

SCS Global Services  
Evaluation of Northern  
Fibre Terminal, Inc.  
Compliance with the SBP  
Framework: Public  
Summary Report

Main (Initial) Audit

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## Completed in accordance with the CB Public Summary Report Template Version 1.4

*For further information on the SBP Framework and to view the full set of documentation see  
[www.sbp-cert.org](http://www.sbp-cert.org)*

### *Document history*

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# 1 Overview

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Current report completion date:	20/Jul/2019
Report authors:	Kyle Meister
Name of the Company:	Northern Fibre Terminal, Inc.
Company contact for SBP:	Breck Stuart, 902-880-6725; breck@gnti.ca
Certified Supply Base:	New Brunswick, Nova Scotia, and Prince Edward Island, Canada
SBP Certificate Code:	SBP-04-45
Date of certificate issue:	16/Sep/2019
Date of certificate expiry:	15/Sep/2024
Date of last update:	15/Mar/2020

This report relates to the Main (Initial) Audit

## 2 Scope of the evaluation and SBP certificate

This certificate covers the production, loading, and trade of wood chips at the mill and port facility located in Sheet Harbour, Nova Scotia. It also covers a Supply Base Evaluation for the sourcing of feedstock from the following Canadian Provinces/Territories: Nova Scotia, New Brunswick, and Prince Edward Island. The scope includes communication of Dynamic Batch Sustainability Data.

### 3 Specific objective

The specific objective of this evaluation was to confirm that the Biomass Producer's management system is capable of ensuring that all requirements of specified SBP Standards are implemented across the entire scope of certification. The following critical control points were identified and evaluated (edit list as appropriate and describe how the organization controls each point and how it was evaluated):

Processes for procurement and processing, transport and storage:

- Supplier evaluation under BP's procurement procedures (e.g., DDS, FSC Controlled Wood Risk Assessment);
- Field assessment of a sample of primary suppliers;
- Review of supplier documentation (e.g., contracts, declarations, load tickets, etc.)
- Delivery, storage, and processing of logs into chips;
- Delivery, filtering, and storage of secondary chips;
- Phytosanitary practices for mixed chips and maple chips;
- Filtering and storage of chips prior to conveying onto ships

Volume accounting method

- BP uses the FSC Credit System; however, BP also sources using its SBE;
- Logs and chips are weighed at the scale-house located at the chip mill entrance; and
- Conversion factors based on historic production records incorporated into FSC credit account.

Documentation of transactions

- DTS and invoices are used;
- BP also prepares annual volume summaries for its FSC certificate

Energy data collection and reporting

- BP has completed a SAR addressing ID5A-D;
- Data is collected in a series of spreadsheets for calculations;
- GHG emission control points described in the SAR were verified, such as electric metres and other points where GHG measurements are taken,

## 4 SBP Standards utilised

### 4.1 SBP Standards utilised

Please select all SBP Standards used during this evaluation. All Standards can be accessed and downloaded from <https://sbp-cert.org/documents/standards-documents/standards>

- SBP Framework Standard 1: Feedstock Compliance Standard (Version 1.0, 26 March 2015)
- SBP Framework Standard 2: Verification of SBP-compliant Feedstock (Version 1.0, 26 March 2015)
- SBP Framework Standard 4: Chain of Custody (Version 1.0, 26 March 2015)
- SBP Framework Standard 5: Collection and Communication of Data (Version 1.0, 26 March 2015)

### 4.2 SBP-endorsed Regional Risk Assessment

NA – there is no RRA.

## 5 Description of Company, Supply Base and Forest Management

### 5.1 Description of Company

Per the BP's Supply Base Report (SBR): Northern Fibre Terminal Inc. (NFTI) produces industrial wood chips for export on the global market. The Sheet Harbour, Nova Scotia chip plant was commissioned in 1998. Over the past two decades it has become a vital link in the overall forest products supply chain utilizing low grade hardwood pulp that could not be utilized in other productive and economical ways within the province of Nova Scotia.

### 5.2 Description of Company's Supply Base

#### **Nova Scotia**

Nova Scotia is dominated by trees. Over 75% of the province's 5,5 million hectares (ha) are dominated by treed vegetation. These 4.2 million ha of forested lands also include areas that are returning to a young forested state after harvesting. There is no sign of permanent forest conversion by agriculture, urbanization or other development<sup>1</sup>. Situated on the south-eastern coast of Canada, Nova Scotia's forests contain 35% hardwood species and 65% softwood species. Part of the Acadian Forest Region, common species include spruce, balsam fir, white pine, maple and birch. Fifty-three (53%) percent of the forest land in Nova Scotia is privately owned and forty-seven (47%) is owned by the provincial or federal government<sup>2</sup>.

#### **New Brunswick**

New Brunswick is located on the east coast and is the largest of the three Maritime Provinces. The Acadian Forest covers most of the province. In New Brunswick, forests cover more than 6 million ha of the province's 7 million ha of land. That represents 83% of the province's total area<sup>3</sup>. Of this, 2% is under the jurisdiction of various federal government departments (Parks Canada, Department of National Defense, etc). The provincial government is responsible for 48%, which is typically referred to as Crown Lands. The remaining 50% is privately owned. Of the half of the province that is in private hands, 20% is owned by industry firms (Industrial Freehold) and the remaining 30% is owned by non-industrial private owners<sup>4</sup>.

#### **Prince Edward Island**

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<sup>1</sup> Source : [https://novascotia.ca/natr/forestry/reports/State\\_of\\_the\\_Forest\\_2016.pdf](https://novascotia.ca/natr/forestry/reports/State_of_the_Forest_2016.pdf)

<sup>2</sup> Source :

[https://www.sfmcanada.org/images/Publications/EN/Nova\\_Scotia\\_info\\_Provinces\\_and\\_territories\\_EN.pdf](https://www.sfmcanada.org/images/Publications/EN/Nova_Scotia_info_Provinces_and_territories_EN.pdf)

<sup>3</sup> Source : [https://www2.gnb.ca/content/dam/gnb/Departments/nr-nr/pdf/en/ForestsCrownLands/GNBForestryBrochure\\_EN.pdf](https://www2.gnb.ca/content/dam/gnb/Departments/nr-nr/pdf/en/ForestsCrownLands/GNBForestryBrochure_EN.pdf)

<sup>4</sup> Source : <https://www2.gnb.ca/content/dam/gnb/Departments/nr-nr/pdf/en/ForestsCrownLands/2011SnapshotOfNB-NonIndustrialForestOwners.pdf>



Located on the east coast of Canada in the Gulf of St Lawrence, Prince Edward Island (PEI) is Canada's smallest province, with a total area of 568,600 ha. PEI has 250,084 ha of forest land, of which 33,011 ha (13.2%) is public lands and 217,073 ha (86.8%) is private<sup>5</sup>.

PEI's forest belongs to the Acadian Forest region of Canada. The most common coniferous species are black spruce, white spruce, balsam fir and eastern larch with a lesser amount of white pine. The primary deciduous species are red maple, trembling aspen and white birch with sugar maple, red oak, beech, white ash and yellow birch accounting for the remainder. Refer to the BP's SBR for more information.

## 5.3 Detailed description of Supply Base

A quantitative description of the supply base and summary statistics can be found in the NFTI's Supply Base Report.

## 5.4 Chain of Custody system

The company sources certified material from FSC-certified sources under its valid COC certificate. In addition, material sourced from non-certified sources has been evaluated under the company's SBE and Due Diligence System (DDS). All material is subject to the company's COC procedures for sourcing certified and non-certified material. The company's wood procurement policy states that it will communicate information about its certifications to its employees, customers, and other interested parties. While the BP also has a PEFC COC certificate, this has not been used to date for any biomass destined for SBP markets.

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<sup>5</sup> Source : [https://www.sfmcanada.org/images/Publications/EN/PEI\\_info\\_Provinces\\_and\\_territories\\_EN.pdf](https://www.sfmcanada.org/images/Publications/EN/PEI_info_Provinces_and_territories_EN.pdf)  
SCS Global Services Evaluation of Northern Fibre Terminal, Inc.:  
Public Summary Report, Main (Initial) Audit

## 6 Evaluation process

### 6.1 Timing of evaluation activities

Pre-assessment activities, consisting primarily of stakeholder consultation and review of the company’s SBR and SBE, were conducted from May-July 2019 until just prior to the onsite audit from 17-19 July 2019. Total audit duration was approximately 40 hours. For the evaluation of Forest Management Units (FMUs), the sample size was selected per SBP scoping requirements using  $0.8\sqrt{Y}$ , where  $Y = \#$  of FMU’s or suppliers that are included as part of the organization’s internal audit program. Auditor Name = Kyle Meister

<b>Site Name or Location:</b>	Northern Fibre Terminal, Inc. – Standards 2, 4, and 5	
<b>Date and Time of Audit:</b>	17 July 2019	
<b>Audit Activity</b>	<b>Items to Review / Actions</b>	<b>Approx. Time</b>
Opening meeting	Introductions, auditor review of audit scope, audit plan and intro/update to SBP, FSC, and SCS standards and protocols, explanation of nonconformities, client description of organization	30-60 min.
Review of CoC/SBP procedures, products and material accounting	Written procedures, work instructions, feedstock description (see ID 5B section 4), product group list, accounting system (transfer, percentage or credit; physical separation, percentage method)	1-2 hrs.
Review of material balances and records	Auditor-selected sample or Simulated test of the following: material tracking system, summary of purchases and sales, invoices, shipping documents, training records, outsourcing agreements, other applicable SBP/CoC systems, procedures and records, tracebacks from certified outputs to eligible input	1-2 hrs.
Verification of calculations	Auditor-selected sample and verification of calculations for conversion factors, percentage claims, and credit accounts, as applicable	1-2 hrs.
Evaluation of trademarks	Review of auditor-selected sample of SBP/FSC/PEFC and/or SCS on-product and/or promotional trademark uses; review of any on-site trademark uses such as banners, posters, entryway signs	10-15 min.
Walkthrough of pellet facility/port	ST 4: Review of physical inputs and outputs, material receipt, processing, storage, credit account (if applicable), sale, and overall control ST 5: verification of critical emissions control points (e.g., electric meters, fuel tanks, material moisture/testing, etc.)	1-2 hrs.

<b>Site Name or Location:</b>	Northern Fibre Terminal, Inc. – Standards 1, 2, 4, and 5	
<b>Date and Time of Audit:</b>	18 July 2019	
<b>Audit Activity</b>	<b>Items to Review / Actions</b>	<b>Approx. Time</b>
Standard 1 and 2 field visits	Field site visits	4 hrs.
SBP ST 5, ID5A, ID5B, ID5C, and ID5C	Review of GHG data collection procedures and records; COC for mill and port	4 hrs.

<b>Site Name or Location:</b>	Northern Fibre Terminal, Inc.	
<b>Date and Time of Audit:</b>	19 July 2019	
<b>Audit Activity</b>	<b>Items to Review / Actions</b>	<b>Approx. Time</b>
Remaining record review and/or staff interviews	Auditor conducts any remaining record review or staff interviews.	1-3 hrs.
Closing meeting preparation	Auditor takes time to consolidate notes and review audit findings for presentation at closing meeting	1-2 hrs.
Closing meeting and review of findings	Convene with all relevant staff to summarize audit findings, review identified nonconformities, and discuss next steps	30 min.

## 6.2 Description of evaluation activities

Onsite activities included review of the SBR, SBE, sourcing and COC procedures, risk assessments, DDS, and a sample of secondary and tertiary supplier documentation (e.g., contracts, transport records, wood supplier audit records, etc.). Audit methods included interviews with staff, suppliers, and stakeholders; review of documentation; and observation of operations, including critical control points.

Two stakeholders provided comments on the BP’s SBE prior to the audit. The onsite audit consisted of a review of purchase, due-diligence, and wood supplier audit records for primary and secondary feedstock suppliers; onsite visits to a sample of primary feedstock suppliers and review of their associated wood supplier audit records, contract, scale tickets, and related purchasing and due-diligence documentation; onsite visits to the woodchip mill, main office, and port facilities to verify chain of custody procedures and greenhouse gas measurements through observation, record review, and verification of calculation methods. In addition to reviewing documentary and field evidence, SCS consulted BP staff and contractors regarding a range of issues related to conformance to SBP requirements. SCS also consulted Crown employees to obtain evidence to respond to the stakeholder comments. A closing meeting was held to present findings.

During the evaluation of FMUs and sawmill suppliers, the auditor verified evidence of compliance to all SBP requirements through interviews, visual observations during site walkthrough, and review of documentation. Topics included post-harvest soil conditions, protected areas, buffers, water, forest type, harvest type, best management practices, mitigation measures implementation, site regeneration for FMUs. For secondary suppliers, evaluation consisted of a review of description of origin, species type, product specifications, process and procedures, mitigation measures implementation.

## 6.3 Process for consultation with stakeholders

Stakeholders were contacted by SCS at least one month prior to the onsite evaluation. Two stakeholder comments regarding the BP’s SBE were received prior to the audit. In addition to reviewing documentary and field evidence, SCS consulted Crown employees to obtain evidence to respond to the stakeholder comments.

## 7 Results

### 7.1 Main strengths and weaknesses

The BP's COC control system, including its DDS, ensure that feedstock material is coming from low risk sources. Sourcing procedures are clear and with enough detail that staff can implement them with minimal training. Staff and contractors who prepared the SBR and SBE have an excellent understanding of provincial forestry regulations. GHG calculations for the various transportation routes are accurate, Refer to the findings section for main weaknesses.

### 7.2 Rigour of Supply Base Evaluation

The SBE was developed based on existing provincial legal frameworks, risk analyses, publications on common forest management in the region of the supply base. The organization ensures compliance to all legal requirements, such as contracts, supplier declarations, and internal and supplier audits. The current scope of the supply base evaluation was adequate given the specific characteristics of the supply base and management system in place by the organization.

### 7.3 Collection and Communication of Data

The BP maintains records of feedstock supply, power and fuel usage, moisture content, and transport distances and vehicles, which have been compiled into a series of Excel files for monitoring and GHG calculations. The results have been reported in the SAR.

### 7.4 Competency of involved personnel

The BP used a staff person and a contractor to prepare the SBE. The staff person has a background in forestry and forest engineering, as well as work experience in the forest products and oil & gas sectors. The contractor is an experienced forester with a background in certification and ISO auditing. Thus, the team is well-qualified to conduct the SBE and GHG calculations.

### 7.5 Stakeholder feedback

Both stakeholder comments emphasized potential weaknesses of the Supply Base Evaluation, mainly on indicators 2.1.1, 2.1.2, 2.2.1, 2.2.2, and 2.2.9. Overall conformance to these requirements was determined.

Comment	Response
<p><b>NS DLF’s Nutrient Budget Model showing unsustainable forest harvesting:</b> <a href="http://file.scirp.org/pdf/OJF_2016092914590401.pdf">http://file.scirp.org/pdf/OJF_2016092914590401.pdf</a></p> <p>: note that “Model output shows that (i) Ca and N are the main growth-limiting nutrients across Nova Scotia, (ii) currently projected plantation yields are generally not sustainable on sites underlain by slowly weathering soils, (iii) current soil base cation contents are generally lower than what is reported in historic soil survey reports, and (iv) model results are expected to vary within the context of changing climate, acid deposition levels, and data accuracy.” Meaning: calcium is limiting, and we won’t be able to sustain yield on short rotations because calcium (and other cations) has disappeared from the soil. Clear cutting is well known to cause soil acidification, providing a clear mechanism for cation loss from short rotations.</p> <p>: my interp. of this, which I don’t think is radical, is that clearcutting on short rotations (less than 80 years) on coarse textured soils is not sustainable from a timber, ecological or carbon perspective</p>	<p>Per interviews with Nova Scotia DNR staff and representatives of Northern Fibre Terminal, Inc. (NFTI), as well as observation of harvest on Crown Lands in Nova Scotia during the onsite assessment, no more clearcutting is allowed on Crown Land in response to the Leady report. The harvests observed employed a system called Variable Retention (VR). While a VR harvest contains areas for overstory removal, release of advanced regeneration, establishment of regeneration, and volume growth (e.g., thinning and unharvested areas), it is considered an intermediate treatment that can be used on an even- or uneven-aged management trajectory. This has implications for:</p> <ul style="list-style-type: none"> <li>• Re-entry period to release advanced regeneration;</li> <li>• Harvest layout and other operational considerations for each entry;</li> <li>• Objectives for tree species diversity on each site; and</li> <li>• Wildlife management practices.</li> </ul> <p>These ranged from 60-80 years of age per a random sample of tree rings counted, review of harvest plans, and interviews with NFTI staff overseeing the harvests. These stands were dominated by conifers, but included a mix of conifers and hardwoods. Both harvests had retention targets set at 30% pre-harvest inventory; observed retained trees included yellow birch, red maple, sugar maple, eastern hemlock, black spruce, and red spruce. Riparian buffers observed were respected per observation of skid trails and harvested trees. Harvest residues, such as branches and green leaves/needles, were spread over the harvest sites and used on skid trails to meet BMPs. These practices ensure that the most nutrient-rich parts of trees are dispersed over the site.</p> <p>The NS DLF’s study sampled spruce plantations. NFTI sources maple from Northern Hardwood and Mixed Wood natural forest stands located on private forestlands and Crown Lands. For the harvests observed, NFTI merchandizes the non-maple species, meaning that these are sorted by species or species groups, quality, and dimension to be sold to other local industries. Local industries include pulp, lumber, and engineered wood products, among others. As stated previously, the harvests on Crown Lands are now VR and harvest residues are dispersed over the sites. The retention of lives trees, snags, and residues helps to retain nutrients onsite. Per interviews with Crown land</p>

	<p>managers, NFTI staff and harvest operators, whole-tree harvesting, and skidding are not allowed on Crown Land. No evidence of whole-tree harvesting was observed onsite.</p> <p>Crown land managers interviewed onsite stated that they did not know what the next entry after the first VR harvest would be and that no ideas have been discussed internally to the best of their knowledge. Since VR can be used on both even- and uneven-aged management trajectories, one of the most important issues to evaluate is post-harvest growth and regeneration. If regeneration established after this entry is not already free-to-grow, it should be released later to avoid loss of shade intolerant and mid-tolerant species. If not, this could result in a stand-type conversion in the long-term, which may or may not be consistent with management objectives that the Crown has for the sites.</p> <p>VR harvests can offer socioeconomic and ecological advantages. Retained patches and individual trees may be used to protect sensitive sites, create wildlife cover and corridors in a matrix of openings, and even serve as long-rotational reserves to produce higher grades of timber. As with all forest management systems, however, there are trade-offs that must be considered to fully integrate VR in the long-term management trajectory.</p> <p>Refer to <b>OBS 2019.6</b></p>
<p><b>Auditor General’s Reports on lack of enforcement of environmental regulations:</b>                  June 2016 WRT Endangered                  Species: <a href="https://www.cbc.ca/news/canada/nova-scotia/michael-pikcup-ag-calls-for-action-endangered-species-1.3624910">https://www.cbc.ca/news/canada/nova-scotia/michael-pikcup-ag-calls-for-action-endangered-species-1.3624910</a></p>	<p>This article and report refer to several projects that are well outside of the scope of biomass, forestry, and forest products, such as quarries and incinerators. All but one of the actions for forestry and biomass, Action 66, have been completed per the report. Of note, here is the text of Action 66: Lead, through the Department of Natural Resources, an interdepartmental and forest industry working group on forest carbon management and forest adaptation to climate change. This is an action for the provincial government to develop and lead, and, while well-intentioned and relevant to the forest industry, is outside of the scope of SBP since it is a government-operated program and does not require any changes to existing harvest practices. It also does not prohibit anyone from practicing or researching the adaptation of forest management to projected climate models.</p>
<p>Nov. 2017 WRT Lack of Monitoring or Enforcement: <a href="https://www.cbc.ca/news/canada/nova-scotia/auditor-general-environment-approvals-1.4381562">https://www.cbc.ca/news/canada/nova-scotia/auditor-general-environment-approvals-1.4381562</a>                  : Actual report from AG: <a href="https://oag.ns.ca/sites/default/files/publications/FullNov2017_1.pdf">https://oag-ns.ca/sites/default/files/publications/FullNov2017_1.pdf</a></p>	<p>This article and report refer to several projects that are well outside of the scope of biomass, forestry, and forest products, such as quarries and incinerators. All but one of the actions for forestry and biomass, Action 66, have been completed per the report. Of note, here is the text of Action 66: Lead, through the Department of Natural Resources, an interdepartmental and forest industry working group on forest carbon management and forest adaptation to climate change. This is an action for the provincial government to develop and lead, and, while well-intentioned and relevant to the forest industry, is outside of the scope of SBP since it is a government-operated program and does not require any changes to existing harvest practices. It also does not prohibit anyone from practicing or researching the adaptation of forest management to projected climate models.</p>



<p><b>Citizen’s Lawsuit against Province for not enforcing endangered species regulations:</b> <a href="https://www.cbc.ca/news/canada/nova-scotia/naturalists-taking-province-to-court-endangered-species-1.4992554">https://www.cbc.ca/news/canada/nova-scotia/naturalists-taking-province-to-court-endangered-species-1.4992554</a>                  : note that the lead is a retired Department of Natural Resources (now named Dept of Lands and Forestry) head wildlife biologist</p>	<p>It is not within our scope to comment on open legal actions as they have yet to be settled. Once a decision is made on this matter, any resulting relevant changes to the provincial policy framework would then have to be considered by Crown land managers and potentially private landowners. Significant changes may require that NFTI update its Supply Base Report and Supply Base Evaluation.</p>
<p><b>Recent old growth harvesting on Crown Land:</b>                  : March 2018: <a href="https://www.cbc.ca/news/canada/nova-scotia/old-growth-trees-guysborough-forestry-harvesting-1.4560296">https://www.cbc.ca/news/canada/nova-scotia/old-growth-trees-guysborough-forestry-harvesting-1.4560296</a></p>	<p>On Crown Lands inspected during the audit, the harvested stands ranged from 60-80 years of age per a random sample of tree rings counted, review of harvest plans, and interviews with NFTI staff overseeing the harvests. Thus, these do not meet the Province’s definition of Old Growth.</p>
<p>: May 2018: <a href="https://www.cbc.ca/news/canada/nova-scotia/old-growth-forest-cut-guysborough-county-department-of-natural-resources-policy-1.4667731">https://www.cbc.ca/news/canada/nova-scotia/old-growth-forest-cut-guysborough-county-department-of-natural-resources-policy-1.4667731</a></p>	
<p>: December 2018: <a href="https://www.cbc.ca/news/canada/nova-scotia/old-growth-forest-clearcut-1.4951173">https://www.cbc.ca/news/canada/nova-scotia/old-growth-forest-clearcut-1.4951173</a></p>	<p>The Nova Scotia Old Growth Policy (Report FOR 2012-4) is applicable to public lands, but not private. The policy defines Old Growth as, “A forest stand where 30% or more of the basal area is in trees 125 years or older, at least half of the basal area is composed of climax species, and total crown closure is a minimum of 30%.”</p>
<p>: April 2019: <a href="https://www.thechronicleherald.ca/news/local/proposed-cut-of-margaree-old-growth-stopped-303733/">https://www.thechronicleherald.ca/news/local/proposed-cut-of-margaree-old-growth-stopped-303733/</a></p>	<p>The policy applies to all public forest land owned by the Province of Nova Scotia, regardless of certified status (e.g., SFI, FSC, CSA, etc.). Note that the Policy makes no distinction between Old Growth established pre-European settlement, that have not experienced logging in the past or are on natural reserves, park or wilderness areas. No minimum stand size is defined either, though the policy makes use of the terms “stand” and “forest stand”. A search of Provincial legislation (<a href="#">Forests Act</a>) and two principle Nova Scotia DNR management documents (e.g., <a href="#">Code of Forest Practice</a> and <a href="#">Forest Management Guide</a>) reveals that there likely is no definition for “stand” or “forest stand” at the Provincial level. The Silvics section (see Table 3, p. 15) of the Forest Management Guide also contains some descriptions of ideal ages for mature and over-mature that, if strictly followed to the letter for timber production, would not allow for some stands to reach Old Growth.</p> <p>Per the Policy, classification of a forest stand as Old Growth does not necessarily mean that no management activities can take place or that the stand cannot be de-designated later, but the Policy requires a strict Integrated Resource Management (IRM) Review in such cases. The articles referenced show some weaknesses in the province’s application of this Policy and its procedures. Ultimately, these cases were settled and some DNR staff interviewed in the articles mention the need to update the Policy to provide clearer guidance.</p>

Per interviews with Nova Scotia DNR staff, the Province is acting on the Leahy review and the issues with Old Growth.

The Old Growth policy makes no direct distinction between Old Growth established pre-European colonization/settlement and Late Seral (i.e., a stand consisting of Species which typically dominate stand composition during the late stages of natural succession), stands that have never been logged or the structure of Old Growth stands; however, Appendix II: Old Forest Scoresheet of the Policy contains some attributes that would most likely be associated with Old Growth stands established pre-European colonization/settlement or that have never been logged, as well as structures that would lead to ecological functions commonly attributed to Old Growth. The Policy uses Primal Forest Value as an attribute, but there is no definition included or cited. From Appendix II, it appears to be intended to indicate an assessment of the level of past human disturbance evident.

The most recent [provincial forest inventory report \(2008\)](#) shows that 2.6% of softwood (83 plots), 0.5% of hardwood (17 plots) and 0.7% (24 plots) of mixed wood of the 3,252 NSDNR Permanent Sample Plots were of forests 100+ years of age. The [2000 report](#) shows that only 6 plots had trees 100+ years of age, though only 1,923 inventory plots were measured. These figures show that more trees have possibly moved into the 100+ age class between the 2000 and 2008 report and/or that old growth is infrequent on the landscape due to the history of past land management (or lack thereof). However, they may also show that increased sampling intensity could detect more plots in the 100+ age class.

Given the infrequent occurrence of Old Growth on the landscape, better identification of this resource would be helpful to multiple stakeholder groups, including industry and conservationists. The current Policy leaves room for some potentially extreme interpretations that would leave many stakeholders dissatisfied and lead to polarizing conflict.

For example, since the Policy bases the definition of Old Growth on age ( $\geq 125$  years old) and species composition (e.g., climax species), it is possible to push an agenda to identify stands that are slightly younger than 125 years in order to schedule harvests prior to them being able to meet this age. This could result in a



potential loss of protected/conserved land area or accelerated use of management practices to keep such stands from reaching ages greater than 125 years.

On the other hand, the broad definition of Old Growth could make it difficult to prioritize the identification of such stands in a short timeframe, especially since the definition of Old Growth does not distinguish between stands established pre-European colonization/settlement, that have never been logged or were established on abandoned agricultural land in the 19<sup>th</sup> century. This could potentially lead to stands being classified as Old Growth that could have been harvested had they been identified sooner. Such stands could also be in locations that are not priority for meeting other conservation objectives, such as protecting rare ecosystems or for establishing connectivity and wildlife corridors. This could result in a loss of productive area available to industry, which would influence land use decisions made on the remaining available productive forest on private and tribal lands.

Stands that were established pre-European contact and/or that have never been logged are more likely to score well using the Appendix II: Old Forest Scoresheet, meaning that they would qualify as Old Growth. Since such stands are more likely to be Old Growth, their identification should be prioritized to avoid their loss. However, these are not specifically prioritized per the Policy. Instead, the Policy emphasizes lands currently under protection. This has implications for identifying Old Growth in forestlands classified as productive area, establishing buffer areas around Old Growth stands and connectivity/corridors between Old Growth stands, and meeting the Policy's goal of achieving 8% of stands in Old Growth per Ecodistrict.

While there are multiple approaches to defining Old Growth, common approaches in North America tend to rely on species composition and age, species alone (i.e., defining Old Growth as the maximum possible age of a species given site conditions where it is commonly found) and/or the presence or absence of human disturbance.

For example, Old growth forest definitions for Ontario ([Uhlig et al. 2001](#)), concludes with a table summarizing Old Growth for different forest regions of the Province using a species- and site-based approach. The table includes the age of onset by species on sites where it is

	<p>commonly found and the probable duration. The FSC-US (2010) definition of Old Growth incorporates elements for species, seral stage, site, human disturbance, and minimum stand size.</p> <p>Given the arguments over temporal- and spatial-based late seral and Old Growth stands, as well as those that are species-based, there are forest management organizations that use hybrid approaches to avoid placing too much emphasis on only one. That is, Old Growth may be defined as a late seral stand that has never been harvested (i.e., likely established pre-European contact) and such stands are fixed spatially and managed to protect this value over time (temporal scale). Then, objectives for seral conditions based on species or species groups may be set for a single forest management unit, such as an Ecodistrict. Stands or areas selected for maintaining or enhancing late seral conditions that do not meet the definition of Old Growth (i.e., likely NOT established pre-European contact) may be fixed in space and managed for late seral conditions. On the other hand, the forest management organization may opt to move late seral stands throughout the Ecodistrict over space and time, especially if there are stands with mid-tolerant species (e.g., <i>Quercus rubra</i>) that require disturbance to establish regeneration or to be released from the mid-story. Likewise, early successional conditions can be fixed in space or moved throughout the landscape over time using a variety of management tools (e.g., prescribed fire, harvest, etc.). This often is an option practiced for oak woodland and oak-savannah systems. Among all these arguments, there are a myriad of flora, fauna, fungi, and physical properties of sites to consider.</p> <p>Refer to <b>OBS 2019.6</b></p>
<p>Note: similar comments were received on the Old Growth issue from anonymous stakeholders.</p>	<p>The issues of clearcutting, Old Growth, and the open lawsuit on Crown lands have already been discussed.</p> <p>Each SBP certificate holder must annually report the percentages or actual figures for how much of their feedstock comes from primary (e.g., logs), secondary (e.g., sawdust and chips from processing of sawlogs), and tertiary (e.g., sawdust from a planer mill) sources in their Supply Base Report (SBR). The figures for Great Northern Timber, Inc. (GNTI) for the last audit period will not be known until October 2019. GNTI receives a mix of such sources. Per discussion with some stakeholders, the use of secondary and tertiary feedstock would alleviate some of the concerns about use of biomass.</p>

	<p>On the private forestland inspected in 2018 (refer to GNTI's 2018 SBP report) and 2019 (refer to NFTI's 2019 SBP report) that provide primary feedstock to both GNTI and NFTI, none of the harvest sites inspected made use of whole-tree harvesting or skidding. Per interviews with staff, GNTI/NFTI use whole-tree harvesting and skidding on private woodlands only when the trees are flail-chipped on the harvest site. Per interviews, if harvest equipment has grappling capability, non-merchantable material is dragged back into the harvest site for meeting BMPs. Other debris, such as leaves and small branches, also break off during extraction. Typically, breakage is greater for hardwood trees and during winter harvesting (e.g., <a href="#">Minnesota Forest Resources Council 2007</a>, <a href="#">D'Amato 2014</a>). Bark and other woody residues from chipping may accumulate at the landing and are left there according to GNTI/NFTI. GNTI/NFTI use the flail-chip harvest method to promote exposure of mineral soil for establishing regeneration and reducing transport costs of chips. To attain a better understanding of the impacts of this type of harvest, retention practices would have to be evaluated quantitatively/ qualitatively or paired to retention guidelines developed for similar forest types (based on research for said types). Ideally, retention guidelines would not differ for conventional and "biomass" harvests to avoid confusion among forest managers and harvest machine operators.</p> <p>Refer to <b>OBS 2019.6</b></p>
<p>Response from Nova Scotia DNR to questions on Old Growth (with permission): Old Forest Policy (<a href="https://novascotia.ca/natr/library/forestry/reports/Old-Forest-Policy-2012.pdf">https://novascotia.ca/natr/library/forestry/reports/Old-Forest-Policy-2012.pdf</a>) Firstly, defines the difference between Old Forest and Old Growth forest. The policy directs all Old Growth Forest to be conserved (in this policy context, this means no timber harvest). The policy does allow for roads to be considered in Old Forest after IRM review (to consider biodiversity, social values, and if the stand is Old Growth compared to old forest). New roads are to be avoided in Old growth forests.</p> <p>The province is undertaking a number of actions under the Lahey Forest Review. The project team are considering a number of items including a Old Forest Policy review (<a href="https://novascotia.ca/natr/forestry/Forest_Review/docs/06252019/June_25_Old_Forest.pdf">https://novascotia.ca/natr/forestry/Forest_Review/docs/06252019/June_25_Old_Forest.pdf</a>).</p>	<p>The second document cited by Nova Scotia DNR shows that it is working on the addressing the Leahy report and other issues such as the Old Growth policy. DNR field staff interviewed were not aware of these responses yet and were not aware of what the next steps were for evaluating VR harvests for the next harvest entry.</p> <p>Refer to <b>OBS 2019.6</b></p>

Some current changes include increased field assessments for Old Growth Forest, interim consideration of Red Maple and Red Oak as climax species (as research is being conducted), and a re-valuation of the PTA (pre-treatment assessment) trigger for Old Growth scoring.

When the PTA identifies a stand might be Old Growth (based on the number of larger diameter trees) , an Old forest scoring assessment is required prior to approval.

Since 2018, the Department has done a number of things to improve the identification of Old Growth forest prior to harvest:

- 1) GIS tool to identify potential OGF sites available to DNR regional foresters
- 2) Provided OGF training to more DNR and Licensee and their contactors (including how to better count tree rings in Hardwoods)
- 3) Clarification of OGF Policy, PTA old forest trigger to all staff
- 4) Invested in Lidar and other possible tools to help identify old growth forests (most of these tools are still in development).

## 7.6 Preconditions

No preconditions were issued.

## 8 Review of Company’s Risk Assessments

*Describe how the Certification Body assessed risk for the Indicators. Summarise the CB’s final risk ratings in Table 1, together with the Company’s final risk ratings. Default for each indicator is ‘Low’, click on the rating to change. Note: this summary should show the risk ratings before AND after the SVP has been performed and after any mitigation measures have been implemented.*

SCS reviewed sources and evidence cited within the SBE, reviewed a sample of chain of custody records for feedstock supplies, and visited a sample of harvest sites that supply primary roundwood or in-woods chips to the BP, and supply primary material to other mills that supply the BP with secondary material.

**Table 1. Final risk ratings of Indicators as determined BEFORE the SVP and any mitigation measures.**

Indicator	Risk rating (Low or Specified)	
	Producer	CB
1.1.1	Low	Low
1.1.2	Low	Low
1.1.3	Low	Low
1.2.1	Low	Low
1.3.1	Low	Low
1.4.1	Low	Low
1.5.1	Low	Low
1.6.1	Low	Low
2.1.1	Low	Low
2.1.2	Low	Low
2.1.3	Low	Low
2.2.1	Low	Low
2.2.2	Low	Low
2.2.3	Low	Low
2.2.4	Low	Low
2.2.5	Low	Low
2.2.6	Low	Low
2.2.7	Low	Low

Indicator	Risk rating (Low or Specified)	
	Producer	CB
2.3.3	Low	Low
2.4.1	Low	Low
2.4.2	Low	Low
2.4.3	Low	Low
2.5.1	Low	Low
2.5.2	Low	Low
2.6.1	Low	Low
2.7.1	Low	Low
2.7.2	Low	Low
2.7.3	Low	Low
2.7.4	Low	Low
2.7.5	Low	Low
2.8.1	Low	Low
2.9.1	Low	Low
2.9.2	Low	Low
2.10.1	Low	Low

2.2.8	Low	Low
2.2.9	Low	Low
2.3.1	Low	Low
2.3.2	Low	Low

**Table 2. Final risk ratings of Indicators as determined AFTER the SVP and any mitigation measures.**

Indicator	Risk rating (Low or Specified)	
	Producer	CB
1.1.1	Low	Low
1.1.2	Low	Low
1.1.3	Low	Low
1.2.1	Low	Low
1.3.1	Low	Low
1.4.1	Low	Low
1.5.1	Low	Low
1.6.1	Low	Low
2.1.1	Low	Low
2.1.2	Low	Low
2.1.3	Low	Low
2.2.1	Low	Low
2.2.2	Low	Low
2.2.3	Low	Low
2.2.4	Low	Low
2.2.5	Low	Low
2.2.6	Low	Low
2.2.7	Low	Low
2.2.8	Low	Low
2.2.9	Low	Low
2.3.1	Low	Low
2.3.2	Low	Low

Indicator	Risk rating (Low or Specified)	
	Producer	CB
2.3.3	Low	Low
2.4.1	Low	Low
2.4.2	Low	Low
2.4.3	Low	Low
2.5.1	Low	Low
2.5.2	Low	Low
2.6.1	Low	Low
2.7.1	Low	Low
2.7.2	Low	Low
2.7.3	Low	Low
2.7.4	Low	Low
2.7.5	Low	Low
2.8.1	Low	Low
2.9.1	Low	Low
2.9.2	Low	Low
2.10.1	Low	Low

## 9 Review of Company's mitigation measures

NA – no mitigation measures are necessary. A finding was issued because The BP presented mitigation measures as justifications for reaching a low risk designation which is not adequate.

## 10 Non-conformities and observations

Identify all non-conformities and observations raised/closed during the evaluation (a tabular format below may be used here). Please use as many copies of the table as needed. For each, give details to include at least the following:

- applicable requirement(s)
- grading of the non-conformity (major or minor) or observation with supporting rationale
- timeframe for resolution of the non-conformity
- a statement as to whether the non-conformity is likely to impact upon the integrity of the affected SBP-certified products and the credibility of the SBP trademarks.

<b>NC number</b> 2019.1	<b>NC Grading:</b> Observation
<b>Standard &amp; Requirement:</b>	SBP ST 1, 4.3
<b>Description of Non-conformance and Related Evidence:</b>	
While the main source of fibre is Nova Scotia, there is no contact information for 2 of the 3 Provincial DNRs (NB and PEI) and no educational institutions included as stakeholders. These are listed as examples in the indicator and thus not normative. Evidence: Stakeholder list	
<b>Timeline for Conformance:</b>	Other Optional
<b>Evidence Provided by Company to close NC:</b>	Click or tap here to enter description provided by Company to close the NC.
<b>Findings for Evaluation of Evidence:</b>	Click or tap here to enter findings for evaluation of evidence by the auditor.
<b>NC Status:</b>	Open

<b>NC number</b> 2019.2	<b>NC Grading:</b> Minor
<b>Standard &amp; Requirement:</b>	ST 1, 1.1.3
<b>Description of Non-conformance and Related Evidence:</b>	
The BP includes the feedstock profiles for both its certificates in the SBE. Bark is listed as a feedstock, but is not used in chip or pellet production; bark is only used as a fuel at the pellet mill. Thus, it is not a feedstock. Evidence: SBE, 1.1.3; observation of feedstock inputs at woodchip mill	



<b>Timeline for Conformance:</b>	By the next surveillance audit, but no later than 12 months from report finalisation date
<b>Evidence Provided by Company to close NC:</b>	Click or tap here to enter description provided by Company to close the NC.
<b>Findings for Evaluation of Evidence:</b>	Click or tap here to enter findings for evaluation of evidence by the auditor.
<b>NC Status:</b>	Open

<b>NC number 2019.3</b>	<b>NC Grading:</b> Observation
<b>Standard &amp; Requirement:</b>	ST 1, 2.8.1
<b>Description of Non-conformance and Related Evidence:</b>	
The BP does not cite its own Occupational Health & Safety program, which was verified onsite in documents and records (e.g., procedures, training records). Evidence: Procedures, training records, SBE	
<b>Timeline for Conformance:</b>	Other Optional
<b>Evidence Provided by Company to close NC:</b>	Click or tap here to enter description provided by Company to close the NC.
<b>Findings for Evaluation of Evidence:</b>	Click or tap here to enter findings for evaluation of evidence by the auditor.
<b>NC Status:</b>	Open

<b>NC number 2019.4</b>	<b>NC Grading:</b> Observation
<b>Standard &amp; Requirement:</b>	ST 2, 9.5
<b>Description of Non-conformance and Related Evidence:</b>	
Per interviews and review of the SBE, the content of the SBE is shared between the BP and one of its sister companies, GNTI. However, the BP maintains two SBEs that contain essentially the same information. There are no rules in SBP that would prohibit a BP from making a single SBE for its portfolio of certificates. Evidence: SBE	
<b>Timeline for Conformance:</b>	Other

	Optional
<b>Evidence Provided by Company to close NC:</b>	Click or tap here to enter description provided by Company to close the NC.
<b>Findings for Evaluation of Evidence:</b>	Click or tap here to enter findings for evaluation of evidence by the auditor.
<b>NC Status:</b>	Open

<b>NC number 2019.5</b>	<b>NC Grading: Minor</b>
<b>Standard &amp; Requirement:</b>	ST 2, 19.2
<b>Description of Non-conformance and Related Evidence:</b>	
The SBR has been signed by most members of senior management, but the BP is still waiting for other management to review and sign it. Evidence: SBR	
<b>Timeline for Conformance:</b>	By the next surveillance audit, but no later than 12 months from report finalisation date
<b>Evidence Provided by Company to close NC:</b>	Click or tap here to enter description provided by Company to close the NC.
<b>Findings for Evaluation of Evidence:</b>	Click or tap here to enter findings for evaluation of evidence by the auditor.
<b>NC Status:</b>	Open

<b>NC number 2019.6</b>	<b>NC Grading: Observation</b>
<b>Standard &amp; Requirement:</b>	ST 2, IN-2B 2.1; and ST 2, IN-2B 1.1
<b>Description of Non-conformance and Related Evidence:</b>	
<p>Stakeholder comments received by SCS prior to and during the audit indicate a concern over some general forest policies and practices on Crown Lands and the impacts of the biomass industry on forests of all ownership types in the Supply Base. While these stakeholders have not engaged the BP, the BP indicated willingness to engage with different stakeholder groups on some key issues, including:</p> <ul style="list-style-type: none"> <li>• Additional available literature or research results to evaluate forest carbon storage in Nova Scotia (refer to ST 1, 2.2.9);</li> <li>• The Nova Scotia provincial Old Growth Policy applicable to Crown Lands;</li> <li>• Whole-tree harvest &amp; transport to landing areas, and implications for woody debris retention practices on harvest</li> </ul>	

sites; and •Variable Retention practices and trajectories given the current lack of consideration of future operations and silviculture. Evidence: SBE, SBR, stakeholder comments	
<b>Timeline for Conformance:</b>	Other Optional
<b>Evidence Provided by Company to close NC:</b>	Click or tap here to enter description provided by Company to close the NC.
<b>Findings for Evaluation of Evidence:</b>	Click or tap here to enter findings for evaluation of evidence by the auditor.
<b>NC Status:</b>	Open

<b>NC number</b> 2019.7	<b>NC Grading:</b> Observation
<b>Standard &amp; Requirement:</b>	ST 5, ID 5A, 2.3.4
<b>Description of Non-conformance and Related Evidence:</b>	
The BP is both PEFC and FSC Chain of Custody certified; however, the BP only lists its FSC information in the SAR. While no material is currently procured with an SFI or PEFC claim, PEFC would have to be added to the SAR if any such material were acquired in the future. Evidence: SAR (Part 1 and SECTION A: Input Groups for Biomass Production, Roundwood or other feedstocks as appropriate)	
<b>Timeline for Conformance:</b>	Other Optional
<b>Evidence Provided by Company to close NC:</b>	Click or tap here to enter description provided by Company to close the NC.
<b>Findings for Evaluation of Evidence:</b>	Click or tap here to enter findings for evaluation of evidence by the auditor.
<b>NC Status:</b>	Open

## 11 Certification decision

<b>Based on the auditor's recommendation and the Certification Body's quality review, the following certification decision is taken:</b>	
<b>Certification decision:</b>	Certification approved
<b>Certification decision by (name of the person):</b>	Theodore Brauer
<b>Date of decision:</b>	16/Sep/2019
<b>Other comments:</b>	Click or tap here to enter text.