

REPORT

Forest Certification



Northern Pulp Nova Scotia Corporation – 2016 SFI Surveillance/Certificate Upgrade Audit

In October 2016, an audit team from KPMG Performance Registrar Inc. (“KPMG PRI”) carried out a surveillance/certificate upgrade audit of Northern Pulp Nova Scotia Corporation’s (“Northern Pulp’s”) Nova Scotia woodlands operation against the requirements of the SFI 2015-2019 Forest Management and Fibre Sourcing Standards. To provide for a more efficient audit, an ISO 14001 re-certification audit was conducted at the same time. This Certification Summary Report provides an overview of the audit process and KPMG’s findings.

Northern Pulp Nova Scotia Corporation

Northern Pulp operates a pulp mill in Pictou, Nova Scotia. The Company is one of the largest private forest landowners in Nova Scotia, and also holds a Crown licence which was originally granted by the Province of Nova Scotia to Scott Paper (one of Northern Pulp’s predecessor companies) in 1965.

Northern Resources, the parent company of Northern Pulp, is a wholly-owned subsidiary of Howe Sound Pulp & Paper Corporation (Howe Sound Pulp), which is in turn owned by Paper Excellence Canada Holdings Corporation. Northern Resources (along with Northern Pulp, the Pictou pulpmill and associated private forest lands and Crown Licence) was acquired by Howe Sound Pulp from Atlas Holdings LLC and Blue Wolf Capital Management LLC in May 2011.

Northern Pulp Woodlands

In 2010, Northern Pulp purchased 192,000 hectares of freehold lands from Neenah Nova Scotia which were previously managed by Northern Pulp under a stumpage agreement. Northern Pulp then sold approximately 22,000 hectares of the newly acquired land to the Crown as part of the Provincial Protected Areas Program. The remaining freehold lands held by the Company represent approximately 5% of the total forested land in Nova Scotia, accounting for approximately 7% of the privately owned forest land. These lands currently contribute approximately 25% of the pulp mill’s total chip furnish. The current allowable annual cut (AAC) for the Company’s freehold lands includes 301,635 GMT (green metric tons) of softwood and 137,113 GMT of hardwood.

Northern Pulp holds a Crown licence covering approximately 80,000 hectares that accounts for 7.6% of the Provincial Crown forest land in Nova Scotia and is situated in the Halifax Regional Municipality. This is a volume-based tenure with a fixed managed land base. The Company’s Crown licence currently provides an allowable annual cut (AAC) of 100,000 GMT of softwood and 15,000 GMT of hardwood.

The Company has also recently acquired a 10 year allocation of 125,000 GMT from the western Crown lands area, which over the longer term will be managed as part of a multi-Company consortium (WestFor). However, the exact structure and management obligations of the consortium have yet to be agreed upon with government.

The 2016 audit found that Northern Pulp continues to conform to the AACs applicable to its woodlands operations.

Northern Pulp has developed an ecological landscape plan for its freehold and Crown licence lands that is based on the Nova Scotia Department of Natural Resources (NSDNR) ecological classification system. In addition, a sustainable forest management (SFM) plan is in place that applies to both freehold and Crown licence lands. The Company maintains a GIS (Arc Info) that includes various layers (roads, stand boundaries, inventory labels, soils information, special sites, species at risk (SAR) sightings, archaeological sites, wilderness areas, etc.). The non-timber information included in the GIS is used during the development of strategic and operational (block) plans as a means to address non-timber values.



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The freehold and Crown lands managed by the Company fall largely within the following Ecodistricts: (1) Cobequid Hills, (2) Central Uplands, (3) Governor Lake, (4) Eastern Interior, (5) Central Lowlands, (6) Eastern Drumlins, and (7) Raw don/Wittenburg Hills.

The choice of which silviculture system to employ is based on the use of Forest Management Guides that consider the tree species, ground conditions and applicable natural disturbance regime to determine the best silviculture system for the site. Where appropriate for the site, even-aged management involving clearcut harvesting with the retention of clumps of standing trees within harvest areas is used. For tolerant hardwood stands and other stands where conditions dictate, the selection system or two-aged management such as extended shelterwood is employed instead. Regeneration surveys are used to determine whether sites should be replanted or allowed to regenerate naturally. Where planted seedlings are threatened by competing vegetation, sites may be treated with government-approved chemical herbicides and/or mechanical means (although herbicides are not currently used on the Company's Crown licence lands).

Northern Pulp Fibre Sourcing Program

The balance of the mill's chip furnish comes from small and large private stumpage purchases. Purchased stumpage is managed under Northern Pulp's forest management system (FMS) which includes various controls including pre-works, written work orders and Operations Inspections by Northern Pulp staff.

Northern Pulp has developed its own wood procurement policy and provided it to the Company's large chip suppliers. In addition, the Company requires its large chip suppliers to develop their own wood procurement policies and wood supplier audit procedures, and has provided them with electronic templates of a draft wood procurement policy and wood supplier audit checklist to facilitate this process. Chip suppliers who do not hold their own sustainable forest management (SFM) certifications are required to conduct quarterly audits of their round-wood suppliers and provide the results to Northern Pulp. In addition, WMD (an independent Company that procures wood from private landowners on behalf of Northern Pulp) also conducts purchase wood audits on 1/25 purchases and provides the audit report to the Company. Any deficiencies noted are entered into the SFI/EMS Reporting Database. The results of these audits are reviewed both internally within the Company and by the Maritime SFI Implementation Committee.

History of Northern Pulp Nova Scotia Corporation's ISO 14001 and SFI Certifications

Northern Pulp Nova Scotia is certified to both the ISO 14001 and SFI 2015-2019 Forest Management and Fibre Sourcing standards. Initial certification to the SFI standard was obtained on April 29, 2005. The Company's SFI certification was renewed on December 2, 2014, and upgraded to the SFI Forest Management and Fibre Sourcing standards following the completion of the 2016 audit and remains valid until December 1, 2017. Certification to the ISO 14001:2004 standard was obtained on March 15, 2005. The Company's ISO 14001:2014 certification was renewed on November 14, 2016 and remains valid until September 15, 2018.

The Audit

- **Audit Team** – The audit was conducted by Dave Bebb, RPF(BC), EP(EMSLA), Bodo von Schilling, RPF(BC), EP(EMSLA) and Dennis Lozinsky, RPF(BC), EP(EMSLA). Dave is an employee of KPMG PRI and has conducted numerous forest management audits under a variety of Standards including SFI, ISO 14001, CSA Z809 and FSC. Bodo and Dennis are contract auditors with considerable experience conducting audits to a variety of certification standards.

Northern Pulp 2016 SFI Surveillance/Certificate Upgrade Audit Findings

Open Non-conformities from previous audits	0
New Major Non-conformities	0
New SFI 2015-2019 Minor Non-conformities	1
New SFI 2015-2019 Opportunities for Improvement	1

Types of audit findings Major non-conformities:

Are pervasive or critical to the achievement of the SFM Objectives.

Minor non-conformities:

Are isolated incidents that are non-critical to the achievement of SFM Objectives.

All non-conformities require the development of a corrective action plan within 30 days of the audit. Corrective action plans to address major non-conformities must be fully implemented by the operation within 3 months or certification cannot be achieved / maintained. Corrective action plans to address minor non-conformities must be fully implemented within 12 months.

Opportunities for Improvement:

Are not non-conformities but are comments on specific areas of the SFM System where improvements can be made.

- *Combined SFI Surveillance/ISO 14001 Re-certification Audit* – The 2016 audit involved an on-site assessment of selected elements of the Company's SFM and Forest Management System (FMS) programs, and included visits to a sample of field sites (15 roads, 15 harvesting blocks, 5 silviculture sites, 1 tree nursery and 7 purchase wood sites) to evaluate the extent to which the Company's forest management plans and practices conform to the requirements of the SFI forest management and fibre sourcing and ISO 14001 standards. The SFI portion of the 2016 audit took approximately 13 auditor days to complete, 8 of which were spent on-site. The balance of audit time was spent preparing the audit plan, completing an off-site review of selected Company documents and records and completing various audit checklists and preparing the main and public summary audit reports.
- *SFM and EMS Program Representative* – Ms. Heidi Higgins served as Northern Pulp's SFM and EMS program representative during the audit.

SFI Audit Scope

The audit was conducted against the requirements of the SFI 2015-2019 forest management and fibre sourcing standards, and incorporated a limited scope assessment against the SFI program objectives for:

- Forest management planning;
- Conservation of biological diversity;
- Protection of special sites;
- Recognize and respect Indigenous Peoples' rights;
- Biodiversity in fiber sourcing;
- Adherence to best management practices;
- Use of qualified resource professionals and qualified logging professionals;
- Legal and regulatory compliance;
- Public land management responsibilities, and;
- Management review and continual improvement.

The scope of the 2016 SFI surveillance/certificate upgrade audit included an assessment of performance on Northern Pulp's private forest land, Crown licence and western Crown land volume allocation, as well as fibre sourcing for the Company's Pictou, NS pulp mill.

Audit Objective(s)

The objectives of the 2016 SFI surveillance/certificate upgrade and ISO 14001 re-certification audit were to:

- Determine its conformance with the requirements of the SFI 2015-2019 forest management and fibre sourcing and ISO 14001 standards;
- Evaluate the ability of the SFM system to ensure that Northern Pulp meets applicable regulatory requirements;
- Evaluate the effectiveness of the SFM system in ensuring that Northern Pulp meets its specified SFM objectives, and;
- Where applicable, identify opportunities for improvement.



The 2016 audit involved an on-site assessment of selected elements of the Company's SFM and FMS programs, and included visits to a sample of field sites (15 roads, 15 harvesting blocks, 5 silviculture sites, 1 tree nursery and 6 purchase wood sites) to evaluate the extent to which the Company's forest management plans and practices continue to conform to the requirements of the SFI forest management and fibre sourcing and ISO 14001 Standards.

Evidence of Conformity with the SFI 2015-2019 Forest Management and Fibre Sourcing Standards

Primary sources of evidence assessed to determine conformity with the SFI 2015-2019 forest management and fibre sourcing standards are presented in the following tables.

SFI Forest Management Objective	Key Evidence of Conformity
1. Forest Management Planning	SFM plan, Ecological Landscape Plan, FMS Manual, GIS, inspection of a sample of field sites, staff interviews.
2. Forest Health and Productivity	Not in scope for 2016.
3. Protection and Maintenance of Water Resources	Not in scope for 2016.
4. Conservation of Biological Diversity	SFM plan, Ecological Landscape Plan, FMS Manual, GIS, inspection of a sample of field sites, staff and contractor interviews.
5. Management of Visual Quality and Recreational Benefits	Not in scope for 2016.
6. Protection of Special Sites	SFM plan, FMS Manual, Operations Inspections, inspection of a sample of field sites, staff and contractor interviews.
7. Efficient Use of Fibre Resources	Not in scope for 2016.
8. Recognize and Respect Indigenous Peoples Rights	Company policy on Indigenous Peoples' rights, records of consultation with local Indigenous Peoples, interviews with Company staff.
9. Legal and Regulatory Compliance	SFM plan, FMS Manual, Operations Inspections, internal audit results, inspection of a sample of field sites, staff and contractor interviews.
10. Forestry Research, Science and Technology	Not in scope for 2016.
11. Training and Education	Not in scope for 2016.
12. Community Involvement and Landowner Outreach	Not in scope for 2016.
13. Public Land Management Responsibilities	SFM plan, correspondence with NSDNR regarding the annual operating plan (AOP) for the Company's Crown licence, staff interviews.
14. Communications and Public Reporting	Not in scope for 2016.
15. Management Review and Continual Improvement	Forest management plan, management review records, internal audit and related action plans.



The Nova Scotia Wildlife Habitat and Watercourses Protection Regulations require that on all harvest sites greater than 3 hectares in size at least 1 legacy tree clump be retained for every 8 hectares of area harvested.

SFI Fibre Sourcing Objective #	Key Evidence of Conformity
1. Biodiversity in Fibre Sourcing	Not in scope for 2016.
2. Adherence to Best Management Practices	Fibre sourcing policy and records of its distribution to wood producers, written fibre sourcing agreements, records of implementation of the BMP monitoring system, inspection of a sample of procurement sites.
3. Use of Qualified Resource and Qualified Logging Professionals	List of Qualified Resource and Logging Professionals (QLPs), records of proportion of fibre delivered by QLPs, interviews with procurement staff.
4. Legal and Regulatory Compliance	Company policies regarding regulatory compliance, procedures to ensure compliance with applicable regulatory requirements, inspection of a sample of procurement sites, interviews with Company staff and regulatory agency personnel.
5. Forestry Research, Science and Technology	Not in scope for 2016.
6. Training and Education	Not in scope for 2016.
7. Community Involvement and Landowner Outreach	Not in scope for 2016.
8. Public Land Management Responsibilities	SFM plans, correspondence with NSDNR regarding the AOP for the Company's Crown licence, staff interviews.
9. Communications and Public Reporting	Not in scope for 2016.
10. Management Review and Continual Improvement	Management review records, internal audit and related action plans.
11. Promote Conservation of Biological Diversity, Biodiversity Hotspots and High-Biodiversity Wilderness Areas	Not in scope for 2016.
12. Avoidance of Controversial Sources Including Illegal Logging	Controversial sources risk assessment, procedures to address any significant risks that have been identified, interviews with procurement staff.
13. Avoidance of Controversial Sources Including Fibre Sourced from Areas without Effective Social Laws	Not in scope for 2016.



The 2016 audit noted a high level of compliance with applicable regulatory requirements, included those related to the transportation and storage of fuel.

Use of Substitute Indicators

The audit involved an assessment of conformance against the applicable objectives, performance measures and indicators included in the 2015-2019 version of the SFI forest management and fiber sourcing standards. None of the indicators included in the SFI standards were modified or substituted for the purpose of this audit.

Good Practices

A number of good practices were identified during the course of the audit, including:

- SFI Forest Management Objective 2 (forest health and productivity): Inspection of a sample of recent plantations found that the Company had done an effective job of reforesting harvested areas with well performing stands containing multiple tree species.
- SFI Forest Management Objective 3 (protection and maintenance of water resources): The audit observed good implementation of best management practices (BMPs) for water control on a private land purchase stumpage block. The landowner had expressed concern about erosion and sediment from road reconstruction. The Northern Pulp Forest Operations Supervisor and road contractor addressed this concern by armoring the ditch line and culvert inlets with rock and installing sediment traps along the ditch line to reduce erosion.
- SFI Forest Management Objective 3 (protection and maintenance of water resources): Inspection of a sample of harvest blocks with watercourses found that the brook and lake special management zones (SMZs) inspected often exceeded the requirements specified in the Wildlife Habitat and Watercourses Protection Regulations.
- SFI Forest Management Objective 9 (legal and regulatory compliance): Northern Pulp maintains a robust internal audit program including both operational procedures audits (4 per year) that evaluate FMS implementation and regulatory compliance at the field level and an annual, full scope office-based FMS audit.
- SFI Forest Management Objective 11 (training and education): The contractors and equipment operators interviewed during the audit demonstrated a very good awareness of the work order instructions, block features (SMZs, MEZs (machine exclusion zones), legacy tree clumps, etc.) and silviculture prescriptions for commercial thinning, seed tree and small patch cuts.

Note: The above list of good practices is not intended to be a comprehensive list of all of the noteworthy or progressive forest practices that are taking place at the operations included in the audit sample. Rather, they are simply observations made by the audit team that were deemed worthy of inclusion in the audit report as a means to highlight some of the positive aspects of the Company's forest management practices.

Follow-up on Findings from Previous Audits

At the time of this assessment there were a total of 4 open non-conformities and 11 opportunities for improvement from previous audits. The audit team reviewed the status of the issues that gave rise to these findings and found that the Company had made good progress towards addressing most of them. As a result:

- 3 out of the 4 minor non-conformities identified during previous audits have been closed and 1 has been downgraded to an opportunity for improvement.
- 6 out of the 11 opportunities for improvement identified during previous audits have been closed, 4 remain open and 1 has been upgraded to a minor non-conformity.



Inspection of a sample of recent plantations found that the Company had done an effective job of reforesting harvested areas with well performing stands containing multiple tree species.

The 2017 audit will include a follow-up assessment of the remaining opportunities for improvement to assess the Company's progress towards addressing them. These include:

- Weaknesses in the content of the Company's ecological landscape plan in relation to seral stage and patch size targets.
- Lack of a clear requirement in the Company's logging contracts and log purchase agreements for logging contractors and wood producers to employ QLPs where available.
- Limited effectiveness of the Company's SFM Advisory Committee in helping to identify and address stakeholder concerns regarding the Company's forest management plans and practices.
- Lack of a clear process to: (1) consult with local Indigenous Peoples regarding forest management on the Company's fee lands, and (2) obtain information regarding the location of cultural sites, traditional forest uses, etc.

New Areas of Nonconformity

A total of 1 new minor non-conformities was identified in relation to the requirements of the SFI 2015-2019 forest management and fibre sourcing standards, as follows:

- SFI Forest Management Objective 1 (forest management planning): The Company is currently operating under interim softwood and hardwood AACs for its fee lands that were set in 2011. These AACs are based on a forest modeling exercise that was completed in 2010 using the same model that was used in 2006 (the 2010 analysis was required to reflect a number of changes in the fee lands owned by the Company that have occurred in recent years). However, although a new fee lands forest modeling exercise was supposed to be completed in 2013 in order to incorporate new inventory information for the Company's current fee land holdings, various delays in completing the steps necessary to support the analysis (e.g., re-inventory of the Company's fee lands, acquisition and analysis of LiDAR (Light Detection and Ranging) data, etc.) resulted in the completion date for this project being pushed back more than once since 2013. Additional delays during the past year (which were in part the result of staffing shortages) have resulted in the new forest analysis still being incomplete, although the Company now hopes to have it finished by the end of 2016.

The Company has been operating under the interim softwood and hardwood AACs for 5 years, and it remains unclear whether the forest modeling exercise that was done in 2010 was sufficient to demonstrate that the current (interim) softwood and hardwood AACs for the Company's fee lands have been set at a sustainable level. Further, required updates to the Company's SFM Plan and Ecological Landscape Plan remain on hold until the new analysis is complete.

Note: The Company took a conservative approach when it developed the interim softwood and hardwood AACs for its fee lands in 2011. In addition, a review of fee land softwood and hardwood harvest levels over the last 5 years shows that the Company is in an undercut position relative to the interim softwood and hardwood AACs that were set in 2011. In light of this, the ongoing delays in the completion of a new forest modeling exercise and the determination of new softwood and hardwood AACs is only being raised as a minor non-conformity at this time.

New Opportunities for Improvement

A total of 1 new opportunity for improvement was identified in relation to the requirements of the SFI 2015-2019 forest management and fibre sourcing standards, as follows:



The audit observed good implementation of best management practices (BMPs) for water control on a private land purchase stumpage block. The landowner had expressed concern about erosion and sediment from road reconstruction. The Northern Pulp Forest Operations Supervisor and road contractor addressed this concern by armoring the ditch line and culvert inlets with rock and installing sediment traps along the ditch line to reduce erosion.

- SFI Forest Management Objective 12 (community involvement and landowner outreach) and SFI Fibre Sourcing Objective 2 (adherence to BMPs) – SFI Forest Management Performance Measure 12.1 includes a requirement to support education and outreach to forest landowners describing the importance of and providing information guidance on various forest management practices (e.g., BMPs, reforestation, visual quality management, etc.). In addition, SFI Fibre Sourcing Performance Measure 2.1 requires Program Participants to define and document their fibre sourcing policies and make them available to wood producers. Northern Pulp addresses these requirements through the provision of an SFI information package (which includes the Company’s fibre sourcing policy and information on a variety of forest management topics) to all of the Company’s main chip suppliers as well as the private landowners from whom the Company purchases stumpage wood. However, a review of the Company’s SFI/EMS database found that it only included records of the distribution of 4 SFI information packages since the 2015 external audit took place, which is significantly less than the actual number of packages given out. As such, the SFI/FMS database contains incomplete records regarding the distribution of the SFI information package to landowners.

Corrective Action Plans

Corrective action plans designed to address the root cause(s) of the non-conformities identified during the audit have been developed by Northern Pulp and reviewed and approved by KPMG PRI. The next surveillance audit will include a follow-up assessment of these issues to confirm that the corrective action plans developed to address them have been implemented as required.

Audit Conclusions

The audit found that Northern Pulp Nova Scotia Corporation’s sustainable forest management system:

- Was in full conformance with the requirements of the ISO 14001 and SFI forest management and fibre sourcing standards included within the scope of the audit, except where noted otherwise in this report;
- Continues to be effectively implemented, and;
- Is sufficient to systematically meet applicable requirements and expected outcomes, provided that the system continues to be implemented and maintained as required.

As a result, a decision has been reached by the lead auditor to recommend that Northern Pulp Nova Scotia Corporation be:

- Re-certified to the ISO 14001 standard for an additional 3 years.
- Upgraded to the SFI 2015-2019 forest management and fibre sourcing standards with a certificate expiry date that is the same as the Company’s existing SFI 2010-2014 certificate (i.e., December 1, 2017).

Focus Areas for the Next Audit Visit

The following issues/potential concerns have been identified as focus areas for the next audit visit:

- Completion and effectiveness of the action plans developed by Northern Pulp to address the open findings from all previous audits.



Although the majority of forest harvesting carried out by Northern Pulp involves clearcutting with the retention of scattered clumps of legacy trees, the Company does practice commercial thinning (as depicted above) on some sites, as well as selection harvesting in tolerant hardwood stands.

- Completion of the current forest modeling exercise and determination of a new AAC for the Company's fee lands.
- The Company's existing SFI forest management and fibre sourcing certifications expire on December 1, 2017. As a result, full-scope SFI forest management and fibre sourcing re-certification audits will be required in early fall 2017.
- ISO 14001:2015 was published on September 15, 2015 and includes a 3 year transition period (i.e., until September 15, 2016), after which all existing ISO 14001:2004 certificates will no longer be valid. Should Northern Pulp decide to transition to the new ISO 14001:2015 standard, a full scope ISO 14001:2015 audit will be required in fall 2017 in order to provide the Company with sufficient lead time to address any non-conformities that may be identified during the audit prior to the end of the 3 year transition period.



Although the Nova Scotia Wildlife Habitat and Watercourses Protection Regulations require a 5 metre machine exclusion zone (MEZ) on both sides of watercourses less than 50 centimeters in width, the Company's FMS procedures specify a MEZ width of 7 metres.

Contacts:

Chris Ridley-Thomas, RPBio, EP(EMSLA) (604) 691-3088
David Bebb, RPF, EP(EMSLA) (604) 691-3451

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