved.
<u>Objective 6</u> <i>To provide early successional shoreline forest habitat similar to what would be created during natural disturbance events, during the plan term.</i>		
<u>Indicator 6.1</u> Riparian area of shoreline forest assessed and	NOT MET	The target to harvest >75% of the shoreline forest planned for harvest was not met. During Phase 1, 243 ha of shoreline

planned for harvest, that is harvested.		harvest were planned and 31 ha were harvested.
<u>Objective 7</u> <i>To maintain wildlife habitat for forest- dependent, wildlife species at risk with known occurrence in the Spanish Forest.</i>		
<u>Indicator 7.1</u> Area of preferred wildlife habitat for the selected species at risk by term	MET	The target to achieve levels of preferred wildlife habitat for the olive-sided flycatcher was achieved during the planning phase.
<u>Indicator 7.2</u> Compliance with wildlife species at risk AOC Prescriptions.	MET	To-date there have not been any non-compliances assessed for AOC prescriptions for species at risk.
<u>Objective 8</u> <i>To ensure that enough roads are in place to allow for effective and efficient forest operations.</i>		
<u>Indicator 8.1</u> Kilometers of road per square kilometer of the forest.	MET	The target to achieve an average road density between 0.4 and 0.6 km/km ² was met, with a current density of 0.55 km of road/km ² of forest.
<u>Objective 9</u> <i>To ensure the successful renewal of harvested stands.</i>		
<u>Indicator 9.1</u> Percent of harvested forest assessed as free growing by forest unit.	MET	The target of greater than 90% of the area assessed to be FTG was achieved. Successful regeneration to the projected forest unit (Silvicultural Success) occurred about 69% of time for all treatment types. Regeneration success was 100%.

<u>Indicator 9.2</u> Percent of the harvest area assessed that is free-to-grow (FTG), by forest unit.	PARTIALLY MET	Regeneration success was reported as 100%.
Objective 10 <i>To reduce the use of pesticides while maintaining forest productivity.</i>		
<u>Indicator 10.1</u> Area of pesticide application.	MET	The target to reduce the area forecasted for treatment with herbicides was achieved. when adjusted relative to harvest.
Objective 11 <i>Implement forest operations in a manner that minimizes conflicts with non-timber resource users and protects non-timber values, in order to provide the opportunity to benefit from the forest.</i>		
<u>Indicator 11.1</u> Compliance with prescriptions for the protection of natural resource features, land-use, or values dependent on forest cover.	MET	To-date there have not been any non-compliances assessed for AOC prescriptions for non-timber resources.
<u>Indicator 11.2</u> Compliance with prescriptions for protection of resource-based tourism values.	MET	To-date there have not been any non-compliances assessed for AOC prescriptions for resource-based tourism values. The previous IFA found that measures to control access were hampered by low levels of enforcement. We concluded that control measures were appropriate and being implemented in a practical manner.
Objective 12 <i>To provide a continuous, predictable, and economical supply of quality timber products required by wood processing facilities that</i>		

<i>receive wood from the Forest.</i>		
<u>Indicator 12.1</u> Modeled long-term annual harvest area by forest unit.	MET	The assessment of this objective in the 2010 Phase I FMP identified a target to remain within +/- 30% 50%of the previous 10-year harvest area.
<u>Indicator 12.2</u> Modeled long-term annual harvest volume by species group.	MET	The assessment of this objective in the 2010 Phase I FMP identified a target to remain within +/- 20% of the previous 10-year harvest volume.
<u>Indicator 12.3</u> Forecast annual harvest area by forest unit.	MET	The assessment of this objective in the 2010 Phase I FMP was completed in accordance with SFMM model results.
<u>Indicator 12.4</u> Forecast annual harvest volume by species group.	MET	The assessment of this objective in the 2010 Phase I FMP identified a target to be within +/-10% of the forecast harvest volume by species group.
<u>Indicator 12.5</u> Planned 1st 5-year harvest area by forest unit.	MET	This indicator includes 14 measures of achievement. Through the FMP assessment it was identified that all of the measures were achieved.
<u>Indicator 12.6</u> Planned 1st 5-year harvest volume by species group.	MET	This indicator includes 6 measures of achievement Through the FMP assessment it was identified that 5 of the 6 measures were achieved.
<u>Indicator 12.7</u> Actual harvest area by forest unit.	NOT MET	The target to actually harvest >90% of the planned harvest area is not being achieved. The total area harvested to date represents 49% of the planned AHA.
<u>Indicator 12.8</u>	NOT MET	This target to be within +/-10% of the actual harvest volume by species group is not

Actual harvest volume by Species Group		being achieved due to poor markets. The harvest volume realized to date represents 56% of the planned Phase 1 volume.
<u>Indicator 12.9</u> Percent of forecast volume utilized, by mill.	NOT MET	The target to achieve >90% utilization, by mill is not being met. Harvest area and volume utilization were approximately 50% of planned levels during the first five years of the plan.
<u>Indicator 12.10</u> Number of forest operations inspections in non-compliance for wasteful practices.	MET	The target of zero percent significant non-compliance, and <5% of moderate and minor non-compliance is being met.
<u>Objective 13</u> <i>To minimize the impact for forest operations on cultural heritage values.</i>		
<u>Indicator 13.1</u> Compliance with prescriptions for cultural heritage values.	MET	To-date the target has been achieved with zero non-compliances assessed for AOC prescriptions for resourced based tourism values.
<u>Indicator 13.2</u> Compliance with prescriptions for identified Aboriginal values.	MET	To-date the target has been achieved with zero non-compliances assessed for AOC prescriptions for Aboriginal Values.
<u>Objective 14</u> <i>To undertake all forest management operations using sound environmental practices such that any negative environmental impacts are avoided or minimized.</i>		
<u>Indicator 14.1</u>	MET	To-date the target has been achieved with zero non-compliances assessed. During the

Number of forest operations inspection in significant non-compliance as a result of forest management activities causing site damage and loss of forest productivity.		site inspections we did not observe any instances of site or environmental damage from harvest operations.
<u>Objective 15</u> <i>To ensure the maintenance of riparian zones, water quality and habitat for fisheries resources adjacent to water bodies where forest management activities occur.</i>		
<u>Indicator 15.1</u> Compliance with prescriptions for forest management activities on riparian zones.	MET	To-date there has been 1 non-compliance assessed in relation to a water crossing due to inadequately stabilized slopes. The target has been essentially met.
<u>Objective 16</u> <i>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.</i>		
<u>Indicator 16.1</u> Managed crown productive forest area available for timber production (ha).	MET	The Crown-managed productive forest area is 911,526ha. During the first five years of the plan, road construction was carried out on approximately 681 ha of Crown-managed forest resulting in reduction in the managed Crown productive forest available for timber production of approximately 1%. The target of no more than 2% reduction was met.

<u>Objective 17</u> <i>To provide opportunities for First Nation involvement in forest management planning activities.</i>		
<u>Indicator 17.1</u> Formal dialogue with FN communities with a known interest in the Spanish Forest.	MET	All eight First Nations with and interest in the Forest were provided opportunities to be involved in each of the planning stages and implementation of the forest management plan. All FMPM Aboriginal notification requirements were met.
<u>Indicator 17.2</u> Formal dialogue with FN communities with a known interest in the Spanish Forest.	MET	Effort was made to consult with all eight aboriginal communities at each consultation stage in the development of the FMP.
<u>Objective 18</u> <i>To encourage and support the participation of the Local Citizens Committee in the development of the Forest Management Plan for the Spanish Forest.</i>		
<u>Indicator 18.1</u> LCC attendance at committee meetings during the FMP planning process.	MET	The LCC had a quorum at all committee meetings.
<u>Indicator 18.2</u> LCC attendance at local Information Centres.	MET	The Spanish LCC participated at all planning information centres.
<u>Indicator 18.3</u> LCC representation on FMP planning team.	MET	A member of the LCC was appointed to the planning team and attended planning team meetings.
<u>Indicator 18.4</u> LCC self-evaluation questionnaire.	MET	The planning team attained an average score of 8, or more on the LCC self-evaluation questionnaire, completed at the final plan stage.
<u>Objective 19</u>		

<i>To improve forest operations compliance.</i>		
<u>Indicator 19.1</u> Number of forest operations inspection in non-compliance as a result of forest management activities.	MET	The target to reduce the number of non-compliances to a level below the 2005–2010 Forest Management Plan period was met. There was a 99% in-compliance rate achieved during the audit term.

Appendix 3

Compliance with Contractual Obligations

SFL Obligation	Comment
Payment of Forestry Futures and Ontario Crown Charges.	Payments by the SFL holder are up-to-date. A FRL holder is in arrears and the MNRF has initiated collection measures (CRF \$ 42,822.03, FF \$ 66,776.82). ²⁶
Wood supply commitments, MOAs, sharing arrangements, special conditions.	<p>Annual wood supply commitments were as follows:</p> <ul style="list-style-type: none"> • Norbord Industries Inc. (Agreement # 536235). • GP North Woods LP's (Agreement # 536260) • Midway Lumber Mills (Agreement# 536226). • Niska North Inc. (Agreement # 536259). <p>Commitments were met.</p>
Preparation of FMP, AWS and reports; abiding by the FMP, and all other requirements of the FMPM and CFSA.	Reports were prepared, FMPM production and reporting schedules were met.
Conduct inventories, surveys, tests and studies; provision and collection of information in accordance with FIM.	Inventories and surveys were completed as required.
Wasteful practices not to be committed.	No wasteful practices were reported in FOIP reports or observed during our field audit.
Natural disturbance and salvage SFL conditions must be followed.	No salvage harvest occurred.
Protection of the licence area from pest damage, participation in pest control programs.	No pest management other than monitoring and reporting activities occurred during the audit term.
Withdrawals from licence area.	There were no withdrawals from the licence area during the audit term.
Audit Action Plan and Action Plan Status Report.	An Action plan and an Action Plan Status Report were prepared but were submitted late (Recommendation # 6).

²⁶ Arrears as of June 22, 2016

Payment of forest renewal charges to Forest Renewal Trust (FRT).	Payments by the SFL holder are up-to-date. A FRL holder is in arrears and the MNRF has initiated collection measures (\$ 59,129.28) ²⁷ .
Forest Renewal Trust eligible silviculture work.	Forest renewal trust eligible silviculture work was examined during the field audit and we concluded it was effectively implemented.
Forest Renewal Trust forest renewal charge analysis.	EACOM and the MNRF completed an annual analysis of renewal rates. The rate was increased in 2014/15.
Forest Renewal Trust account minimum balance.	The minimum balance was maintained for all years of the audit term.
Silviculture standards and assessment program.	An effective silviculture assessment was implemented during the audit term.
Aboriginal opportunities.	Opportunities were provided to aboriginal communities through harvesting and pre-commercial thinning contracts.
Preparation of compliance plan	All required plans were completed on an annual basis. Format and content of the plans met all FMPM requirements.
Internal compliance prevention/education program.	EACOM has a sophisticated EMS which includes a full range of educational and issue specific training programs.
Compliance inspections and reporting; compliance with compliance plan.	An effective compliance program was implemented. Compliance planning and submission of FOIPs met all format and timing requirements.
SFL extension recommendation.	The last SFL extension was granted by the Minister on March 31, 2011. We provide a recommendation to extend the SFL for a further five years.

²⁷ Arrears as of June 22, 2016

Appendix 4

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 EACOM, MNRF District Offices, the Northeastern Regional MNRF Office, the Forestry Futures Trust Committee and the LCC Chair in May 2016.

Public Notices: Public participation in the audit was solicited through the placement of a public notice in Sudbury Star (June 30, 2016) and a random mailing to 103 individuals/organizations listed in the 2010FMP mailing list.

The eight Aboriginal communities with an interest in the SF were contacted by mail to participate in the audit and/or express their views. Community leaders and/or forestry representatives received several follow-up telephone calls and/or e-mails. Three community representatives responded. The audit process was explained and they were invited to participate with submissions to the auditor and/or by participation in the field audit inspections. None responded.

All LCC members received letters and follow-up telephone calls with an invitation to participate in the audit process. Seven LCC members were interviewed and two members participated in one day of the field inspections.

Individual interviews were held with interested stakeholder groups and/or individuals (i.e. tourism operators, anglers and hunters, cottagers) with specific interests on the SF. Contact with stakeholder groups was initiated by the auditor, and/or occurred in response to our public outreach initiative (i.e. newspaper notice).

Field Site Selection: Field sample sites were selected randomly by the Lead Auditor in May 2016. 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 EACOM. The sample site selections were finalized with EACOM and MNRF District Staff at the Pre-Audit Meeting (May 30, 2016).

Site Audit: The audit team spent 5 days on the SF in July 2016 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 inspected to ensure conformity between invoiced and actual activities.

The field inspection included site-specific (intensive) and landscape-scale (extensive helicopter) examinations.

Report: This report provides a description of the audit process and a discussion of audit findings and conclusions. Recommendations are directed at deficiencies in forest management and associated processes that require a corrective action.

Procedures Audited by Risk Category

Principle	Low Risk			Medium Risk			High Risk	Comments
	Applicable (#)	Selected (#)	% Audited	Applicable (#)	Selected (#)	% Audited	Audited (#) (100% Audited)	
1. Commitment	0	0	0	2	2	100	0	All procedures were audited.
2. Public Consultation and Aboriginal Involvement	0	0	0	6	6	100	2	All procedures were audited.
3. Forest Management Planning	7	5	71	12	11	92	41	The following procedures were not audited; 3.2.1., 3.2.2. & 3.6.2.
4. Plan Assessment & Implementation	1	1	100	1	1	100	10	All procedures were audited.
5. System Support	0	0	0	1	1	100	1	All procedures were audited.
6. Monitoring	0	0	0	7	7	100	11	All procedures were audited.
7. Achievement of Management Objectives and Forest Sustainability	0	0	0	2	2	100	15	All procedures were audited.
8. Contractual Obligations	0	0	0	2	2	100	5	All procedures were audited.
Totals	8	6	75	33	32	97	85	

IFA Field Sampling Intensity on the Spanish Forest²⁸

Activity	Total Area (Ha) / Number	Planned Sample Area (Ha)	Actual Area (Ha) Sampled ²⁹	Number of Sites Visited	Percent Sampled
Harvest	26,970	2,697	4,242	49	16%
Renewal (Artificial)	15,467	1,546	1,844	19	12%
Renewal (Natural)	10,982	1,098	1,595	14	15%
Site Preparation	13,943	1,394	1,953	20	15%
Tending – Release	13,039	1,303	1,798	24	14%
Tending - Thinning	4,214	421	494	7	12%
FTG	41,497	4,149	4,396	78	11%
Water Crossings (# of Crossings)	133	13		13	10%
Forest Resource Aggregate Pits (# of Pits)	278	27		27	10%

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 Sudbury Star (June, 2016). This notice directed interested individuals to contact the audit firm with comments or complete a survey questionnaire on forest management during the audit term on the Arbex website. One hundred and three individuals/organizations on the 2010 FMP mailing list received a letter and the survey questionnaire. Two responses were received. An additional sample of stakeholders was contacted directly by telephone.

Comments received included those associated with resourced based tourism, Bear Management Areas, anglers and hunters and cottagers. All respondents indicated that they had been made aware of FMP processes and opportunities to engage in the planning process were provided.

²⁸ During the field audit we observed numerous areas where AOCs had been implemented in either linear buffer strips or in association with an identified value. We cannot provide an accurate estimate of the sample intensity given the linear nature of many of the buffers. All AOCs associated with sample sites were observed. These included riparian reserves and nest buffers.

²⁹Not 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); all associated activities that occurred on the site were assessed allowing the audit team to augment the planned sampling intensity.

The comments included a range of opinions. Some respondents expressed satisfaction with MNRF/Company performance and their relationship with them. Others had concerns about their relationship with MNRF/EACOM and about the negative impacts of logging and related operations.

Some specific concern included:

- Perception that the consultation process lacked transparency.
- Lack of trust of MNRF and EACOM and harvest contractors.
- The need for more timeliness and specificity of information about cutting intentions including more localised and precise maps.
- Poor communication by operators about the specific timing and location of harvest operations.
- Excessive impact of harvest operations on BMA bait stations /stands, increased access to vulnerable lakes and effect of the spray program on blueberries.
- Issues with speed of trucks on haul roads including safety in residential areas.
- Concern that slash in cutovers from the cut-to-length harvest system was impeding tree planting by limiting the plantable area.
- Concern with planting quality.

MNRF

MNRF staff from Sudbury, Timmins and Chapleau Districts attended the field audits and were interviewed in person or by telephone. A Regional MNRF staff member attended all days of the field audit and other involved regional staff were interviewed by telephone. General comments expressed by staff to the auditors were:

- The various elements of the MNRF transformation are generally in place and individual staff members and district teams had a better understanding of their respective roles.
- Communications and the working relationship with EACOM is very good.
- Some frustration was expressed with the inability to engage Aboriginal communities in the forest management planning process to a greater extent.

EACOM

EACOM staff were interviewed and/or attended the field audit. General comments made to the audit team included;

- Concern and frustration associated with the issue of nuisance beaver management.
- General consensus that the working relationship with the MNRF Districts and the LCC was effective.
- Concern with the observed crop tree damage by herbicide applications.

LCC Members

Individual members of the SFLCC received a letter inviting their participation in the audit. Interviews were conducted with seven members and two members attended two day of the field audit. The respondents provided the following general comments:

- Excellent communications with EACOM and the MNRF.
- They feel their involvement with the LCC is a positive experience and they provide benefit to forest management on the Forest.

First Nations

All the First Nations communities with an interest in the Forest were contacted by mail, telephone and/or email and asked to express their views on forest management during the audit term. Representatives from three communities did speak to the auditor. Comments included;

- Confusion associated with the difference in certification audits and the IFA.
- Comments that they have interests on several Forests and can be overwhelmed with requests for input.
- One comment that their input is directed at broader governance and economic issues that does not fall within the mandate of the various auditors.
- A request for financial support to participate in the audit.

Appendix 5

List of Acronyms Used

AHA	Available Harvest Area
ACOP	Annual Compliance Operations Plan
AOC	Area of Concern
AR	Annual Report
AWS	Annual Work Schedule
B&S	Barren and Scattered
BMP	Best Management Practice
B.Sc.F.	Bachelor of Science in Forestry
CAVRS	Compliance Activity Violation Reporting System
CFSA	Crown Forest Sustainability Act
CTL	Cut-to-Length
EMS	Environmental Management System
FIM	Forest Information Manual
FMP	Forest Management Plan
FMPM	Forest Management Planning Manual
FN	First Nation
FOIP	Forest Operation Inspection Program
FOP	Forest Operations Prescription
FRI	Forest Resource Inventory
FRMA	Forest Roads and Maintenance Agreement
FRT	Forest Renewal Trust
FSC	Forest Stewardship Council
FTG	Free-to-Grow
Ha	Hectares
IEA	Individual Environmental Assessment
IFA	Independent Forest Audit

IFAPP	Independent Forest Audit Process and Protocol
KMS	Kilometers
LCC	Local Citizens Committee
LTMD	Long Term Management Direction
m ³	Cubic Metres
MNRF	Ministry of Natural Resources and Forestry
MOECC	Ministry of the Environment and Climate Change
NDPEG	Natural Disturbance Pattern Emulation Guideline
NRS	Not Satisfactorily Regenerated
OFRL	Overlapping Forest Resource Licence
PT	Planning Team
RD	Regional Director
R.P.F.	Registered Professional Forester
RSA	Resource Stewardship Agreements
SAR	Species at Risk
SFLCC	Spanish Forest Local Citizens Committee
SEM	Silvicultural Effectiveness Monitoring
SF	Spanish Forest
SFI	Sustainable Forestry Initiative
SFL	Sustainable Forest Licence
SFMM	Strategic Forest Management Model
SGR	Silvicultural Ground Rule
SIP	Site Preparation
SPH	Stems Per Hectare
SPR	Specified Procedures Report
STP	Silvicultural Treatment Package
VS	Versus

Appendix 6

Audit Team Members and Qualifications

Name	Role	Responsibilities	Credentials
Mr. Bruce Byford R.P.F. President Arbex Forest Resource Consultants Ltd.	Lead Auditor Forest Management & Silviculture Auditor	Audit Management & coordination Liaison with MNRF Review documentation related to forest management planning and review and inspect silviculture practices Determination of the sustainability component.	B.Sc.F. ISO 14001 Lead Auditor Training. FSC Assessor Training. 37 years of consulting experience in Ontario in forest management planning, operations and resource inventory. Previous work on 30 IFA audits with lead auditor responsibility on all IFAs. 27 FSC certification assessments with lead audit responsibilities on 7.
Mr. Al Stewart Arbex Senior Associate	First Nations & LCC Participation in Forest Management Process Auditor Forest Compliance	Review & inspect AOC documentation & practices. Review of operational compliance. First Nations consultation.	B.Sc. (Agr) ISO 14001 Lead Auditor Training. FSC assessor training. 45 years of experience in natural resource management planning, field operations, policy development, auditing and working with First Nation communities. Previous work experience on 30 IFA audits.
Mr. David Watton Arbex Senior Associate	Forest Management Planning & Public Participation Auditor	Review documentation and practices related to forest management planning & public participation. Determination of the sustainability component.	B.Sc., M.Sc. (Zoology) ISO 14001 Lead Auditor Training. 45 years of experience in natural resource management planning, land use planning, field operations, and policy development. Previous work experience on 29 IFA audits.

Mr. Trevor Isherwood R.P.F. Arbex Senior Associate	Silvicultural, Forest Management 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. 45 years of experience in forest management and operations. Previous work experience on 26 IFA audits.
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