SBP

Sustainable Biomass Program

Shaw Resources Belledune Supply Base Report

Fourth Surveillance Audit

www.sbp-cert.org

Completed in accordance with the Supply Base Report Template Version 1.3

For further information on the SBP Framework and to view the full set of documentation see www.sbp-cert.org

Document history

Version 1.0: published 26 March 2015

Version 1.1 published 22 February 2016

Version 1.2 published 23 June 2016

Version 1.3 published 14 January 2019

Contents

1 Overview

Producer name:	Belledune Wood Pellet Facility Shaw Resources (A member of The Shaw Group Limited)
Producer location:	52 Hodgins Road, Belledune, NB, E8G 2E3
Geographic position:	Latitude 47.9058, Longitude -65.8670, Datum 1983
Primary contact:	Julie Griffiths P.O. Box 60, Shubenacadie, NS, B0N 2H0 902 750 0173 jgriffiths@shawresources.ca
Company website:	www.shawresources.ca
Date report finalised:	March 9, 2017
Close of last CB audit:	January 19, 2018
Name of CB:	SCS Global Services
Translations from English:	No
SBP Standard(s) used:	SBP Standard 1: Feedstock Compliance Standard (V1.0) SBP Standard 2: Verification of SBP-compliant Feedstock (V1.0) SBP Standard 4: Chain of Custody (V1.0) SBP Standard 5: Collection and Communication of Data (V1.0)
Weblink to Standard(s) used:	https://sbp-cert.org/documents/standards-documents/standards
SBP Endorsed Regional Risk Assessment:	N/A
Weblink to SBE on Company website:	https://shawresources.ca/about-shaw/why-shaw/

Indicate how the current evaluation fits within the cycle of Supply Base Evaluations				
Main (Initial) Evaluation	**First Surveillance**	**Second Surveillance**	**Third Surveillance**	**Fourth Surveillance**
☐	☐	☐	☐	☑

2 Description of the Supply Base

2.1 General description

Shaw Resources Belledune manufactures industrial wood pellets for export to European power utilities. The supply base is considered south-eastern Québec (QC), New Brunswick (NB), and Nova Scotia (NS). Primary feedstock (round wood) and secondary feedstock (sawmill residuals) are used in the production of wood pellets in Belledune.

New Brunswick Forestry
The NB provincial government proclaimed the Crown Lands and Forests Act in 1982; this is the legal foundation for Crown forest management in the province. The Act divides NB's Crown land into 10 timber licences; each license is leased through a 25 year forest management agreement to a large forest based company called a Licensee. On a 5 year cycle, the New Brunswick Department of Natural Resources (NBDNR) will re-assess the forest management practices, and if satisfied, will renew the agreement for another 5 year period. Licensees are required to have a forest management plan that covers a 25 year period that is sustainable for an 80 year planning horizon. The licensees' annual operating plans are reviewed to ensure that all regulations and standards are followed. All forest operations on Crown land are ISO 14001 certified, as well as to a sustainable Forest Management (SFM) System (i.e. CSA, FSC, and SFI). NB is one of the first jurisdictions in the world to require certification of licensee operations.

The provincial government sets the annual allowable cut (AAC) for both Crown and private woodlots based on on-going forest inventory research. Data obtained from aerial photography analysis and ground sample plots chart the province's timber growth and yield. These are updated on an annual cycle using a computerized geographical information system (GIS).

Harvesting from private forest sources is monitored through 1 of 7 regional marketing boards. The marketing boards offer assistance to private woodlot owners with forest management planning; this is includes, but is not limited to, calculating timber inventory, defining harvest layout, and developing management plans. The marketing boards will also offer programs that promote sustainable forest management. The provincial government partners with private woodlot owners and marketing boards to fund silviculture treatments. A Landowner Agreement must be signed with the NB Department of Energy and Resource Development (ERD) to be eligible for silviculture treatment on a private woodlot. Any woodlot that has received silviculture funding may be inspected to ensure best management practices (BMPs) and guidelines outlined in the New Brunswick Private Woodlots Silviculture Manual (ERD, 2018) are being followed.

Quebec Forestry
With the implementation of Quebec's Sustainable Forest Development Act in 2010, the Minister of Natural Resources (MRN) has greater control and responsibility over Crown forest management. This includes maintaining ecosystem-based management plans that maintain ecosystem biodiversity and viability. The MRN offers technical and financial support to woodlot owners that practice sustainable forest management. This support is presented through regional agencies (similar to regional marketing boards in NB) that help with the preparation of a protection and development plan and financial and technical support. Only certified private forests have access to these government programs.

92% of Quebec's forests are publicly owned; ~8% are private forests. By August 2017, 93% of the province's publicly managed forest was SFM certified (FSC or SFI). The Federation of Forest Producers of Québec (Fédération des producteurs forestiers du Québec, FPFQ) is the provincial organization that promotes the interests of the 130,000 private woodlot owners, which includes 35,000 forest producers. There are 13 regional agencies that were formed to help with the protection and enhancement of Québec's private forests. Municipal by-laws regulate cutting of trees to limit the size of cut blocks and protect riparian zones and sensitive environments. Permits for logging on private lands are required in all municipalities. The Civil Code of Québec provides recourse for logging performed on private property without the consent of the landowner.

Nova Scotia Forestry
The enforcement of the NS Forests Act on Crown and private lands supports the development of a healthy productive forest capable of yielding high volumes of high quality product. The enforcement division of NSDNR completes regular inspections to harvest sites to enforce the Forests and Crown Lands Acts.

Nova Scotia's Code of Forest Practice is a guide for sustainable forest management (SFM) in the province. SFM is required on Crown lands and highly encouraged on private woodlots in Nova Scotia. The majority of primary wood products supplied to industry are from privately sources. The provincial government develops forest management training programs and financial incentives to further encourage the sustainable use of private woodlots.

The Nova Scotia Registry of Buyers requires businesses to inventory all primary forest products acquired for processing. Registered buyers contribute to a silviculture fund based on a volume of wood acquired basis. The Registry of Buyers' annual report outlines the volumes of wood harvested throughout the province. The registry provides reliable data on market demands and estimates on sustainable harvest levels.

All product used at the Belledune wood pellet plant can be defined in 4 categories: 1) Certified SBP-Compliant Primary Feedstock, 2) Uncertified SBP-Compliant Primary Feedstock, 3) Certified SBP-Compliant Secondary Feedstock, and 4) Uncertified SBP-Compliant Secondary Feedstock (Table 1)

Feedstock Product Groups	**% of Certified Feedstock**	**% of Uncertified Feedstock**	**# of Suppliers**	**Species Mix**
Controlled Feedstock				
SBP-Compliant Primary Feedstock	62.2%	37.8%	3-5	(See 2.5i, below)
SBP-Compliant Secondary Feedstock	12.6%	87.4%	7-10	(See 2.5i, below)
SBP-Compliant Tertiary Feedstock				
SBP Non-Compliant Feedstock				

Table 1 - Feedstock Product Groups

2.2 Actions taken to promote certification amongst feedstock supplier

Shaw Resources' suppliers are aware of Shaw Resources' current PEFC Chain of Custody and the Sustainable Biomass Partnership certifications. In general, sustainability is a common practice amongst many of Shaw Resources' current suppliers of Shaw Resources. Suppliers continue to seek third party SFM certifications (FSC, or SFI). Shaw Resources' sustainability mission statement is publicly available and is posted on the company website. Shaw Resources' mission statement is:

> *"Shaw Resources PEFC COC (Programme for the Endorsement of Forest Certification, Chain of Custody) program exists to support our customers' requirements for a socially responsible and sustainable, renewable energy source. It reflects Shaw Resources' commitment to providing its employees with a safe environment to work and to ensuring the sustainability of the natural resources used and the protection of the environment of the regions that the Shaw Resources wood pellet plants operate in."*

Scoping-in agreements and supplier declarations facilitate the transfer of credits through Shaw Resources' PEFC Chain of Custody certification. Suppliers also provide a Supplier Assertion declaring that feedstock originates from within a defined supply base and not from controversial sources. Company-wide, Shaw

Resources has implemented training programs to ensure employees understand their roles and responsibilities and the objectives of each certification.

2.3 Final harvest sampling programme

Belledune's primary forest products originate from: a) Crown forest and b) private forest sources.

a) Crown land forest management is monitored and objectives are enforced by NBDNR,
b) Regional marketing boards, which represent the private forest woodlots regionally, distinguish between marketable saw logs and woody biomass. Approximately 85% of primary wood products sold in the province are saw logs and directed to sawmills, while about 15% of primary wood products are considered woody biomass.

The regional marketing boards complete surveys on a random selection of private woodlots chosen by the New Brunswick SFI Implementation Committee (NBSIC) on an annual basis. These surveys are compiled by NBSIC and available as an annual report.

2.4 Flow diagram of feedstock inputs showing feedstock type [optional]

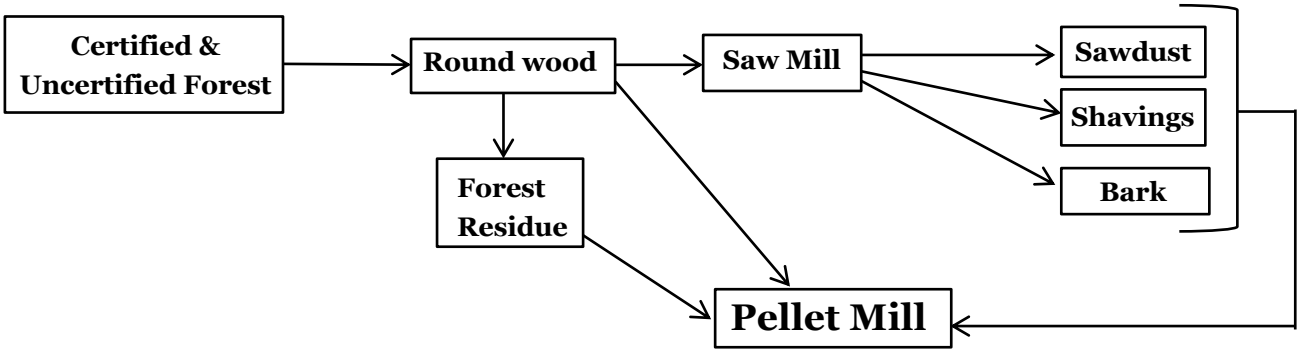


Figure 1 – Flow diagram of feedstock inputs

2.5 Quantification of the Supply Base

Supply Base

New Brunswick Supply Base
a. Total Supply Base Area (ha): Cumulative forest area of all forest types within SB

6 of the 7 million hectares of land in New Brunswick are forested; 83% of forest cover (NBDNR). The remaining 17% is made up of agricultural and urban areas.

b. Tenure by type (ha): Privately owned/Public/Community concession

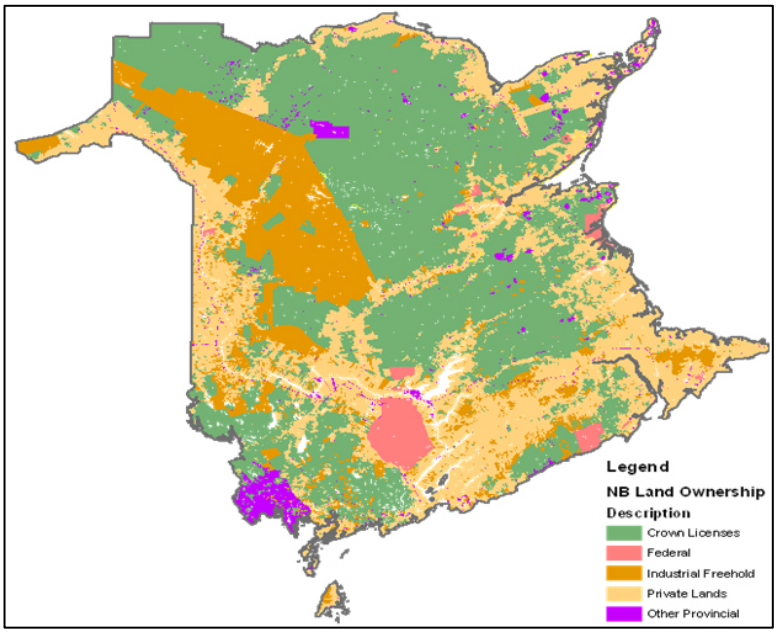


Figure 2 - Map of NB Land Tenure by Type (from www.nbforestry.com)

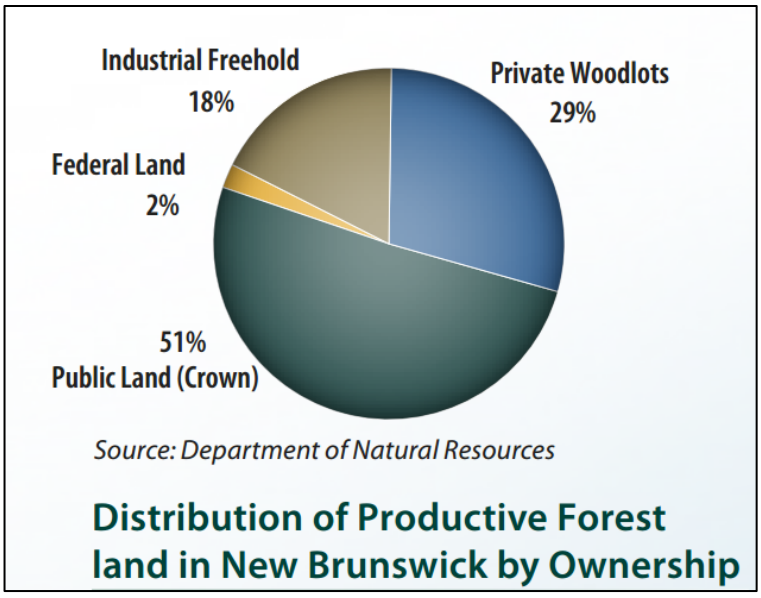


Figure 3 - Tenure by type (from State of the Forest Report, NBDNR, 2008)

c. Forest by type (ha): Boreal/Temperate/Tropical

The maritime provinces are designated as the Atlantic Maritime Eco zone. They are made up of two major regions: Appalachians and coastal plains. About 50% of NB, most of NS, and some regions in QC are made up of Acadian forest. The Acadian forest can be described as a transitional forest between boreal spruce-fir to the north and deciduous forest to the south.

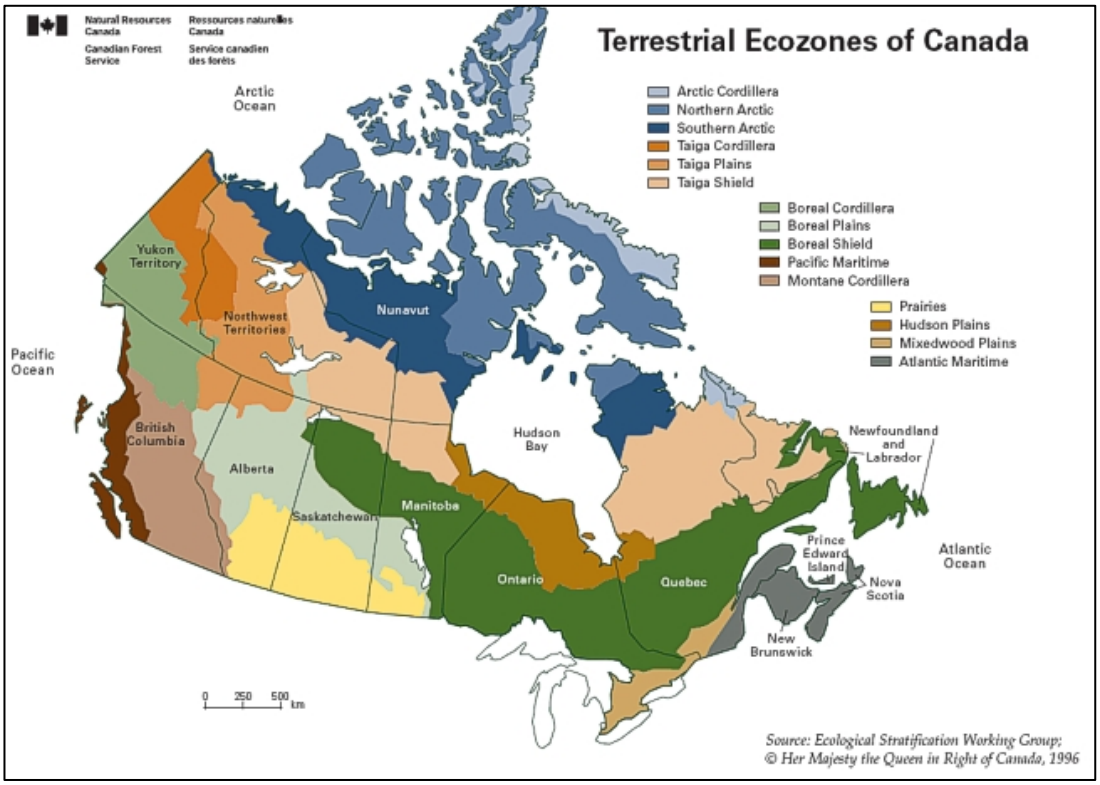


Figure 4 - Eco zones of Canada (from Ecological Stratification Working Group, NBDNR 1996)

d. Forest by management type (ha): Plantation/Managed Natural/Natural

There are 6.1 million hectares of forest in New Brunswick, 3.2 million hectares are Crown and the remaining 2.9 million hectares are private. The government projects that of the 3.2 million hectares of Crown forest, 26% are natural regeneration forests, 26% are mature stands, 13% are thinned regenerations, 12% have silviculture plantations and the remaining are conservation areas (protected natural areas, watercourses and wetland buffers, deer wintering areas, and old forest habitats).

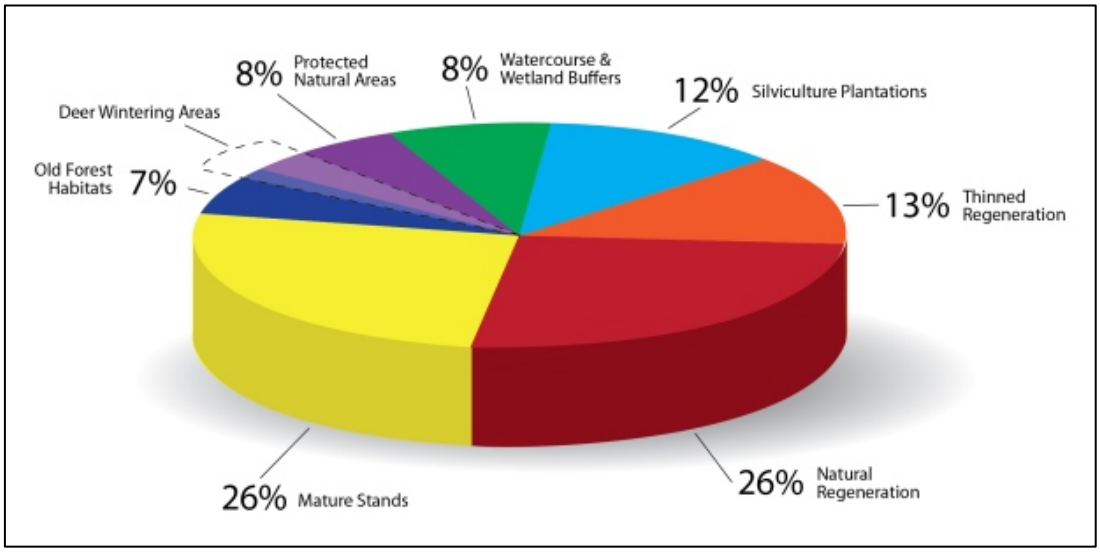


Figure 5 - New Brunswick Crown forests projection (GNB, 2014)

e. Certified forest by scheme (ha): Hectares of FSC or PEFC certified

4.2 of the 6.1 million hectares of forest lands are certified to the SFI standard in New Brunswick.

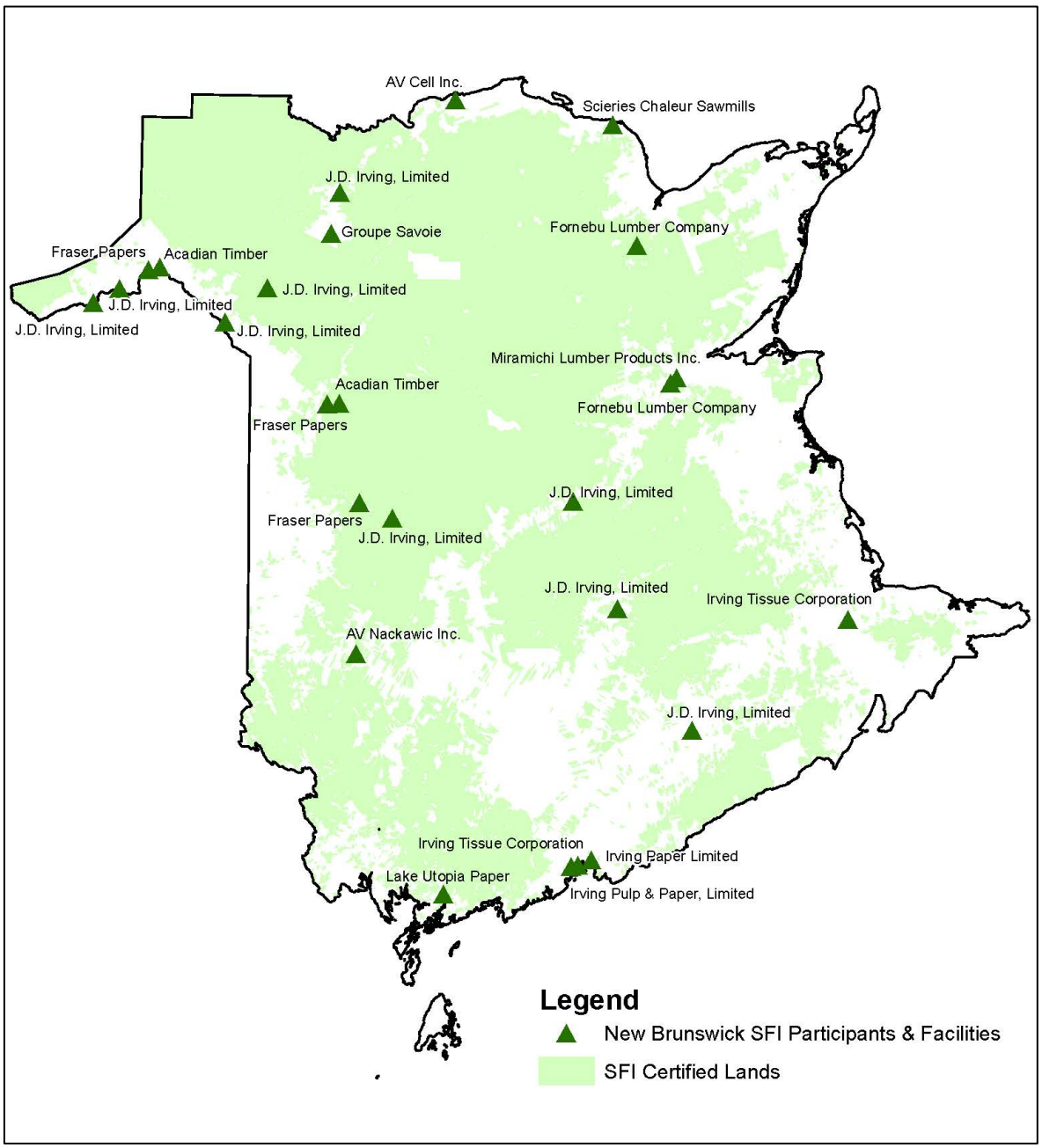


Figure 6 - SFI Certified Lands and Participants in NB (From NBSIC, 2009)

Quebec Supply Base

a. Total Supply Base Area (ha): Cumulative forest area of all forest types within SB

Quebec forests cover about 76.1 million hectares of the provinces 166.7 million hectares of land.

b. Tenure by type (ha): Privately owned/Public/Community concession

Of the 76.1 million hectares of forest, 70 million hectares are public and 6.1 million hectares are private.

c. Forest by type (ha): Boreal/Temperate/Tropical

Quebec's forests extend over three major bio-climatic zones. The three forest types are the boreal forest, the mixed wood forest, and the hardwood forest.

d. Forest by management type (ha): Plantation/Managed Natural/Natural

The forest management strategy in Quebec emphasizes natural regeneration. 100% of public forests must be regenerated after logging. When natural regeneration is insufficient, reforestation is introduced.

e. Certified forest by scheme (ha): Hectares of FSC or PEFC certified

By 2017, 93% of all productive areas in Quebec's public forests were certified.

Nova Scotia Supply Base
a. Total Supply Base Area (ha): Cumulative forest area of all forest types within SB

There are 4.275 million hectares of forest in Nova Scotia

b. Tenure by type (ha): Privately owned/Public/Community concession

1,994,000 ha (47%) of the forested lands is public, and the remaining 2,281,000 ha (53%) is private.

c. Forest by type (ha): Boreal/Temperate/Tropical

The forested area is part of the Acadian Forest region and common species include spruce, balsam fir, white pine, maple and birch.

d. Forest by management type (ha): Plantation/Managed Natural/Natural

The majority of forest woodlots in NS are replanted forests, while some are naturally regenerated forests.

e. Certified forest by scheme (ha): Hectares of FSC or PEFC certified

As of 2014, 1.3 million hectares of land in Nova Scotia were certified to CSA, FSC, or SFI.

Feedstock

f. Total volume of Feedstock: tonnes or m3

185,000 Tonnes

g. Volume of primary feedstock: tonnes or m^3 –

65,000 Tonnes

h. List percentage of primary feedstock (g), by the following categories

- 54.7% of primary feedstock originates from large forest holdings certified to an SBP-approved Forest Management Schemes (primarily SFI Forest Management, which is endorsed through PEFC and SFI Chain of Custody)
- 3.7% primary feedstock originates from large forest holdings not certified to an SBP-approved Forest Management Schemes

- 41.6% of primary feedstock originates from small forest holdings not certified to an SBP-approved Forest Management Schemes

i. List all species in primary feedstock, including scientific name

- Beech (Fagus sp.)
- Poplar (Populus sp.)
- Hemlock (Tsuga sp.)
- Ash (Fraxinus sp.)
- Birch (Betula sp.)
- Maple (Acer sp.)
- Aspen (Populus sp.)
- Balsam Fir (Abies Balsamea)
- Spruce (Picea sp.)
- Cedar (Cedrus sp.)
- Pine (Pinus sp.)

j. Volume of primary feedstock from primary forest

Primary feedstock is sourced from continuously managed secondary forests.

k. List percentage of primary feedstock from primary forest (j), by the following categories. Subdivide by SBP-approved Forest Management Schemes:

- 0% of primary feedstock from primary forest certified to an SBP-approved Forest Management Schemes
- 0% of primary feedstock from primary forest not certified to an SBP-approved Forest Management Schemes

l. Volume of secondary feedstock: specify origin and type

All secondary feedstock (sawmill residuals) originate from Nova Scotia, New Brunswick and Quebec.

m. Volume of tertiary feedstock: specify origin and composition

There is no tertiary feedstock.

3 Requirement for a Supply Base Evaluation

SBE completed	SBE not completed
☑	☐

It was determined that a Supply Base Evaluation was required because Shaw Resources – Belledune will use the SBP-compliant claim when selling product and not all feedstock is certified to a SBP approved certification scheme. As part of the Supply Base Evaluation, a Stakeholder's Consultation was completed to allow stakeholders an opportunity to identify any foreseeable risks within the supply base.

4 Supply Base Evaluation

4.1 Scope

The scope of the Supply Base Evaluation (SBE) includes the supply base for all primary and secondary feedstock sources. The supply base includes the entire province of New Brunswick, Nova Scotia and Quebec. To ensure that all secondary feedstock originates from within the supply base, a 100-km radius around each of our secondary feedstock suppliers (sawmill supplier) was examined to ensure it was within the supply base.

4.2 Justification

All round wood, biomass, and residuals originate from within New Brunswick, Nova Scotia and Quebec. The approach used in evaluating the supply base relied heavily on government (Federal & Provincial) legislation, regulations, and third party certification standards. Government enforcement divisions carry out regular monitoring and site visits to ensure all legislation and regulations are enforced. Furthermore, penalties are administered for non-compliance.

4.3 Results of Risk Assessment

The SBE indicated a low risk of non-compliance to the SBP standards.

4.4 Results of Supplier Verification Programme

Since the entire supply base is low risk, there was no need to complete a supplier verification programme.

4.5 Conclusion

The SBE assesses the risk in the company's defined supply base (New Brunswick, Nova Scotia, and Quebec). The SBP Standard 1 – Feedstock Standard's aim is to assure end users that feedstock is legally and sustainably sourced. SBP-approved FM certified feedstock is considered SBP-compliant. Feedstock from forest sources that are not SBP-compliant FM-certified require verification that the supply is low risk for it to be considered SBP-compliant.

The SBE for Shaw Resources-Belledune involved a detailed assessment and evaluation of the Belledune feedstock supply base. Ultimately, the SBE indicated an overall low risk to all indicators and the defined supply base is considered SBP-compliant.

5 Supply Base Evaluation Process

The SBE was performed by Julie Griffiths, the Environmental Management System Representative; this individual is also responsible for the PEFC Chain of Custody system. Nate Ryant, a professional forester and consultant with NMR Resource Management, assisted in the process of completing the SBE and implementing SBP processes. Nate has assisted several other pellet mills in implementing SBP and chain of custody certifications, and was recommended by the Wood Pellets Association of Canada.

The SBE process involved a detailed review of all feedstock sources within a particular region and for the Belledune Facility included New Brunswick and Quebec as regional sources. The New Brunswick Department of Natural Resources, the North Shore Forestry Marketing Board, and the Forest Sector from the Department of Environment in Quebec were all consulted in the evaluation process.

6 Stakeholder Consultation

As part of the Stakeholder Consultation, the final SBE document along with a link to the SBP standards was emailed to regional stakeholders, who were given 30 days to respond or comment. The consultation was completed on December 17, 2015.

6.1 Response to stakeholder comments

Comment 1:
One stakeholder had two suggestions for the SBE:
1. Add a website as evidence to Indicator 2.2.7:
   QC: http://www.mddelcc.gouv.qc.ca/air/inter_en.htm
2. Additional information in regards to 2.8.1:
   Sub-contractors in Quebec must comply with the Quebec Work Health and Safety Commission (CSST).

Response 1:
Stakeholder comments were reviewed, and subsequently added to the SBE.

7 Overview of Initial Assessment of Risk

The results of the Initial Assessment of Risk showed that all indicators were low risk.

Table 1. Overview of results from the risk assessment of all Indicators (prior to SVP)

Indicator	Initial Risk Rating		
	Specified	Low	Unspecified
1.1.1		☑	
1.1.2		☑	
1.1.3		☑	
1.2.1		☑	
1.3.1		☑	
1.4.1		☑	
1.5.1		☑	
1.6.1		☑	
2.1.1		☑	
2.1.2		☑	
2.1.3		☑	
2.2.1		☑	
2.2.2		☑	
2.2.3		☑	
2.2.4		☑	
2.2.5		☑	
2.2.6		☑	
2.2.7		☑	
2.2.8		☑	
2.2.9		☑	

Indicator	Initial Risk Rating		
	Specified	Low	Unspecified
2.3.1		☑	
2.3.2		☑	
2.3.3		☑	
2.4.1		☑	
2.4.2		☑	
2.4.3		☑	
2.5.1		☑	
2.5.2		☑	
2.6.1		☑	
2.7.1		☑	
2.7.2		☑	
2.7.3		☑	
2.7.4		☑	
2.7.5		☑	
2.8.1		☑	
2.9.1		☑	
2.9.2		☑	
2.10.1		☑	

8 Supplier Verification Programme

8.1 Description of the Supplier Verification Programme

The SBE indicated that the supply base was low risk, so a supplier verification programme was not required.

8.2 Site visits

N/A

8.3 Conclusions from the Supplier Verification Programme

N/A

9 Mitigation Measures

9.1 Mitigation measures

Mitigation measures were not required at this time as all feedstock was considered low risk in the SBE.

9.2 Monitoring and outcomes

N/A

10 Detailed Findings for Indicators

Detailed findings for each Indicator are given in Annex 1.

11 Review of Report

11.1 Peer review

The final version of the Supply Base Report was reviewed by the Operations Manager. A peer review was completed by Nate Ryant on January 19, 2016, a consultant with the Wood Pellet Association of Canada.

11.2 Public or additional reviews

N/A

12 Approval of Report

Approval of Supply Base Report by senior management			
Report Prepared by:	Julie Griffiths	Geology/Environmental Specialist	August 31, 2018
	Name	Title	Date
The undersigned persons confirm that I/we are members of the organisation's senior management and do hereby affirm that the contents of this evaluation report were duly acknowledged by senior management as being accurate prior to approval and finalisation of the report.			
Report approved by:	[signature]	Carol MacMillan Chief Financial Officer	Sept 14/18
	Name	Title	Date
Report approved by:	[signature] Lindsay Hawker	Corporate Secretary and Legal Counsel	Sept 14/18
	Name	Title	Date

13 Updates

13.1 Significant changes in the Supply Base

There are no significant changes in the Supply Base.

13.2 Effectiveness of previous mitigation measures

No mitigation measures are required.

13.3 New risk ratings and mitigation measures

All indicators remain low risk at this time.

13.4 Actual figures for feedstock over the previous 12 months

a. *Total volume of Feedstock: tonnes or m3*

155,000 Tonnes

b. *Volume of primary feedstock: tonnes or m^3*

60,000 Tonnes

c. *List percentage of primary feedstock (g), by the following categories*

- 71.3% of primary feedstock originates from large forest holdings certified to an SBP-approved Forest Management Schemes (primarily SFI Forest Management, which is endorsed through PEFC and SFI Chain of Custody)
- No primary feedstock originates from large forest holdings not certified to an SBP-approved Forest Management Schemes
- No feedstock originates from small forest holdings certified to an SBP-approved Forest Management Schemes
- 28.7% of primary feedstock originates from small forest holdings not certified to an SBP-approved Forest Management Schemes

d. *List all species in primary feedstock, including scientific name*

The species list remains unchanged.

e. *Volume of primary feedstock from primary forest*

Primary feedstock is sourced from continuously managed secondary forests.

f. *List percentage of primary feedstock from primary forest (j), by the following categories. Subdivide by SBP-approved Forest Management Schemes:*

There is no primary feedstock originating from primary forest.

g. *Volume of secondary feedstock: specify origin and type*

~95,000 Tonnes. All secondary feedstock (sawmill residuals) originate from Nova Scotia, New Brunswick and Quebec.

h. *Volume of tertiary feedstock: specify origin and composition*

There is no tertiary feedstock.

13.5 Projected figures for feedstock over the next 12 months

Total volume of Feedstock: Tonnes or m3

150,000-180,000 Tonnes (A range has been provided due to commercial sensitivity of the information)

b. *Volume of primary Feedstock: Tonnes or m3*

50,000 - 100,000 Tonnes (A range has been provided due to commercial sensitivity of the information)

c. *List of percentage of primary feedstock (g), by the following categories. Subdivide by SBP-approved Forest Management Schemes*

- 65-75% of primary feedstock originates from large forest holdings certified to an SBP-approved Forest Management Schemes (primarily SFI Forest Management, which is endorsed through PEFC and SFI Chain of Custody)
- 0-5% of primary feedstock originates from large forest holdings not certified to an SBP-approved Forest Management Schemes
- No feedstock originates from small forest holdings certified to an SBP-approved Forest Management Schemes
- 25-30% of primary feedstock originates from small forest holdings not certified to an SBP-approved Forest Management Schemes

d. *List all species in primary feedstock, including scientific name*

The species list will remain unchanged.

e. *Volume of primary feedstock from primary forest*

Primary feedstock will continue to be sourced from continuously managed secondary forests.

f. *List percentage of primary feedstock from primary forest (i), by the following categories. Subdivide by SBP-approved Forest Management Schemes*

a. *0% of primary feedstock from primary forest certified to an SBP-approved Forest Management Schemes*
b. *0% of primary feedstock from primary forest not certified to an SBP-approved Forest Management Schemes*

g. *Volume of secondary feedstock: Specify origin and type*

All secondary feedstock (sawmill residuals) originates from Nova Scotia, New Brunswick or Quebec.

h. *Volume of tertiary feedstock: Specify origin and composition*

There will be no tertiary feedstock.

Annex 1: Detailed Findings for Supply Base Evaluation Indicators

<table>
<tr><th></th><th>Indicator</th></tr>
<tr><td>1.1.1</td><td>The Biomass Producer's Supply Base is defined and mapped.</td></tr>
<tr><td>Finding</td><td>The Biomass Producer's (BP) supply base is New Brunswick (NB), Nova Scotia (NS), and south-eastern Quebec (QC). The supply base is mapped to ensure the scope is consistent with the risk assessment.

The following ecoregions have been identified by the World Wildlife Fund (WWF):
<table>
<tr><th>Ecoregion</th><th>Code</th><th>Province</th></tr>
<tr><td>Eastern Canadian Forest</td><td>NA0605</td><td>NB, NS, QC</td></tr>
<tr><td>New England-Acadian Forest</td><td>NA0410</td><td>NB, NS</td></tr>
<tr><td>Gulf of St. Lawrence Lowland</td><td>NA0605</td><td>NB, NS</td></tr>
</table>
Each supplier must sign a contract and an assertion. The assertion declares that feedstock is legally sourced from within the BP's defined supply base.</td></tr>
<tr><td>Means of Verification</td><td>BP's DDS
Supplier contracts and assertions
Primary & secondary feedstock source map
Supplier assertion

WWF Ecoregions:
http://www.worldwildlife.org/science/wildfinder/</td></tr>
<tr><td>Evidence Reviewed</td><td>All means of verification reviewed

WWF ecoregion summary web links:
https://www.worldwildlife.org/ecoregions/na0605
https://www.worldwildlife.org/ecoregions/na0410/
https://www.worldwildlife.org/ecoregions/na0408</td></tr>
<tr><td>Risk Rating</td><td>☑ Low Risk ☐ Specified Risk ☐ Unspecified Risk at RA</td></tr>
<tr><td>Comment or Mitigation Measure</td><td>N/A</td></tr>
</table>

<table>
<tr><th></th><th>Indicator</th></tr>
<tr><td>1.1.2</td><td>Feedstock can be traced back to the defined Supply Base.</td></tr>
<tr><td>Finding</td><td>The BP conducts wood procurement operations, which include the purchase and transport of primary feedstock (round wood and wood chips) and secondary feedstock (sawmill</td></tr>
</table>

	residuals - wood chips, shavings & sawdust). Biomass is transported on trucks to the wood pellet plant. The BP purchases certified and uncertified fibre and round wood that originates from New Brunswick (NB), Nova Scotia (NS), and Quebec (QC). Primary round wood is accompanied by a transportation certificate (TC), which includes the Property Identification (PID). The PID can trace the feedstock back to the forest management unit and are described and mapped by Service New Brunswick (https://paol.snb.ca). The *Transportation of Primary Forest Products Act* requires the accurate completion of TCs, which are subject to audits by the New Brunswick Department of Natural Resources (NBDNR) and New Brunswick Forest Products Commission. Some primary round wood and wood chips are sourced from Sustainable Forest Management (SFM) certified lands. SFM & chain of custody (COC) standards require certificate holders to undergo annual 3rd party audits, which provide further assurance and verification that feedstock can be traced back to the defined supply base. Secondary feedstock is purchased from local sawmills. NB sawmills typically procure round wood from Crown or private forests in New Brunswick. A small percentage of sawmill residuals originate from Quebec or Nova Scotia. Each load delivered to the pellet plant is accompanied by a scale ticket that identifies the supplier. Supplier declarations are completed quarterly and confirm tonnage of feedstock and certified content received from each supplier. Individual loads delivered and supplier declarations can be compared to scale reports for the same period. The due diligence system (DDS) employed through the BP's PEFC COC certification includes requirements for local knowledge of supply base by staff, risk assessments, and supplier assertions. Regional risk assessments have been prepared for the entire supply base (NS, NB, and QC) and are reviewed on an annual basis. Supplier contracts include a clause requiring legal compliance. Assertions signed by each supplier declare that feedstock is legally sourced from within the BP's defined supply base of NB, NS or QC. On an annual basis, the BP completes supplier evaluations on 25% of secondary suppliers. The evaluation, or supplier audit, consists of a site visit to review and collect documentation on forest sources (location of the stump) to ensure that feedstock originates from within the defined supply base and to identify how certified feedstock is traced back to the forest management unit. This control measure provides assurance to the BP that feedstock originates from within the defined supply base of the SBE. The BP has implemented a purchase wood risk assessment for all round wood purchases. Round wood purchases are evaluated annually; and depending on the associated risk, may be assessed based on forest practice compliance or have site visits and field inspections facilitated by the BP. In addition, the marketing boards conduct SFI BMP surveys and reports on a random selection of private wood lots on an annual basis. In summary, all feedstock can be traced back to the defined supply base and the BP verifies this on an annual basis through the BP's internal auditing systems.
Means of Verification	Supplier contracts and assertions PEFC DDS (BP's EMS Manual) NB, NS, and QC risk assessments BP's annual supplier evaluations BP's internal audit BP's purchase wood risk assessment Staff interviews Scale tickets, bills of lading, transportation certificates Sales documents
Evidence Reviewed	All means of verification reviewed

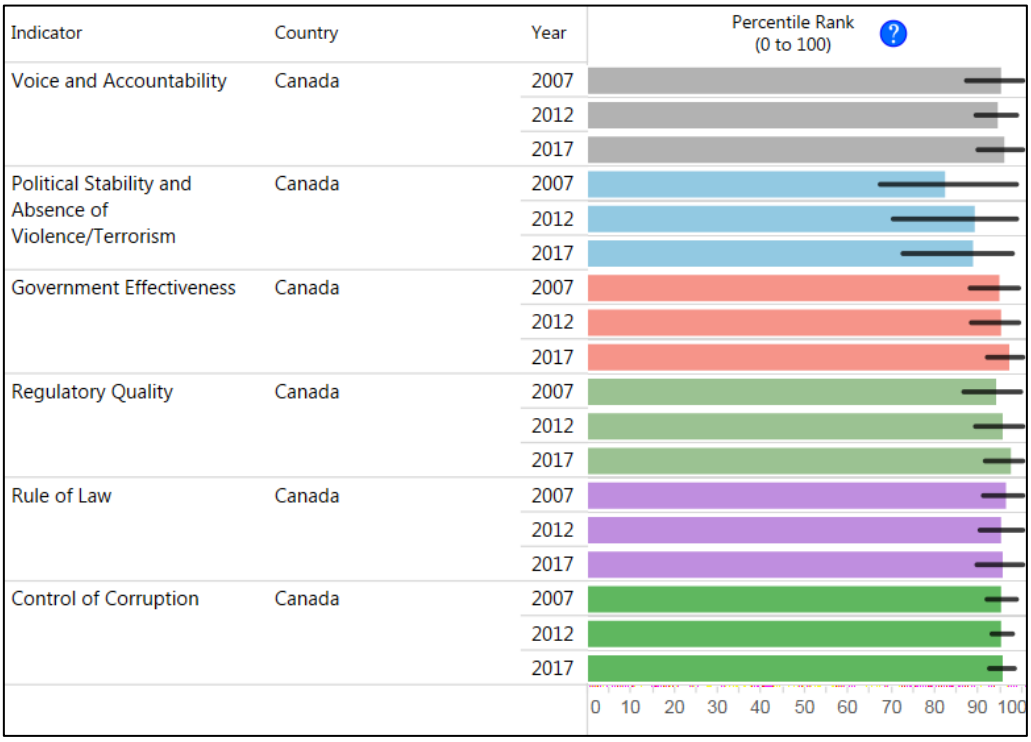
Risk Rating	☑ **Low Risk**	☐ **Specified Risk**	☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A		

	Indicator
1.1.3	The feedstock input profile is described and categorised by the mix of inputs.
Finding	Species and type of feedstock (round wood, sawdust, shavings, chips, etc.) are documented on incoming documentation (i.e. scale ticket, bill of lading, or transportation certificate). Feedstock is also categorized on each supplier's quarterly declaration, which is recorded in the BP's PEFC credit account. The credit account tracks certified feedstock using a percentage based system (inputs and outputs) that is certified to the PEFC chain of custody standard (PEFC ST 2002:2013). The BP's PEFC certification is 3rd party audited on an annual basis. Sales documents and payment information provide confirmation of purchases from individual suppliers. PEFC Certificate No. PwC-PEFC-449
Means of Verification	Scale tickets, bills of lading, transportation certificates Quarterly supplier declarations Sales documents BP's PEFC credit account PEFC COC Standard (PEFC ST 2002:2013) PEFC certificate database: https://www.pefc.org/find-certified/certified-certificates
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
1.2.1	The Biomass Producer has implemented appropriate control systems and procedures to ensure that legality of ownership and land use can be demonstrated for the Supply Base.
Finding	Incoming documentation accompany each load of primary and secondary feedstock. Depending on the source, these documents contain a variety of information to assist in tracking the feedstock, including woodlot owner, sawmill, cut block, contractor, type of feedstock and species type. Round wood is accompanied with a transportation certificate (TC) identifying either the Property Identification (PID) for private land and Forest Management Unit (FMU) for Crown land. The PID helps to ensure legality of ownership and land use. The BP has measures in place to ensure that all incoming documentation include the required information, if not, the load is rejected.

	Each province has land use laws to ensure accessibility to guaranteed property titles and for legality of land ownership. Land use is further regulated with municipal by-laws. Private land titles are registered with provincial registry offices where annual assessments determine the annual tax rate. Forest tenure contracts are used for public or Crown land. In New Brunswick (NB), forests are governed through the *Crown Lands and Forests Act*. Most Crown and industry freehold lands are forest management (FM) certified (SFI) and undergo 3rd party annual audits. Private woodlots also undergo annual audits through regional marketing boards. The PID or FMU can trace the feedstock back to the forest unit and is mapped by the provincial government – Service NB (https://paol.snb.ca). The *Transportation of Primary Forest Products Act* requires the accurate completion of a TC, which is subject to audits by the NB Department of Natural Resources and New Brunswick Forest Products Commission. The *Community Planning Act* establishes the legislation for regional development and community planning, land use and zoning, and land acquisition. In Nova Scotia (NS), private woodlots are the primary source of forest products for industry; they are governed by the *Forests Acts*. The Nova Scotia Department of Natural Resources (DNR) provides authority to harvest from provincial Crown land under the *Crown Lands Act,* and requires a letter of authority, permit, licence and forest utilization agreement. The letter authority details allowable products and maximum allowable cut. The DNR's enforcement division monitors these acts and manages all allocations assigned on Crown land. Businesses and individuals that surpass a specified minimum purchase volume must register through the NS Registry of Buyers. The *Forest Sustainability Regulations* require registered buyers to make payments into a silviculture fund for private woodlots in proportion to the value of primary forest products acquired. *Nova Scotia's Land Registration Act* ensures that both Crown and private land owners are able to obtain a guaranteed title to a property. The Municipal Government Act authorizes a municipality to develop and adopt a municipal planning strategy and land use by-law. In Quebec (QC), ~90% of all productive forest areas are certified to SFM standards (SFI, FSC or CSA). Crown and private forests are governed through the *Sustainable Forest Development Act* administered by the Minister of Natural Resources (MRN). The MRN is responsible for preparing forest management plans for all Crown forests, and offering technical and financial support for sustainable forestry to private woodlots. The MRN authorizes all permits, agreements and contracts associated with wood harvesting; and inspects and audits harvested lands. Transporters of primary feedstock in QC must have a transportation certificate indicating its origin. All documentation concerning transportation, processing and scaling activities must be kept on file and may be checked, inspected or audited. *The Act Respecting Land Use Planning and Development* establishes the legal framework for land use planning and development in the province. The *FSC National Risk Assessment* (Draft, 2018) assigns a low risk rating for land tenure and management rights in Canada (Indicator 1.1). It states: "Canada has established an extensive and rigorous system of forest governance to prevent abuses with regards to land tenure and ownership. In 2014, the World Resources Institute referred to Canada's record of the lowest prevalence of suspicious log supply and corruption of any country. A low level of corruption coupled with strong tenure governance systems throughout the country means a low risk of illegally obtained forest licenses or tax exemptions."

	The BP's PEFC Due Diligence System (DDS) is employed to ensure that the risk of receiving material from controversial sources is minimized. This includes local knowledge of the supply base by procurement staff, risk assessments and supplier assertions. Regional risk assessments have been prepared for the entire supply base (NS, NB, and QC) and are reviewed on an annual basis. The DDS is audited as part of the BP's annual 3rd party PEFC COC certification. Contracts with each feedstock supplier include a clause for legal compliance. Furthermore, feedstock suppliers have signed an assertion. The assertion includes the following: *The supplier confirms that round wood and wood fibre don't originate from unacceptable or controversial sources, which include sources that are:* *1. Not complying with local, national or international legislation* *2. Not complying with legislation of the country of harvest relating to trade and customs, in so far as the forest sector is concerned,* *The round wood and biomass originates from:* *1. Nova Scotia, New Brunswick, or Quebec;* *2. Areas not covered by the UN Security Council ban on Timber; and* *Areas governed by a legislated stumpage system that requires documentation to confirm the supply of the fibre to the forest management unit (i.e. license or tenure).* On an annual basis, the BP completes supplier evaluations on 25% of secondary suppliers. The evaluation, or supplier audit, consists of a site visit to review and collect documentation on forest sources (location of the stump) to ensure that feedstock originates from within the supply base and to identify how certified feedstock is traced back to the forest management unit. This control measure provides assurance to the BP that feedstock originates from within the defined supply base of the SBE. The BP has implemented a purchase wood risk assessment for all round wood purchases. Round wood purchases are evaluated annually; depending on the associated risk, may be assessed based on forest practice compliance or have site visits and field inspections facilitated by the BP. In addition, the marketing boards conduct SFI BMP surveys and reports on a random selection of private wood lots on an annual basis.
Means of Verification	Supplier contracts & assertions BP's annual supplier evaluations BP's purchase wood risk assessment PEFC wood procurement protocol (EMS manual) PEFC due diligence system (EMS manual) NB, NS, QC Risk Assessment SFI BMP survey & reports Scale tickets, bill of ladings, transportation certificates Provincial legislation on land use & ownership FSC National Risk Assessment: https://ca.fsc.org/en-ca/standards/national-risk-assessment-01
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
1.3.1	The BP has implemented appropriate control systems and procedures to ensure that feedstock is legally harvested and supplied and is in compliance with EUTR legality requirements.
Finding	The BP's PEFC Due Diligence System (DDS) is aligned with the *European Union Timber Regulation* (EUTR). The DDS minimizes the risk of receiving supplies from illegal timber harvesting. Risk assessments are maintained for each province in the defined supply base and are updated on an annual basis. The following sources provide assurance that the source areas are low risk for illegal logging/activities or corruption: 1. https://www.illegal-logging.info/ 2. http://www.un.org/en/documents/index.html 3. http://www.transparency.org 4. http://info.worldbank.org/governance/wgi/index.aspx#home 5. http://www.eia-international.org Transparency international has become one of the leading evaluators of public sector corruption. Year over year, Canada is rated as having a very low incidence of corruption. The *2018 Corruption Perceptions Index* ranks Canada 9th in the world relative to 180 countries with a score of 81. *Worldwide Governance Indicators* (WGI) rank each country on a multitude of indicators in relation to that country's governance. In 2017, Canada ranked 88.6% for political stability and absence of violence, 97.1% for government effectiveness, 97.6% for regulatory quality, 95.7% for rule of law and 95.7% for control of corruption (Figure 1.3.1-1).  Figure 1.3.1–1: Canada's WGI for 2007, 2012 and 2017 (Kaufmann, D., A. Kraay, and M. Mastruzzi (2010), The Worldwide Governance Indicators: Methodology and Analytical Use)

	The UN Security Council has not issued a ban on timber exports from NB, NS or QC, and Canada is not designated as a source of conflict timber. The *FSC National Risk Assessment for Canada (Draft, 2018)* concludes that Canada has a low risk for illegal logging and illegally obtained forest licenses or tax exemptions. The BP's feedstock suppliers have signed a contract requiring compliance to all applicable legislation and regulations and an assertion that includes the following: *The supplier confirms that round wood and wood fibre don't originate from unacceptable or controversial sources, which include sources that are:* *1. Not complying with local, national or international legislation* *2. Not complying with legislation of the country of harvest relating to trade and customs, in so far as the forest sector is concerned,* *The round wood and biomass originates from:* *1. Nova Scotia, New Brunswick, or Quebec;* *2. Areas not covered by the UN Security Council ban on Timber; and* *Areas governed by a legislated stumpage system that requires documentation to confirm the supply of the fibre to the forest management unit (i.e. license or tenure).*
Means of Verification	Supplier contracts and assertions NB, NS, QC risk assessments PEFC due diligence system (BP's EMS Manual) Provincial legislation on land use & ownership World Bank website: http://info.worldbank.org/governance/wgi/index.aspx#home Transparency International: http://www.transparency.org/ Environmental Investigation Agency: http://www.eia-international.org Canadian Council of Forest Ministers national status report: www.ccfm.org/pdf/C&I_e.pdf FSC national risk assessment: https://ca.fsc.org/en-ca/standards/national-risk-assessment-01 The Royal Institute of International Affairs: https://www.illegal-logging.info/ UN Security Council: http://www.un.org/en/documents/index.html European Commission, Environment: http://ec.europa.eu/environment/forests/timber_regulation.htm
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
1.4.1	The Biomass Producer has implemented appropriate control systems and procedures to verify that payments for harvest rights and timber, including duties, relevant royalties and taxes related to timber harvesting, are complete and up to date.

Finding	All harvests on Canadian Crown lands have an associated harvesting fee that must be paid to the Crown (stumpage fee). The provincial government is responsible for setting the rate and ensuring that royalties are paid. Provinces where harvesting on private lands for commercial purposes is more common have put in place legislation to regulate harvesting, as is the case in Nova Scotia with the NS Registry of Buyers. The *FSC National Risk Assessment for Canada* (Draft, 2018) identifies a low risk for non-payment of harvesting fees (royalties). All forestry companies operating in public forests must report formally on their operations; the provincial governments carry out audits and in some cases investigations if there is evidence of an infraction. Penalties may include fines, suspension of harvesting rights, seizure of timber or imprisonment. In New Brunswick (NB), Crown land licensees are responsible for the proper scaling and remitting of all royalties. The royalty payments are published in the *New Brunswick Department of Natural Resources annual report*. Marketing boards conduct annual audits on select woodlots each year to ensure legality of harvesting. Furthermore, transportation certificates with property identification (PID) are inspected and enforced in the province through the *Transportation of Primary Forest Products Act.* In Nova Scotia (NS), registered buyers for primary wood products must submit statistical returns with the volume of wood purchased. Export documents must be kept on hand and provided to the Minister upon request. The *NS Scalers Act* applies to both public and private lands. Buyers who obtain more than 5,000 cubic meters/year of privately sourced wood must have a Wood Acquisition Plan. The Plan must detail how the buyer will meet their obligation under the *Forest Sustainability Regulations*. The buyer can opt to pay directly to a sustainable forestry fund or carry out silviculture activities on privately owned land. Royalties are paid for all timber harvested from Crown lands. The NS Department of Natural Resources regional field staff and conservation officers monitor and enforce activities on Crown lands to prevent unauthorized harvest or theft of timber. Private landowners rely on commercial or civic laws to protect their property from timber theft or to enforce the terms of a business transaction. In Quebec (QC), the Minister allocates Crown forest resource management responsibilities under the *Forests Act*. This is facilitated with Timber Supply and Forest Management Agreements, which authorize harvester to remove a predetermined volume and species of timber, so long as the agreement holder has prepared a forest management plan that complies with forest management standards. This agreement provides the legal basis for ensuring the payment of annual dues, which can either be paid directly or through silvicuture treatments. For private woodlots, the newly formed timber marketing boards set the rate for annual dues and cost of timber. In the southern regions of the province, where the BP's feedstock is sourced, private forests are a showcase for forestry practices because they are located in populated areas, so they are typically held to a higher standard of accountability. Supplier contracts have a clause requiring legal compliance. All suppliers have signed an assertion which specifies requirements for legally sourcing fibre within the defined supply base of this evaluation. On an annual basis, the BP completes supplier evaluations on 25% of secondary suppliers. The evaluation, or supplier audit, consists of a site visit to review and collect documentation on forest sources (location of the stump) to ensure that feedstock originates from within the supply base, and to identify how certified feedstock is traced

	back to the forest management unit. This control measure also provides assurance that feedstock originates from within the defined supply base. The BP has implemented a purchase wood risk assessment for all round wood purchases. Round wood purchases are evaluated annually; and depending on the associated risk, may be assessed based on forest practice compliance or have site visits and field inspections facilitated by the BP. In addition, the marketing boards conduct SFI BMP surveys and reports on a random selection of private wood lots on an annual basis. Risk assessments have been completed for each of the 3 provinces as part of the BP's PEFC due diligence system.
Means of Verification	Supplier contracts and assertions Purchase wood risk assessments BP's annual supplier evaluations NB, NS, QC risk assessments NB Department of Natural Resources annual forestry report: https://www2.gnb.ca/content/gnb/en/departments/erd/Publications.html NB Transportation of Primary Forest Products Act: https://www.canlii.org/en/nb/laws/stat/snb-1999-c-t-11.02/latest/snb-1999-c-t-11.02.html NS Registry of Buyers annual report: https://novascotia.ca/natr/forestry/registry/ann_report.asp NS Forest Sustainability Regulations: https://www.novascotia.ca/just/regulations/regs/fosust.htm QC - Understanding the Forest: https://mffp.gouv.qc.ca/the-forests/understanding-the-forest/?lang=en QC Forests Act: http://legisquebec.gouv.qc.ca/en/ShowDoc/cs/F-4.1 FSC National Risk Assessment: https://ca.fsc.org/en-ca/standards/national-risk-assessment-01
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
1.5.1	The Biomass Producer has implemented appropriate control systems and procedures to verify that feedstock is supplied in compliance with the requirements of CITES.
Finding	The species and origin of incoming feedstock are documented and there are no endangered or threatened species used. There are no Canadian tree species on the CITES list of species. As a party to CITES, Canada has an international obligation to regulate the trade in CITES-listed wild animals and plants. The *Wild Animal and Plant Protection* and *Regulation of International and Interprovincial Trade Act* (WAPPRIITA) was enacted to control CITES-listed species in Canada. The act is also used to control imports of other non CITES-listed species that have been obtained illegally. The *FSC National Risk Assessment for Canada* (Draft, 2018) states that the governance system as a whole,

	combined with the resources and rigour of the Canadian customs agencies result in low risk of illegal practices with regards to customs regulations. Supplier contracts have requirements for adherence to regulations and assertions state that feedstock is not sourced from areas that doesn't comply with the requirements of CITES. On an annual basis, the BP completes supplier evaluations on 25% of secondary suppliers. The evaluation, or supplier audit, consists of a site visit to review and collect documentation on forest sources (location of the stump) to ensure that feedstock originates from within the supply base, and to identify how certified feedstock is traced back to the forest management unit. This control measure provides assurance to the BP that feedstock originates from within the defined supply base of the SBE. The BP has implemented a purchase wood risk assessment for all round wood purchases. Round wood purchases are evaluated annually; and depending on the associated risk, may be assessed based on forest practice compliance or have site visits and field inspections facilitated by the BP. In addition, the marketing boards conduct SFI BMP surveys and reports on a random selection of private wood lots on an annual basis. Risk assessments have been completed for each of the 3 provinces as part of the BP's PEFC due diligence system.
Means of Verification	Supplier contracts and assertions BP's annual supplier evaluations BP's purchase wood risk assessment NB, NS, QC risk assessments Index of CITES species List of applicable laws and regulations Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act: https://laws-lois.justice.gc.ca/eng/acts/w-8.5/index.html Government of Canada on CITES: https://www.canada.ca/en/environment-climate-change/services/convention-international-trade-endangered-species.html Species +: https://speciesplus.net/species FSC National Risk Assessment: https://ca.fsc.org/en-ca/standards/national-risk-assessment-01
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
1.6.1	The Biomass Producer has implemented appropriate control systems and procedures to ensure that feedstock is not sourced from areas where there are violations of traditional or civil rights.

Finding	The *Canadian Charter of Rights and Freedoms* forms the first part of the Constitution Act (1982). The Charter falls into seven distinct categories: fundamental freedoms, democratic rights, language rights, mobility rights, minority language education rights, legal rights and equality rights. The Charter also recognizes Aboriginal rights and treaty rights (Section 35). Since Canada has now ratified to all 8 of the fundamental principles and rights, it is considered low risk. The *FSC National Risk Assessment for Canada* (Draft, 2018) has a low risk designation for Canada in regards to the rights of Indigenous and Traditional Peoples being upheld. There are mechanisms in place to mitigate the risk to Indigenous Peoples where their legally enforceable rights may be infringed as a result of forest management activities. Supplier contracts and assertions require adherence to applicable legislation. The BP has implemented a Due Diligence System (DDS) through their PEFC Chain of Custody certification. Risk assessments for each province have been completed and are updated annually.
Means of Verification	Supplier contracts and assertions NB, NS, PQ Risk Assessments BP's PEFC Due Diligence System Canadian Charter of Rights and Freedoms: https://laws-lois.justice.gc.ca/eng/Const/page-15.html ILO Helpdesk: https://www.ilo.org/empent/areas/business-helpdesk/lang--en/index.htm FSC National Risk Assessment: https://ca.fsc.org/en-ca/standards/national-risk-assessment-01 U.S. Department of State on Canada Human Rights: http://www.state.gov/g/drl/rls/hrrpt/2005/61719.htm Natural Resources Canada Indigenous Forestry Initiative: http://www.nrcan.gc.ca/forests/federal-programs/13125
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk at RA** ☐ **Unspecified Risk**
Comment or Mitigation Measure	N/A

	Indicator
2.1.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that forests and other areas with high conservation values are identified and mapped.
Finding	**About 70-80%** of the BP's feedstock is sustainable forest management (SFM) certified and acquired through the PEFC chain of custody (COC) system. SFM certificate holders are required to maintain forest management and harvest plans consistent with best management practices, particularly with regard to high conservation values (HCV). Certified feedstock is either SFI or FSC FM certified. Both standards include measures for the protection and enhancement of high conservation values in the management unit. SFM certified forests undergo annual 3rd party audits, which provide further assurance that critical habitat and HCV forests are identified, mapped, and conserved. Forest audit reports and public summary are available online and may be reviewed for non-compliances to the standards.

The remaining ~20-30% is uncertified feedstock from managed forests. The majority of uncertified feedstock is primarily from private forest lands in New Brunswick. Regional marketing boards represent private woodlot owners in the province. Marketing boards distribute BMP guides to private woodlot owners or contractors "*Best Management Practices: A Practical Guide to BMP's in New Brunswick's Private Woodlots*". The guide is supported by the SFI Implementation Committee in New Brunswick and lays out similar objectives to the SFI FM standard, including objectives for forests with exceptional conservation value. The marketing boards assist the private woodlot owners or contractors with forest management plans and mapping when needed.

Three WWF ecoregions have been identified and mapped for the supply base, the Eastern Canadian Forest, the New England Acadian Forest, and the Gulf of St. Lawrence Lowland Forest. The *FSC National Risk Assessment for Canada* [FSC NRA] (Draft, 2018) has been utilized to further assess the risk for HCV in the supply base. There are 6 HCV features identified in the FSC NRA:

1. HCV 1: Species Diversity
2. HCV 2: Landscape-level ecosystems and mosaics
3. HCV 3: Ecosystems and Habitat
4. HCV 4: Critical Ecosystem Services
5. HCV 5: Community Needs
6. HCV 6: Cultural values

HCV 1 is assessed on a provincial geographic scale, whereas the other HCVs are assessed based on the WWF ecoregions.

HCV 1, species diversity, is evaluated based on species identified by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) – a panel of expert Canadian scientists, as a basis for the determination of risk. COSEWIC makes recommendations to the Minister of Environment, and the minister will create listing plans and evaluate whether the species is added to the *Species at Risk Act* (SARA). Recovery plans are created for species added to SARA.

HCV 1 is assessed as specified risk for each of the provinces in the supply base. The assessment provides control measures to reduce to a low risk. At least one of the following control measures is suggested:

- No harvesting on the species' critical habitat,
- A SARA-compliant action plan is being implemented and/or the critical habitat is considered protected by the federal government,
- If #2 does not apply, then a plan or other measure to protect critical habitat is developed and available on the SARA registry, or
- The organization implements management actions that mitigates the risk of the threat to the species that is supported by an independent expert

The BP has reviewed the COSEWIC and SARA status for each of the identified species at risk in the supply base. 14 of the 16 listed species are on SARA and have recovery strategies. The other two species (Wrinkled Shingle Lichen and Black Foam Lichen) are currently in the evaluation process and are on the *2016-2018 Listing Plan*. Critical habitats are identified and mapped in the COSEWIC reports and recovery strategies (#3 above).

Eastern Canadian Forest
Location: Eastern Quebec, highlands of New Brunswick and Cape Breton, Newfoundland

Of the 33 forested ecoregions in Canada, the *WWF Conservation Status Index* lists the Eastern Canadian Forest as critical/endangered and is mapped above. The FSC NRA identifies this ecoregion at a low risk for the following HCV indicators for this ecoregion:

- HCV 3: Ecosystems and Habitat
- HCV 4: Critical Ecosystem Services
- HCV 5: Community Needs
- HCV 6 Cultural values

The assessment identifies the Eastern Canadian Forest as a specified risk for HCV 2, Landscape-level ecosystems and mosaics. HCV 2 is defined as:

"*Intact forest landscapes and large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patters of distribution and abundance".*

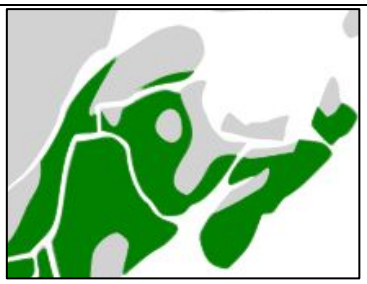
About 40% of this ecoregion remains as intact habitat. The majority of intact habitat occurs along the northern portions of the ecoregion in Quebec (*outside of defined supply base*). No major intact habitat blocks remain in Gaspé (Québec) outside of protected areas (https://www.worldwildlife.org/ecoregions/na0605).

The BP identifies the Eastern Canadian Forest at a low risk because:

- Most of this ecoregion is outside of the defined supply base (Northern Quebec and Newfoundland). The forests of this type located within the supply base are the NB and Cape Breton Highlands, which are outside of the procurement area for primary and secondary fibre suppliers.

- Most areas containing this ecoregion in the supply base have protected area designations (In Gaspe, PQ & Cape Breton Highlands National Park, NS) or are located on NB Crown lands. HCV sites are avoided during harvests under current management practice recommendations included in BMP manuals and guidelines. Crown land is SFM certified, so forest management plans are 3rd party audited for recognized forest management standards (i.e. SFI).

New England Acadian Forest
Location: Southern Quebec, half of New Brunswick and most of Nova Scotia



The WWF Conservation Status Index lists the New England Acadian Forest as critical/endangered and a map is shown above. The FSC NRA identifies this ecoregion at a low risk for the following HCV indicators:

- HCV 2: Landscape-level ecosystems and mosaics
- HCV 4: Critical Ecosystem Services
- HCV 5: Community Needs
- HCV 6 Cultural values

The assessment identifies the New England Acadian Forests at a specified risk for the following HCV 3, Ecosystems and habitats. HCV 3 is defined *as "rare, threatened, or endangered ecosystems, habitats or refugea".* This forest has a high magnitude of fragmentation but only 1.6% habitat loss. The degree of fragmentation is the reason associated with the specified risk designation.

Control measures have been identified for this ecoregion:

- Age-Class Distribution: demonstrate management towards appropriate amount of late-successional and older forest age classes and of key structural, composition and process attributes of late-successional, temperate-zone old-growth forest types.
- Species Composition: demonstrate management practices that support natural species composition based on ecosystem characteristics.
- Natural Disturbance Patterns: demonstrate that harvest methods are aligned with the appropriate natural disturbance type for the region/Eco district.

These control measures align with BMPs in the areas where these forests are harvested.

The BP identifies the New England Acadian Forest at a low risk because:

- BMPs are implemented in the areas where these forests are harvested. The control measures listed are identified in provincial BMP manuals.

Gulf of St. Lawrence Lowland Forest

Location: Prince Edward Island, east central New Brunswick and western coast of Nova Scotia

The WWF Conservation Status Index lists the Gulf of St. Lawrence Lowland Forest as critical/endangered and it is mapped as shown above. The FSC NRA identifies this ecoregion at a low risk for the following HCV indicators:

- HCV 2: Landscape-level ecosystems and mosaics
- HCV 4: Critical Ecosystem Services
- HCV 5: Community Needs
- HCV 6 Cultural values

The assessment identifies the New England Acadian Forests at a specified risk for HCV 3, Ecosystems and habitats. HCV 3 is defined *as rare, threatened, or endangered ecosystems, habitats or refugea*. This forest has a very high magnitude of fragmentation but only 4.5% habitat loss. The degree of fragmentation is the reason associated with the specified risk designation.

Control measures have been identified for this forest type through the FSC NRA, and include:

- Age-Class Distribution: demonstrate management towards appropriate amount of late-successional and older forest age classes and of key structural, composition and process attributes of late-successional, temperate-zone old-growth forest types.
- Species Composition: demonstrate management practices that support natural species composition based on ecosystem characteristics.
- Natural Disturbance Patterns: demonstrate that harvest methods are aligned with the appropriate natural disturbance type for the region/Eco district.

The BP identifies the Gulf of St. Lawrence Lowland Forest at a low risk because:

- BMPs are implemented in the areas where these forests are harvested. The control measures listed are identified in provincial BMP manuals.

In addition to above, Protected Natural Areas (PNA) in New Brunswick are mapped, and sites of high or unique ecological, historical, cultural or scenic value are preserved.

In Nova Scotia, high conservation value forests on Crown lands are protected through legislation, and enforced by Department of Natural Resources – these areas are also mapped. On private lands, designation and protection require agreement with the landowner.

In Quebec, 92% of forests are considered Crown lands, and as of 2013, 90% of productive public forests are certified through recognized SFM standards (PEFC, FSC, SFI). 3rd party certification requires that areas of high conservation value are identified and mapped. Furthermore, the Minister of Environment may designate a forest as an exceptional forest ecosystem at any time, and all forest development activities would be prohibited in these areas.

Contracts with fibre and round wood supplier require adherence to regional, provincial and federal legislation. Prior to bringing any feedstock onto the site, all suppliers are required to sign a supplier's assertion that states the following:

The supplier confirms that round wood and wood fibre don't originate from unacceptable or controversial sources, which include sources that are:

1. Not complying with local, national or international legislation, in particular:

a. *forestry operations and harvesting, including biodiversity conservation and conversion of forest to other use*
b. *management of areas with designated high environmental and cultural values, protected and endangered species, including requirements of CITES,*
c. *health and labour issues relating to forest workers, indigenous peoples' property, tenure and use rights, third parties' property, tenure and use rights,*
d. *payment of taxes and royalties related to timber harvesting are complete and up to date,*

	2. Not complying with legislation of the country of harvest relating to trade and customs, in so far as the forest sector is concerned, *3. Utilizing genetically modified forest based organisms,* *4. Converting forest to other vegetation type, including conversion of primary forests to forest plantations. Where forest plantations are defined as forests of exotic species that are under intensive stand management, are fast growing and subject to short rotations (I.e. Poplar, acacia, or eucalyptus plantations)* Transportation documents, such as transportation certificates (which contain PIDs), scale tickets and bills of lading are effective means of tracing the round wood back to the forest source and secondary fibre back to the sawmill. The BP's annual internal audit (PEFC & SBP) ensures that transportation documents are properly documented and stored; they are compared to scale reports for the same period to ensure that all tickets have been received and all fibre is accounted for. The internal audit also verifies that certified feedstock forest management certificates are still valid. On an annual basis, the BP completes supplier evaluations on 25% of secondary suppliers. The evaluation, or supplier audit, consists of a site visit to review and collect documentation on forest sources (location of the stump) to ensure that feedstock originates from within the supply base. The audit also helps to identify how certified feedstock is traced back to the forest management unit. This control measure provides assurance to the BP that feedstock originates from within the defined supply base. The BP has implemented a purchase wood risk assessment for all round wood purchases. Round wood purchases are evaluated annually; and depending on the associated risk, are either assessed via a desktop forest practice compliance review or with a site visit and field inspection facilitated by the BP. In addition to the BP's audits, the marketing boards conduct SFI BMP surveys and report on a random selection of private wood lots on an annual basis. Source forests are compared to critical habitat areas to ensure that harvests aren't located in these areas. As part of the BP's PEFC DDS system, risk assessments have been completed for each of the provinces in the supply base. In summary, the high conservation forests and features have been identified and mapped in the defined supply base.
Means of Verification	Supplier contracts and assertions WWF ecoregion maps Protected areas maps Primary & secondary feedstock sources maps Crown licensee SFM 3rd party audit reports Transportation Certificates, scale tickets, bills of lading Purchase wood risk assessment BP's annual supplier evaluations BP's annual internal audit List of forest tracts for private woodlots BMP manuals SFM standards NB SIC BMP survey and reports (private woodlots) Critical habitat maps (in recovery strategies) FSC National Risk Assessment: https://ca.fsc.org/en-ca/standards/national-risk-assessment-01 Species at Risk Act: https://laws-lois.justice.gc.ca/eng/acts/s-15.3/ New Brunswick Protected Natural Areas Act https://www.gnb.ca/legis/bill/editform-e.asp?ID=158&legi=54&num=5 Nova Scotia Endangered Species Act http://nslegislature.ca/legc/statutes/endspec.htm Quebec Sustainable Forest Development Act

	http://legisquebec.gouv.qc.ca/en/ShowDoc/cs/A-18.1
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.1.2	The Biomass Producer has implemented appropriate control systems and procedures to identify and address potential threats to forests and other areas with high conservation values from forest management activities.
Finding	**About 70-80%** of the BP's feedstock is sustainable forest management (SFM) certified and acquired through the PEFC chain of custody (COC) system. SFM certificate holders are required to maintain forest management and harvest plans consistent with best management practices, particularly with regard to high conservation values. The standards include measures for the protection of forests with exceptional conservation value (SFI) and/or for the maintenance or enhancement of high conservation values in the forest management unit (FSC). Program participants must promptly reforest and maintain ecosystem productivity and conditions capable of supporting naturally occurring species. Furthermore, certificate holders undergo annual 3rd party audits, providing assurance that critical habitat and high conservation value forests are identified, mapped, and conserved. **The remaining ~20-30%** is uncertified feedstock from managed forests; most is from private land in New Brunswick (NB) and a small percentage is from South Eastern Quebec (QC) or Nova Scotia (NS). Conservation efforts and protection are Canada's approach to help maintain forest ecosystem and biodiversity. Conservation efforts take the form of provincial guidelines that forest companies operating on the land must follow and include retention of trees used by wildlife during harvesting, creation of a mix tree species type and age, and ensuring that sections of forest remain connected to meet wildlife habitat needs. Whereas forest protection is the creation of parks or other areas protected legally from industrial activity to preserve healthy ecosystems. These include networks of protected areas to enable wildlife to move from one area and habitat for vulnerable plant species. The Global Forest Watch maps the combined conservation value within Canada's intact forest landscapes; the majority of the remaining intact landscapes in Canada are located outside of the BPs defined supply base (https://databasin.org/galleries/0267510a7beb4142a55857290b8f922a#expand=152259%2C152261). In NB, *Protected Natural Areas* (PNA) are mapped and sites of high or unique ecological, historical, cultural or scenic value are preserved. Crown land licensees must identify HCV areas in their forest management plans. The NB provincial government has mapped areas of high conservation value including designated conservation forest, special management

	areas, national & provincial parks and conservation sites (http://www.snb.ca/GeoNB1/e/map-carte/DNR_cf_E.asp). Regional marketing boards represent private woodlots owners in the province. Most of the BP's uncertified primary feedstock originates from managed private woodlots in NB. Marketing boards distribute BMP guides to private woodlot owners or contractors "*Best Management Practices: A Practical Guide to BMP's in New Brunswick's Private Woodlots*". The guide is supported by the SFI Implementation Committee in New Brunswick and lays out similar objectives to the SFI FM standard, including objectives for forests with exceptional conservation value. Marketing boards assist landowners in identifying HCV areas and addressing any threats in the landowners' forest management plans. Marketing boards will often offer SFI logger training to private woodlot owners and contractors. A private woodlot silviculture program is available through the provincial government and a manual is available to participants (*New Brunswick Private Woodlot Silviculture Manual*). Silviculture contracts (i.e. Landowner Agreements) between the marketing board and woodlot owners provide assurance that BMPs are followed and prescribed to each forest management unit. Performance monitoring and random inspections are completed by provincial government staff. All privately owned property greater than 10 ha are eligible for silviculture funding and forest management assistance. Sustainable forestry initiatives laid out in the treatment plan must be followed to be eligible for subsequent treatments under the program. All private woodlots must comply with the *Clean Water Act*, the *Forest Products Act*, the *Natural Products Act*, the *Forest Fires Act*, the *Transportation of Primary Forest Products Act*, and the *Pesticides Control Act*. Any violations identified during an audit are reported to the appropriate authorities. High conservation value habitats in Nova Scotia are protected under the *NS Endangered Species Act*. On private lands, designation and protection require agreement with the landowner; however, active stewardship programs and recovery strategies have been effective at conserving critical habitat and high conservation value areas in the province. *Nova Scotia's Forest Sustainability Act* require that buyers of more than 5,000 cubic metres of private primary forest products must pay directly to a sustainable forestry fund or carry out silviculture activities on privately owned land. In Quebec, high conservation value forests are protected through the *Sustainable Forest Development Act*. The Minister may designate a forest as an exceptional forest ecosystem, and all forest development activities are prohibited in these forests. Forest management plans for harvest sites identify areas of high conservation value. The Quebec Federation of Woodlot Owners (FPFQ) has released the "*Sound Forestry Practices for Private Woodlots Field Guide*" and this is used by small woodlot owners and contractors to promote responsible forest management. The guide is supported by SFI and is the same guide used by SFI program participants when procuring wood through SFI Fibre Sourcing Standard requirements. In general, avoidance measures and BMPs are the key ways that forest operations remove threats to high conservation value forests. Forests having high or exceptional conservation value are often protected through federal and provincial government legislation (i.e. *Protected Natural Areas Act, Parks Act*, *Crown Lands Act*, etc.), and become National or Provincial Parks or wildlife reserves. The Canadian Wildlife Service, Environment Canada, Fisheries and Oceans Canada, and Parks Canada Agency all work together to enforce federal legislation. Provincial governments enforce legislation on the protection of species and conservation areas from encroachment through mechanisms such as permitting, monitoring and issuance of fines or charges for infringement (FSC National Risk Assessment, Draft, 2018). Three WWF ecoregions have been identified and mapped for the supply base, the Eastern Canadian Forest, the New England Acadian Forest, and the Gulf of St. Lawrence Lowland

Forest. The *FSC National Risk Assessment for Canada* [FSC NRA] (Draft, 2018) has been utilized to further assess the risk for HCV in the supply base. There are 6 HCV features identified in the FSC NRA:

7. HCV 1: Species Diversity
8. HCV 2: Landscape-level ecosystems and mosaics
9. HCV 3: Ecosystems and Habitat
10. HCV 4: Critical Ecosystem Services
11. HCV 5: Community Needs
12. HCV 6: Cultural values

HCV 1 is assessed on a provincial geographic scale, whereas the other HCVs are assessed based on the WWF ecoregions.

HCV 1, species diversity, is evaluated based on the species identified by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) – a panel of expert Canadian scientists, as a basis for the determination of risk. COSEWIC makes recommendations to the Minister of Environment, and the minister will create listing plans and evaluate whether the species is added to the *Species at Risk Act* (SARA). Recovery plans are created for species added to SARA.

HCV 1 is assessed as specified risk for each of the provinces in the supply base. The assessment provides control measures to reduce from specified to low risk. At least one of the following control measures is suggested:

13. No harvesting on the species' critical habitat,
14. A SARA-compliant action plan is being implemented and/or the critical habitat is considered protected by the federal government,
15. If #2 does not apply, then a plan or other measure to protect critical habitat is developed and available on the SARA registry, or
16. The organization implements management actions that mitigates the risk of the threat to the species that is supported by an independent expert

The BP has reviewed the COSEWIC and SARA status for each of the identified species at risk in the supply base. 14 of the 16 listed species are on SARA and have recovery strategies. The other two species (Wrinkled Shingle Lichen and Black Foam Lichen) are currently in the evaluation process and are on the *2016-2018 Listing Plan*. Critical habitats are identified and mapped in the COSEWIC reports and recovery strategies (#3 above).

Eastern Canadian Forest

Location: Eastern Quebec, highlands of New Brunswick and Cape Breton, Newfoundland

Of the 33 forested ecoregions in Canada, the *WWF Conservation Status Index* lists the Eastern Canadian Forest as critical/endangered and it is mapped above. The FSC NRA identifies this ecoregion at a low risk for the following HCV indicators for this ecoregion:

HCV 3: Ecosystems and Habitat
HCV 4: Critical Ecosystem Services
HCV 5: Community Needs
HCV 6 Cultural values

The assessment identifies the Eastern Canadian Forest as a specified risk for HCV 2, Landscape-level ecosystems and mosaics. HCV 2 is defined as:

"*Intact forest landscapes and large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patters of distribution and abundance".*

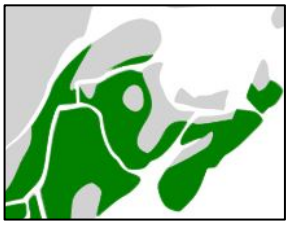
About 40% of this ecoregion remains as intact habitat. The majority of intact habitat occurs along the northern portions of the ecoregion in Quebec (*outside of defined supply base*). No major intact habitat blocks remain in Gaspé (Québec) outside of protected areas (https://www.worldwildlife.org/ecoregions/na0605).

The BP identifies the Eastern Canadian Forest at a low risk because:

- Most of this ecoregion is outside of the defined supply base (Northern Quebec and Newfoundland). The forests of this type located within the supply base are the NB and Cape Breton Highlands, which are outside of the procurement area for primary and secondary fibre suppliers.
- Most areas containing this ecoregion in the supply base have protected area designations (In Gaspe, PQ & Cape Breton Highlands National Park, NS) or are located on NB Crown lands. HCV sites are avoided during harvests under current management practice recommendations included in BMP manuals and guidelines. Crown land is SFM certified, so forest management plans are 3rd party audited for recognized forest management standards (i.e. SFI).

New England Acadian Forest

Location: Southern Quebec, half of New Brunswick and most of Nova Scotia



The WWF Conservation Status Index lists the New England Acadian Forest as critical/endangered and a map is shown above. The FSC NRA identifies this ecoregion at a low risk for the following HCV indicators:

HCV 2: Landscape-level ecosystems and mosaics
HCV 4: Critical Ecosystem Services
HCV 5: Community Needs
HCV 6 Cultural values

The assessment identifies the New England Acadian Forests at a specified risk for the following HCV 3, Ecosystems and habitats. HCV 3 is defined *as "rare, threatened, or endangered ecosystems, habitats or refugea".* This forest has a high magnitude of fragmentation but only 1.6% habitat loss. The degree of fragmentation is the reason associated with the specified risk designation.

Control measures have been identified for this ecoregion:

- Age-Class Distribution: demonstrate management towards appropriate amount of late-successional and older forest age classes and of key structural, composition and process attributes of late-successional, temperate-zone old-growth forest types.
- Species Composition: demonstrate management practices that support natural species composition based on ecosystem characteristics.

- Natural Disturbance Patterns: demonstrate that harvest methods are aligned with the appropriate natural disturbance type for the region/Eco district.

These control measures align with BMPs in the areas where these forests are harvested.

The BP identifies the New England Acadian Forest at a low risk because:
BMPs are implemented in the areas where these forests are harvested. The control measures listed are identified in provincial BMP manuals.

Gulf of St. Lawrence Lowland Forest

Location: Prince Edward Island, east central New Brunswick and western coast of Nova Scotia

The WWF Conservation Status Index lists the Gulf of St. Lawrence Lowland Forest as critical/endangered and it is mapped as shown above. The FSC NRA identifies this ecoregion at a low risk for the following HCV indicators:

HCV 2: Landscape-level ecosystems and mosaics
HCV 4: Critical Ecosystem Services
HCV 5: Community Needs
HCV 6 Cultural values

The assessment identifies the New England Acadian Forests at a specified risk for HCV 3, Ecosystems and habitats. HCV 3 is defined *as rare, threatened, or endangered ecosystems, habitats or refugea*. This forest has a very high magnitude of fragmentation but only 4.5% habitat loss. The degree of fragmentation is the reason associated with the specified risk designation. Control measures have been identified for this forest type through the FSC NRA, and include:

- Age-Class Distribution: demonstrate management towards appropriate amount of late-successional and older forest age classes and of key structural, composition and process attributes of late-successional, temperate-zone old-growth forest types.
- Species Composition: demonstrate management practices that support natural species composition based on ecosystem characteristics.
- Natural Disturbance Patterns: demonstrate that harvest methods are aligned with the appropriate natural disturbance type for the region/Eco district.

The BP identifies the Gulf of St. Lawrence Lowland Forest at a low risk because:

- BMPs are implemented in the areas where these forests are harvested. The control measures listed are identified in provincial BMP manuals.

The BP's PEFC chain of custody and environmental management system allow for the effective tracking of feedstock back to the forest source. Transportation documents, such as transportation certificates (which contain PIDs), scale tickets, trip tickets, and bills of lading are effective means of tracing the round wood back to the forest and sawmill residuals back to the sawmill. The BP's annual internal audit ensures that transportation documents are properly documented and stored; they are compared to scale reports for the same period to ensure that all tickets have been received and all fibre is accounted for. The internal audit also verifies the validity of forest management certificates.

	Supplier contracts and assertions provide assurance to the BP that suppliers adhere to local, provincial and federal legislation. On an annual basis, the BP completes supplier evaluations on 25% of secondary suppliers. The evaluation, or supplier audit, consists of a site visit to review and collect documentation on forest sources (location of the stump) to ensure that feedstock originates from within the supply base, and to identify how certified feedstock is traced back to the forest management unit. This control measure provides assurance to the BP that feedstock originates from within the defined supply base. The BP has implemented a purchase wood risk assessment for all round wood purchases. Round wood purchases are evaluated annually; and depending on the associated risk, may be assessed based on forest practice compliance or have site visits and field inspections facilitated by the BP. In addition, the marketing boards conduct SFI BMP surveys and reports on a random selection of private wood lots annually. Risk assessments have been completed for each of the 3 provinces as part of the BP's PEFC due diligence system. In summary, on a large scale, high conservation areas are documented and mapped through a variety of sources including NGO's (i.e. WWF, NCC, etc.), national risk assessments (i.e. FSC) and provincial and federal governments. Regional high conservation areas are further identified in regional and provincial reports and through forest management plans for each forest management unit. Forest management plans are required for all Crown lands and any private land assigned to provincially funded silvicultural programs. When HCV areas are identified in forest management plans, control measures are put in place to reduce the threat to each HCV indicators, as described in BMP manuals. All certified suppliers must adhere to HCV requirements though their SFM certificates for their certified forest management units. Non-certified sources are required to adhere to BMPs to be considered for silviculture funding contracts. With extensive ongoing research, conservation efforts and protection in the supply base area, the BP assigns a low risk to this indicator as the high conservation values have been identified and addressed for potential threats from forest management activities.
Means of Verification	Supplier contracts and assertions Landowner agreement SFM standards BMP and silviculture guides for private woodlots BP's purchase wood risk assessment BP's EMS manual Transportation Certificates, scale tickets, bills of lading Maps of primary & secondary feedstock sources List of forest tracts for private woodlots NB SIC BMP survey and reports (private woodlots) WWF maps PEFC wood procurement processes 3rd party Crown licensee forest audits SFM certificates List of Applicable laws and regulations Canadian Federal high value habitat maps: http://data.ec.gc.ca/data/species/establishpartnerships/high-value-habitats-and-high-value-biodiversity-areas-biodiversity-atlas-canadian-wildlife-service-ontario-region/ Quebec provincial government maps: https://mffp.gouv.qc.ca/le-ministere/cartes-plans/ GNB conservation map: http://www.snb.ca/GeoNB1/e/map-carte/DNR_cf_E.asp WWF: https://www.worldwildlife.org\ FSC National Risk Assessment: https://ca.fsc.org/en-ca/standards/national-risk-assessment-01

	Global Forest Watch Intact Forest Maps: https://databasin.org/galleries/0267510a7beb4142a55857290b8f922a#expand=152259%2C152261
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.1.3	The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is not sourced from forests converted to production plantation forest or non-forest lands after January 2008.
Finding	The BP's PEFC Chain of Custody system is an effective means of feedstock back to the forest source. Transportation documents, such as transportation certificates (which contain PIDs), scale tickets, and bills of lading are effective means of tracing the round wood back to the forest and secondary fibre back to the sawmill. The BP's annual internal audit ensures that transportation documents are properly documented and stored; they are compared to scale reports for the same period to ensure that all tickets have been received and all fibre is accounted for. The internal audit also verifies the validity of forest management certificates. **About 70-80%** of the BP's feedstock is forest management (FM) certified and acquired through the PEFC chain of custody (COC) system. SFM certificate holders are required to maintain forest management and harvest plans consistent with best management practices. The standards require the protection of forestlands from deforestation and conversion. Program participants must promptly reforest and maintain ecosystem productivity and conditions capable of supporting naturally occurring species. Furthermore, certificate holders undergo annual 3rd party audits to ensure that practices are consistent with SFM standards. **The remaining ~20-30%** is uncertified feedstock from managed forests; most from private land in New Brunswick (NB), while a small percentage originates from South Eastern Quebec (QC) and Nova Scotia (NS). Regional marketing boards represent private woodlots owners in the province. Marketing boards distribute BMP guides to private woodlot owners or contractors "*Best Management Practices: A Practical Guide to BMP's in New Brunswick's Private Woodlots*". The guide is supported by the SFI Implementation Committee in NB and lays out similar objectives to the SFI FM standard. The marketing boards assist private woodlot owners or contractors with forest management plans and mapping when needed, and will often offer SFI logger training to private woodlot owners and contractors in their region. A private woodlot silviculture program is available through the provincial government and a manual is available to participants (*NB Private Woodlot Silviculture Manual*). Silviculture contracts (i.e. Landowner Agreements) between the marketing board and woodlot owners provide assurance that the site is being reforested and not converted to another land use. Furthermore, performance monitoring and random inspections are completed by provincial government staff. All privately owned property greater than 10 ha are eligible for silviculture funding and forest management assistance. Sustainable forestry initiatives laid

out in the treatment plan must be followed to be eligible for subsequent treatments under the program.

Forest management plans on Crown lands aim to include strategies for regenerating forests with principal characteristics of the native ecosystems for that site using natural and artificial regeneration. Since 2006, Canada has been monitoring deforestation through the *National Deforestation Monitoring System* (NDMS). In the NDMS, deforestation is the conversion of forest land to non-forest land use. The FSC National Risk Assessment in Canada (Draft, 2018) evaluated deforestation rates and noted that key contributors to deforestation were clearing for agriculture purposes (33%) and oil and gas industries (27%). Forestry contributed to 4.2% during the same reporting period (2008-2012). All areas assessed in the BPs defined supply base were a low risk for conversion of natural forests to non-forest use and for conversion to plantations.

Canadian forests are healthy, productive and thriving; the annual deforestation rate was less than 0.02% of forests in 2010 and has been declining The Canadian government monitors and regularly publishes reports on deforestation. 94% of Canada's forests are on public land and according to laws, regulations, and policies across the country, all public land must be reforested either by replanting or natural regeneration (https://www.nrcan.gc.ca/forests/fire-insects-disturbances/deforestation/13419).

Supplier contracts provide assurance to the BP that suppliers adhere to local, provincial and federal legislation. Feedstock is not sourced from plantations or lands being converted to other uses (i.e. agricultural lands). Prior to bringing any feedstock onto the site, all suppliers are required to sign an assertion that states the following:

The supplier confirms that round wood and wood fibre don't originate from unacceptable or controversial sources, which include sources that are:

1. *Not complying with local, national or international legislation, in particular:*
    a. *forestry operations and harvesting, including biodiversity conservation and conversion of forest to other use*
    b. *management of areas with designated high environmental and cultural values, protected and endangered species, including requirements of CITES,*
    c. *health and labour issues relating to forest workers, indigenous peoples' property, tenure and use rights, third parties' property, tenure and use rights,*
    d. *payment of taxes and royalties related to timber harvesting are complete and up to date,*
2. *Not complying with legislation of the country of harvest relating to trade and customs, in so far as the forest sector is concerned,*
3. *Utilizing genetically modified forest based organisms,*
4. *Converting forest to other vegetation type, including conversion of primary forests to forest plantations. Where forest plantations are defined as forests of exotic species that are under intensive stand management, are fast growing and subject to short rotations (I.e. Poplar, acacia, or eucalyptus plantations)*

On an annual basis, the BP completes supplier evaluations on 25% of secondary suppliers. The evaluation, or supplier audit, consists of a site visit to review and collect documentation on forest sources (location of the stump) to ensure that feedstock originates from within the supply base, and to identify how certified feedstock is traced back to the forest management unit. This control measure provides assurance to the BP that feedstock originates from within the defined supply base of the SBE.

The BP has implemented a purchase wood risk assessment for all round wood purchases. Round wood purchases are evaluated annually; and depending on the associated risk, may be assessed based on forest practice compliance or have site visits and field inspections

	facilitated by the BP. In addition, the marketing boards conduct SFI BMP surveys and reports on a random selection of private wood lots annually. Risk assessments have been completed for each of the 3 provinces as part of the BP's PEFC due diligence system. In summary, the supply base is considered to be a low risk for forest conversion to non-forested land or plantations. There are no plantations in the supply base and BMPs require the adequate protection from deforestation and conversion.
Means of Verification	Supplier contracts and assertions Silviculture contracts BP's purchase wood risk assessment BP's annual supplier evaluations SFM standards BMP manuals Transportation certificates, scale tickets, bills of lading NB, NS and QC risk assessments BP's annual internal audit List of forest tracts for private woodlots NB SIC BMP survey and reports (private woodlots) Crown licence forest audits Provincial and federal government reports and maps Canada's National Deforestation Monitoring System: http://cfs.nrcan.gc.ca/publications?id=36042 Deforestation in Canada: https://www.nrcan.gc.ca/forests/fire-insects-disturbances/deforestation/13419 FSC National Risk Assessment: https://ca.fsc.org/en-ca/standards/national-risk-assessment-01
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.2.1	The Biomass Producer has implemented appropriate control systems and procedures to verify that feedstock is sourced from forests where there is appropriate assessment of impacts, and planning, implementation and monitoring to minimise them.
Finding	The supply base is traceable back to the defined supply base (Indicator 1.1.2). **About 70-80%** of the BP's feedstock is forest management (FM) certified and acquired through the PEFC chain of custody (COC) system. SFM certificate holders are required to maintain forest management and harvest plans consistent with best management practices. Furthermore, certificate holders undergo annual 3rd party audits to ensure that practices are consistent with SFM standards.

	The remaining ~20-30% is uncertified feedstock from managed forests; most is from private land in New Brunswick (NB) and a small percentage is from South Eastern Quebec (QC) and Nova Scotia (NS). Regional marketing boards represent private woodlots owners in the province. Marketing boards distribute best management practice (BMP) guides to private woodlot owners or contractors "*Best Management Practices: A Practical Guide to BMP's in New Brunswick's Private Woodlots*". The guide is supported by the SFI Implementation Committee in NB and lays out similar objectives to the SFI FM standard. The marketing boards assist private woodlot owners or contractors with forest management plans and mapping when needed, and will often offer SFI logger training to private woodlot owners and contractors in their region. Private woodlots must follow best management practices and have operating/harvesting plans for consideration of silviculture funding. In NB, a contract between the marketing board and the woodlot owner/contractor specifies that all silviculture work must be completed in accordance with local standard and practices of the Department of Natural Resources. The *NB Private Woodlot Silviculture manual* sets the guideline and regulations governing activities on private woodlots. On Crown land, harvest plans are developed and include detailed maps of harvest blocks, roadways, watercourse crossings, and high conservation areas. The provincial forest authorities have inspectors to ensure that forest operators respect harvesting regulations. Forest operators on Crown land are required to implement environmental impact control measures, and those that don't can receive penalties, fines, suspension of licence, timber seizure, or even imprisonment (*FSC National Risk Assessment,* draft 2018). Forests certified to SFM standards are required to maintain operating and harvest plans demonstrating BMPs and complete annual 3rd party audits. *Nova Scotia's Code of Forest Practice* states that forest management will be designed and conducted in a manner that maintains and enhances the quality of air, water, and soil. The BMP manual developed by the Nova Forest Alliance for contractors and operators provides guidelines for assessing and preventing negative environmental impacts. The *Sustainable Forest Development Act* and BMP manual (Saines Pratiques D'Intervention en Foret Privee, Guide Terrain, 4E, 2016) provide the guidelines for constructing forest management plans in QC. The Minister of Natural Resources (MRN) is responsible for all forest management plans on Crown lands. Confirmation of management practices is part of the supplier risk assessment and monitoring system. Annual audits ensure that appropriate control measures are in place to prevent environmental impacts. Harvesting regulations and guidelines on environmental impacts in the defined supply base are elaborated under provincial forest acts (i.e. NB Crown Lands and Forests Act, NS Forests Act, and QC's Sustainable Forest Development Act). These acts and associated guidelines require forest managers to assess and manage the environmental impacts to soil, water and biodiversity. The provincial forest authorities are responsible for carrying out audits, detailed investigations, issuing warnings, fines, penalties, and prosecution for serious infractions through the court system (https://www.nrcan.gc.ca/forests/canada/laws/17497). Forest management in Canada is based on nationally recognized standards for the long term protection and development of the forest. Canada's forest laws are some of the strictest in the world and are based on sustainable forest management principles, scientific research and analysis, and developed with public consultation (https://www.nrcan.gc.ca/forests/canada/laws/17497).

	In 2015, Canada adopted the United Nations' 17 Sustainable Development Goals identified in the *2030 Agenda for Sustainable Development*. Data collected over time will provide essential information about the state and trends of Canada's forests, highlight needs for improvement in forest management policy and practice, and supply reliable information for discussions and initiatives related to environmental performance as discussed in the 2018 *State of Canada's Forest Annual Report* (http://cfs.nrcan.gc.ca/publications/download-pdf/39336). On an annual basis, the BP completes supplier evaluations on 25% of secondary suppliers. The evaluation, or supplier audit, consists of a site visit to review and collect documentation on forest sources (location of the stump) to ensure that feedstock originates from within the supply base, and to identify how certified feedstock is traced back to the forest management unit. This control measure provides assurance to the BP that feedstock originates from within the defined supply base of this evaluation. The BP has implemented a purchase wood risk assessment for all round wood purchases. Round wood purchases are evaluated annually; and depending on the associated risk, may be assessed based on forest practice compliance or have site visits and field inspections facilitated by the BP. In addition, the marketing boards conduct SFI BMP surveys and reports on a random selection of private wood lots on an annual basis. Supplier contracts and assertions provide some assurance that suppliers are adhering to local, provincial and federal legislation. Risk assessments have been completed for each of the 3 source provinces as part of the BP's PEFC due diligence system. Similar to the FSC NRA (Draft, 2018), and based on the above findings, this indicator is considered a low risk.
Means of Verification	Supplier contracts and assertions Crown licensee audits 3rd party forest management audits SFM certificates Transportation certificates, scale tickets, bills of lading PEFC due diligence system BP's annual supplier evaluations BP's purchase wood risk assessment BMP manuals NB SIC BMP survey and reports (private woodlots) NB private woodlot silviculture program and funding agreement List of applicable laws and regulations 2018 State of Canada's Forest Annual Report http://cfs.nrcan.gc.ca/publications/download-pdf/39336 2030 Agenda for Sustainable Development https://sustainabledevelopment.un.org/post2015/transformingourworld FSC National Risk Assessment: https://ca.fsc.org/en-ca/standards/national-risk-assessment-01 Natural Resources Canada on Canada's Forest Laws: https://www.nrcan.gc.ca/forests/canada/laws/17497
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk at RA** ☐ **Unspecified Risk**
Comment or Mitigation Measure	N/A

	Indicator
2.2.2	The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is sourced from forests where management maintains or improves soil quality (CPET S5b).
Finding	The supply base is traceable back to the defined supply base (Indicator 1.1.2). **About 70-80%** of the BP's feedstock is forest management (FM) certified and acquired through the PEFC chain of custody (COC) system. SFM certificate holders are required to maintain forest management and harvest plans consistent with best management practices (BMP). Furthermore, certificate holders undergo annual 3rd party audits to ensure that practices are consistent with SFM standards. **The remaining ~20-30%** is uncertified feedstock from managed forests; most is from private land in New Brunswick (NB) and a small percentage is from South Eastern Quebec (QC) or Nova Scotia (NS). Harvesting regulations and guidelines on environmental impacts to soils are elaborated in each of the provinces' forest acts (i.e. *NB Crown Lands and Forests Act, NS Forests Act,* and *QC's Sustainable Forest Development Act*). These acts and associated guidelines require forest managers to assess and manage the environmental impacts to soil quality. The provincial forest authorities are responsible for carrying out audits, detailed investigations, issuing warnings, fines, penalties, and prosecution for serious infractions (https://www.nrcan.gc.ca/forests/canada/laws/17497). BMPs in place for each province provide guidance for the management of soils. **New Brunswick** The *2009 Biodiversity Strategy* was developed by the provincial government as a comprehensive plan aiming to conserve genetic, species and ecosystem diversity and these are used and managed in a sustainable manner to achieve biodiversity goals. The Crown forest management system in NB is established under the *Crown Lands and Forest Act* and is monitored by the Department of Natural Resources (DNR) and citizens of NB. The government sets objectives and standards for management of the lands and Licensees are responsible for achieving those objectives. Under the Act, the Minister of Natural Resources evaluates Crown forest management performance on a five year cycle. The evaluation results are used to determine whether the forest management agreement with each Licensee is extended or terminated. Most Crown forests in the province are SFM certified and undergo annual 3rd party audits. BMPs laid out in SFM standards provide guidance for the protection of soils. The forest management manual for NB Crown lands also includes guidance for the preservation of soil function, processes and health. To sustain this, harvesters must minimize rutting and environmental contamination at the site, as well as prevent the permanent loss of productive forest area from heavy harvest debris. Regional marketing boards represent private woodlots owners in the province. Marketing boards distribute BMP guides to private woodlot owners and contractors "*Best Management Practices: A Practical Guide to BMP's in New Brunswick's Private Woodlots*". The guide is supported by the SFI Implementation Committee in NB and lays out similar objectives to the SFI FM standard. The BMP guide provides guidance for managing harvesting debris (slash), tree tops, and coarse woody debris (fallen dead wood). Marketing boards assist private woodlot owners or contractors with forest management plans and mapping when needed, and will often offer SFI logger training to private woodlot owners and contractors. Marketing boards' complete annual audits and reports on a random selection of private woodlots. The annual audit assesses the use of BMPs on each site; in particular the survey requires an assessment on whether ruts are minimized and if the site is clean of fuel spills.

	Adherence to the *Clean Water Act* and *Watercourse Buffer Zone guidelines* are required in private and Crown forests. Private woodlots can acquire funding for the preparation of a management plan, which includes forest stand description, access roads, treatment recommendations, and long term resource consideration (wetlands, forest health, protection from fires and insects, biodiversity, wildlife habitat, etc.). Private woodlots must follow BMPs and have operating/harvesting plans for consideration of silviculture funding. An agreement between the marketing board and the woodlot owner/contractor specifies that all silviculture work must be completed in accordance with local standards and practices of DNR. The *New Brunswick Private Woodlot Silviculture manual* lists the rules and regulations governing activities on private woodlots. **Nova Scotia** *Nova Scotia's Code of Forest Practice* states that forest management will be designed and conducted in a manner that maintains and enhances the quality of air, water, and soil. The *Wildlife Habitat and Protection Regulations*, made under section 40 of the *Forests Act* have several requirements including: 1) Legacy trees and habitat structure, which includes specific regulations in regards to number of trees, proportion of species, average height and diameter, and clump size, 2) Special Management Zones for watercourses (> 50 cm wide), and 3) Protection of watercourses (< 50 cm wide). The BMP manual developed by the Nova Forest Alliance for contractors and operators provides guidelines for assessing ground vegetation and soil types, so that soil compaction and rutting hazards can be determined and managed effectively. **Quebec** The *Sustainable Forest Development Act* is considered as a guideline when constructing forest management plans in QC. The Minister of Natural Resources (MRN) is responsible for all forest management plans on Crown lands. Confirmation of management practices is part of the supplier risk assessment and monitoring system. Annual audits ensure that appropriate control measures are in place for maintaining or improving soil quality. The QC BMP manual provides guidelines to minimize rutting and erosion for soil preservation and the maintenance of soil function (Saines Pratiques D'Intervention en Foret Privee, Guide Terrain, 4E, 2016). The supply base is defined and can be traced back to the forest management unit (Indicator 1.1.2). Supplier contracts and assertions have clauses requiring adherence to all applicable legislation. Risk assessments have been completed for each of the 3 provinces through the BP's PEFC due diligence system. On an annual basis, the BP completes supplier evaluations on 25% of secondary suppliers. The evaluation, or supplier audit, consists of a site visit to review and collect documentation on forest sources (location of the stump) to ensure that feedstock originates from within the supply base, and to identify how certified feedstock is traced back to the forest management unit. This control measure provides assurance to the BP that feedstock originates from within the defined supply base of the SBE. The BP has implemented a purchase wood risk assessment for all round wood purchases. Round wood purchases are evaluated annually; and depending on the associated risk, may be assessed based on forest practice compliance or have site visits and field inspections facilitated by the BP. In addition, the marketing boards conduct SFI BMP surveys and reports on a random selection of private wood lots on an annual basis.
Means of Verification	Supplier contracts and assertions NB SIC BMP survey and reports (private woodlots) BP's annual supplier evaluations BP's Purchase Wood Risk Assessment BMP manuals

	NB, NS, QC risk assessments NB Private Woodlot Silviculture Program and funding agreement List of applicable laws and regulations 2009 Biodiversity Strategy: *www2.gnb.ca/content/dam/gnb/Departments/nr-rn/pdf/en/.../Biodiversity.pdf* FSC National Risk Assessment: https://ca.fsc.org/en-ca/standards/national-risk-assessment-01
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.2.3	The Biomass Producer has implemented appropriate control systems and procedures to ensure that key ecosystems and habitats are conserved or set aside in their natural state (CPET S8b).
Finding	The supply base is traceable back to the defined supply base (Indicator 1.1.2). **About 70-80%** of the BP's feedstock is forest management (FM) certified and acquired through the PEFC chain of custody (COC) system. SFM certificate holders are required to maintain forest management and harvest plans consistent with best management practices (BMP). Furthermore, certificate holders undergo annual 3rd party audits to ensure that practices are consistent with SFM standards. **The remaining ~20-30%** is uncertified feedstock from managed forests; most is from private land in New Brunswick (NB) and a small percentage is from South Eastern Quebec (QC) and Nova Scotia (NS). Conservation efforts and forest protection are Canada's approach to help maintain forest ecosystem and biodiversity. Conservation efforts include provincial guidelines that forest companies must follow, which include retention of trees used by wildlife during harvesting, creation of a mix tree species type and age, and ensuring that sections of forest remain connected to meet wildlife habitat needs. Forest protection is the creation of parks or other areas protected legally from industrial activity to preserve healthy ecosystems. These include networks of protected areas to enable wildlife to move from one area to another and habitat for vulnerable plant species. The Global Forest Watch maps conservation values in Canada's intact forest landscapes; the majority of the remaining intact landscapes in Canada are located outside of the BP's defined supply base (https://databasin.org/galleries/0267510a7beb4142a55857290b8f922a#expand=152259%2C152261). Canada's *Wildlife Act* allows for the creation, management and protection of wildlife areas to preserve habitats that are critical to migratory birds and other wildlife species, particularly those that are at risk. All commercial activities are prohibited on the site unless a permit is issued. A guide "*How Much Habitat is Enough*" is effectively a framework to serve as a starting point for developing strategies to conserve habitat and discuss research needs around those habitats. The framework includes guidelines for wetland, riparian and watershed, forest and grassland habitat.

Soil and water resources are quintessential to the health, vitality and conservation of Canadian ecosystems and habitats. 7% of Canadian forests (24 million hectares) are designated as protected areas. The National Parks Act was developed to help create and manage these protected areas. Many areas considered high conservation value forest are protected through federal and provincial government legislation (i.e. Protected Natural Areas Act, Parks Act, Crown Lands Act, etc.) and have become national or provincial parks or wildlife reserves. Each provincial government is responsible for the management of their forest resource. They have the power to develop and enforce legislation, regulations, standards and programs to ensure the conservation and management of the forest.

Forest management in Canada is based on nationally recognized standards for the long term protection and development of the forest. Canada's forest laws are some of the strictest in the world and are based on sustainable forest management principles, scientific research and analysis, and developed with public consultation (https://www.nrcan.gc.ca/forests/canada/laws/17497).

In 2015, Canada adopted the United Nations' 17 Sustainable Development Goals identified in the *2030 Agenda for Sustainable Development*. Data collected over time helps to a) provide essential information about the state and trends of Canada's forests, b) highlight needs for improvement in forest management policy and practice, and c) supply reliable information for discussions and initiatives related to environmental performance. These are discussed in the 2018 *State of Canada's Forest Annual Report* (http://cfs.nrcan.gc.ca/publications/download-pdf/39336).

New Brunswick
Crown forest land licensees in NB are required to implement BMPs for the conservation of key ecosystems and habitats. Crown forest management in NB is established under the *Crown Lands and Forest Act* and is monitored by the Department of Natural Resources (DNR) and citizens of NB. Under the Act, the Minister of Natural Resources evaluates Crown forest management performance on a five year cycle. Most Crown forests in the province are SFM certified and undergo annual 3rd party audits.

Regional marketing boards represent private woodlots owners in the province. Marketing boards distribute BMP guides to private woodlot owners and contractors "*Best Management Practices: A Practical Guide to BMP's in New Brunswick's Private Woodlots*". The guide is supported by the SFI Implementation Committee in NB and lays out similar objectives to the SFI FM standard. Marketing boards assist private woodlot owners or contractors with forest management plans and mapping when needed, and often offer SFI logger training to private woodlot owners and contractors. Marketing boards' complete annual audits on a random selection of private woodlots and these data are summarized in an annual report.

Private woodlots can acquire funding for the preparation of a management plan, which includes forest stand description, access roads, treatment recommendations, and long term resource consideration (wetlands, forest health, protection from fires and insects, biodiversity, wildlife habitat, etc.). Private woodlots must follow best management practices and have operating/harvesting plans for consideration of silviculture funding. An agreement between the marketing board and the woodlot owner/contractor specifies that all silviculture work must be completed in accordance with local standards and practices of the Department of Natural Resources. The *New Brunswick Private Woodlot Silviculture manual* lists the rules and regulations governing activities on private woodlots.

Adherence to the Clean Water Act and Watercourse Buffer Zone guidelines is also required in both private and Crown forests in NB.

Nova Scotia

	The NS Code of Forest Practice states that forest management will be designed and conducted in a manner that maintains and enhances the quality of air, water, and soil. The watercourse and wildlife habitat protection regulations require that on Crown and private lands that buffer strips must be left along watercourses, legacy trees must be left in clumps, and coarse woody debris must be left in all types of forest harvesting and management activities. BMP manuals are provided to private woodlot owners through regional organizations who assist with forest management planning. Private woodlot owners are encouraged to adopt BMPs and must conform to the NS *Forests Act*. **Quebec** In QC, the *Sustainable Forest Development Act* is used as a guideline when constructing forest management plans. The Minister of Natural Resources (MRN) is responsible for all forest management plans on Crown lands. Confirmation of management practices is part of the supplier risk assessment and monitoring system for Crown lands. Annual audits ensure that appropriate control measures are in place for the protection and conservation of biodiversity. The QC BMP manual provides guidelines to for the conservation of key habitats and ecosystems (*Saines Pratiques D'Intervention en Foret Privee, Guide Terrain, 4E, 2016*). Supplier contracts have a clause requiring adherence to all applicable legislation. Suppliers must also sign an assertion declaring that all feedstock originates from within the BP's defined supply base. The supply base is defined and can be traced back to the forest management unit (Indicator 1.1.2). As part of the BP's PEFC due diligence system, risk assessments have been completed for each province in the supply base. On an annual basis, the BP completes supplier evaluations on 25% of secondary suppliers. The evaluation, or supplier audit, consists of a site visit to review and collect documentation on forest sources (location of the stump) to ensure that feedstock originates from within the supply base, and to identify how certified feedstock is traced back to the forest management unit. This control measure provides assurance to the BP that feedstock originates from within the defined supply base of the SBE. The BP has implemented a purchase wood risk assessment for all round wood purchases. Round wood purchases are evaluated annually; and depending on the associated risk, may be assessed based on forest practice compliance or have site visits and field inspections facilitated by the BP. In addition, the marketing boards conduct SFI BMP surveys and reports on a random selection of private wood lots on an annual basis.
Means of Verification	Supplier contracts and assertions List of applicable laws and regulations PEFC wood procurement processes Company risk assessments BP's annual supplier evaluations BP's purchases wood risk assessment BMP manuals NB SIC BMP survey and reports (private woodlots) NB private woodlot silviculture program 2018-2019 NB private woodlot silviculture funding agreement Government reports Global Forest Watch: https://databasin.org/galleries/0267510a7beb4142a55857290b8f922a#expand=152259%2C152261 2018 State of Canada's Forest annual report: http://cfs.nrcan.gc.ca/publications/download-pdf/39336 2030 Agenda for Sustainable Development: https://sustainabledevelopment.un.org/post2015/transformingourworld
Evidence Reviewed	All means of verification reviewed

Risk Rating	☑ **Low Risk**	☐ **Specified Risk**	☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A		

	Indicator
2.2.4	The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b).
Finding	The supply base is traceable back to the defined supply base (Indicator 1.1.2). **About 70-80%** of the BP's feedstock is forest management (FM) certified and acquired through the PEFC chain of custody (COC) system. SFM certificate holders are required to maintain forest management and harvest plans consistent with best management practices (BMP). Certificate holders undergo 3rd party audits, which provides further assurance that measures are in place to protect biodiversity, wildlife habitat, species at risk, and high conservation value (HCV) forest. **The remaining ~20-30%** is uncertified feedstock from managed forests; most is from private land in New Brunswick (NB) and a small percentage is from South Eastern Quebec (QC) and Nova Scotia (NS). Following Canada's ratification to the Convention on Biological Diversity in 1992, the Federal, Provincial and Territorial Working Group on Biodiversity was established. The group works to achieve the goals and objectives of the United Nations Convention on Biological Diversity. Currently, nineteen targets are being pursued at a national level for the conservation of biodiversity. Some of the targets applicable to this indicator are: a) create more protective areas, b) ensure species are secure and species listed on SARA have effective recovery strategies and management plans, c) conserve and enhance wetlands and ecosystem services, d) understand adaptations of ecological systems to climate change, e) continue progress on sustainable management of Canada's forests, f) identify and intervene invasive species, and g) enhance science-based biodiversity, increase accessibility, integrate into the school system and gain public interest. National reports summarizing progress are submitted to the United Nations Convention on Biological Diversity (*https://biodivcanada.chm-cbd.net/?lang=En&n=DABC84B3-1*). Forest management in Canada is based on nationally recognized standards for the long term protection and development of the forest. Canada's forest laws are some of the strictest in the world and are based on sustainable forest management principles, scientific research and analysis, and developed with public consultation (*https://www.nrcan.gc.ca/forests/canada/laws/17497*). Federal and provincial governments both have a responsibility in managing biodiversity; strategies are implemented in each province. **New Brunswick** In NB, regional marketing boards represent private woodlot owners. Marketing boards distribute BMP guides to private woodlot owners and contractors (*Best Management*

	Practices: A Practical Guide to BMP's in New Brunswick's Private Woodlots). The guide is supported by the SFI Implementation Committee in NB and lays out similar objectives to the SFI FM standard, including objectives for consideration of biodiversity. The marketing boards offer assistance with forest management plans and mapping, as well as SFI logger training. Furthermore, the marketing boards' complete annual audits on a selection of private woodlots. Private woodlots must have operating plans to be considered for silviculture funding. An agreement between the marketing board and the woodlot owner/contractor specifies that all silviculture work must be completed in accordance with local standard and practices of the Department of Natural Resources (DNR). The *New Brunswick Private Woodlot Silviculture manual* lists the rules and regulations governing activities on private woodlots, and includes requirements for BMPs on habitat and biodiversity to be presented in operating plans. Once silviculture work is completed and approved by either the marketing board or DNR, the contractor is paid the pre-approved rate per hectare. Computer-based modelling software is used to create maps of forest inventory data and simulate the growth of different forest communities in NB. These maps show ecoregions and species present, and include areas which are considered more vulnerable, including sites of endangered species, waterways, deer wintering areas and old-spruce forests. These maps are used in management plans to ensure biodiversity of Crown forest in New Brunswick is maintained (*https://www2.gnb.ca/content/gnb/en/services/services_renderer.200621.html*). Protected Natural Areas (PNA) in New Brunswick are mapped, and sites of high or unique ecological, historical, cultural or scenic value are preserved (*https://nbdnr.maps.arcgis.com/apps/webappviewer/index.html?id=ceb3caf9aba34466bbb0bfa0bb0c3ed5&locale=en*). 70-80% of feedstock is SFM certified. The majority of this originates from certified Crown forests and freehold lands in NB. SFM standards have requirements for the protection and conservation of biodiversity. The BP's PEFC feedstock procurement procedures and documents (SFM certificates, quarterly declarations, credit account, etc.) provide assurance that feedstock is originating from certified lands. **Nova Scotia** The Natural Resources strategy (*The Path We Share, A Natural Resources Strategy for Nova Scotia 2011-2020*) set several goals in regards to biodiversity in the province: a) establish clear & effective leadership and governance for biodiversity (Goal 4), b) increase and share knowledge about biodiversity (Goal 5), c) maintain & restore healthy wildlife populations, ecosystems and processes (Goal 6), and d) engage Nova Scotians in the province's biodiversity. The NS Biodiversity Council, established in 2018, assisted with the creation of new legislation that enables the province of NS to improve conservation and sustainability of wild species and ecosystems. In March, 2019, the Minister of Lands and Forestry introduced the *Biodiversity Act* in NS. The purpose of the act is to provide legislation that supports the stewardship, conservation, sustainable use and governance of biodiversity in the province (*https://nslegislature.ca/legislative-business/bills-statutes/bills/assembly-63-session-2/bill-116*). The NS Code of Forest Practice guidebook states that forest management will be designed and conducted in a manner that maintains and enhances the quality of air, water, and soil. The Code is mandatory on Crown lands and recommended for application on private lands. The primary ecological goals addressed in the guidebook include biodiversity conservation and ecosystem productivity and resilience. The *Watercourse and Wildlife Habitat Protection Regulations* require that both Crown and private forest lands leave buffer strips along

	watercourses, legacy trees in clumps, and coarse woody debris in all types of forest harvesting and management activities. **Quebec** The *Sustainable Forest Development Act* is used as a guideline when constructing forest management plans in QC. Crown lands are managed by the Minister of Natural Resources (MRN). In QC, 92% of forests are considered public lands, and as of 2013, 90% of productive public forests are certified through recognized standards (PEFC, FSC, and SFI). Furthermore, the Minister of Environment may designate a forest as an exceptional forest ecosystem at any time, and all forest development activities would be prohibited in these areas. The majority of secondary feedstock originating from QC is sourced from FSC FM certified lands. FSC FM standards have requirements for the conservation of biodiversity, and the forest lands are 3rd party audited. The QC BMP manual provides guidelines for conservation and protection of forest biodiversity (Saines Pratiques D'Intervention en Foret Privee, Guide Terrain, 4E, 2016). **National Assessment** The *FSC National Risk Assessment in Canada* (Draft, 2018) [FSC NRA] has been utilized to further assess the risk for HCVs for each of the three WWF ecoregions identified in the supply base. The assessment uses species at risk identified by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) – a panel of expert Canadian scientists. COSEWIC makes recommendations to the Minister of Environment, who creates listing plans and evaluates whether the species is added to the *Species at Risk Act* (SARA). Recovery plans are created for species added to SARA. The FSC NRA's identifies specified risk for HCV 1, species diversity, for each of the provinces in the supply base. The FSC NRA provides control measures to reduce the risk from specified to low. At least one of the following control measures is required: 1. no harvesting on the species' critical habitat, 2. a SARA-compliant action plan and is being implemented and/or the critical habitat is considered protected by the federal government, 3. if #2 does not apply, then a plan or other measure to protect critical habitat is developed and available on the SARA registry, or 4. the organization implements management actions that mitigates the risk of the threat to the species that is supported by an independent expert The BP has reviewed the COSEWIC and SARA status for each of the identified species. 14 of the 16 species have been added to SARA and have recovery strategies. The other two species (Wrinkled Shingle Lichen and Black Foam Lichen) are currently in the evaluation process and are on the government's 2016-2018 Listing Plan. Critical habitats have been identified and mapped in the COSEWIC reports and in the SARA recovery strategies (Control measure #3 above).

Species	COSEWIC Status	SARA Status	Recovery Strategy or Action Plan?	Specified Risk		
				New Brunswick	Quebec	Nova Scotia
American Ginseng	Endangered	Endangered	✓		x	
Bicknell's Thrush	Threatened	Threatened	✓	x	x	x
Black Foam Lichen	Threatened	No Status, on 2016-2018 Listing Plan		x	x	x
Boreal Felt Lichen	Endangered	Endangered	✓			x
Butternut	Endangered	Endangered	✓	x		
Cerulean Warbler	Endangered	Endangered	✓		x	
Olive-sided Flycatcher	Special Concern	Threatened	✓	x	x	x
Rainbow Smelt/ Dwarf Smelt	Endangered	Threatened	✓	x		
Red Headed Woodpecker	Endangered	Threatened	✓		x	
Spring Salamander	Threatened	Threatened	✓		x	
Vole Ears Lichen	Endangered	Endangered	✓	x		x
Woodland Caribou	Threatened	Threatened	✓		x	
Woodland Caribou (Gaspesie)	Endangered	Endangered	✓		x	
Wood Turtle	Threatened	Threatened	✓	x	x	x
Wrinkled Shingle Lichen	Threatened	No Status, on 2016-2018 Listing Plan		x		x

Figure 2.2.4-1: Species at risk identified in supply base provinces by COSEWIC and the current status with SARA (listing and recovery strategy or action plan)

Transportation documents, such as transportation certificates (which contain PIDs), scale tickets, and bills of lading are effective means of tracing round wood back to the forest source and sawmill residuals back to the sawmill. The BP's annual internal audit ensures that transportation documents are properly documented and stored; they are compared to scale reports for the same period to ensure that all tickets have been received and all fibre is accounted for. The internal audit also verifies the validity of forest management certificates.

Supplier contracts require an adherence to all applicable regional, provincial and federal legislation. Furthermore, prior to bringing any feedstock onto the site, all suppliers are required to sign a supplier's assertion that includes the following:

The supplier confirms that round wood and wood fibre don't originate from unacceptable or controversial sources, which include sources that are:

1. Not complying with local, national or international legislation, in particular:
   - *a. forestry operations and harvesting, including biodiversity conservation and conversion of forest to other use*
   - *b. management of areas with designated high environmental and cultural values, protected and endangered species, including requirements of CITES,*
   - *c. health and labour issues relating to forest workers, indigenous peoples' property, tenure and use rights, third parties' property, tenure and use rights,*
   - *d. payment of taxes and royalties related to timber harvesting are complete and up to date,*

2. Not complying with legislation of the country of harvest relating to trade and customs, in so far as the forest sector is concerned,

3. Utilizing genetically modified forest based organisms,

	4. Converting forest to other vegetation type, including conversion of primary forests to forest plantations. Where forest plantations are defined as forests of exotic species that are under intensive stand management, are fast growing and subject to short rotations (I.e. Poplar, acacia, or eucalyptus plantations) On an annual basis, the BP completes supplier evaluations on 25% of secondary suppliers. The evaluation, or supplier audit, consists of a site visit to review and collect documentation on forest sources (location of the stump) to ensure that feedstock originates from within the supply base. The audit also helps to identify how certified feedstock is traced back to the forest management unit. This control measure provides assurance to the BP that feedstock originates from within the defined supply base of this evaluation. The BP has implemented a purchase wood risk assessment for all round wood purchases. Round wood purchases are evaluated annually; and depending on the associated risk, are either assessed via a desktop forest practice compliance review or with a site visit and field inspection facilitated by the BP. In addition to the BP's audits, the marketing boards conduct SFI BMP surveys and report on a random selection of private wood lots on an annual basis. Source forests are compared to critical habitat areas to ensure that harvests aren't located in these areas. As part of the BP's due diligence system, risk assessments have been completed for each of the provinces in the supply base.
Means of Verification	Supplier contracts and assertions List of applicable laws and regulations Company risk assessments BP's annual supplier evaluations BP's Purchase wood risk assessment NB SIC BMP survey and reports (private woodlots) BMP manuals Map of forest sources Critical habitat maps NB Private Woodlot Silviculture Program 2018-2019 NB private woodlot silviculture funding agreement New Brunswick government forestry reports: https://www2.gnb.ca/content/gnb/en/departments/erd/natural_resources/content/ForestsCrownLands.html Nova Scotia government forestry reports: https://novascotia.ca/natr/forestry/ Quebec government forestry reports: https://mffp.gouv.qc.ca/the-forests/forests-publications/?lang=en FSC National Risk Assessment: https://ca.fsc.org/en-ca/standards/national-risk-assessment-01
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.2.5	The Biomass Producer has implemented appropriate control systems and procedures for verifying that the process of residue removal minimises harm to ecosystems.

Finding	The supply base is traceable back to the defined supply base (Indicator 1.1.2). **About 70-80%** of the BP's feedstock is forest management (FM) certified and acquired through the PEFC chain of custody (COC) system. SFM certificate holders are required to maintain forest management and harvest plans consistent with best management practices (BMP), which include measures for protecting ecosystems, soil and water quality. **The remaining ~20-30%** is uncertified feedstock from managed forests; most is from private land in New Brunswick (NB) and a small percentage is from South Eastern Quebec (QC) or Nova Scotia (NS). **New Brunswick** The *2009 Biodiversity Strategy* is a comprehensive plan which aims to conserve genetic, species and ecosystem diversity and the sustainable use and development of biological resources. In NB, regional marketing boards represent private woodlot owners. Marketing boards distribute BMP guides to private woodlot owners and contractors (*Best Management Practices: A Practical Guide to BMP's in New Brunswick's Private Woodlots*). The guide is supported by the NB SFI Implementation Committee. The BMP guide provides guidance for managing harvest debris (slash), tree tops, and coarse woody debris (fallen dead wood). Slash and tree tops (crown & fine branches from canopy) hold many of the nutrients for the soil, while dead wood is critical habitat for many species. The marketing boards offer assistance with forest management plans and mapping, and will often offer SFI logger training. Furthermore, the marketing boards' complete annual audits and reports on a selection of private woodlots. Private woodlots must have operating plans for consideration of silviculture funding. An agreement between the marketing board and the woodlot owner/contractor specifies that all silviculture work must be completed in accordance with local standards and practices of the Department of Natural Resources (DNR). The *NB Private Woodlot Silviculture manual* lists the rules and regulations governing activities on private woodlots. Once silviculture work is completed and approved by either the marketing board or DNR, the contractor is paid the pre-approved rate per hectare. 70-80% of feedstock is SFM certified. The majority of this originates from certified Crown forests and freehold lands in NB. SFM standards have requirements to manage the use of harvest residue (eg. Slash, limbs, tops) so that environmental factors such as organic and nutrient value to future forests are considered. The BP's PEFC feedstock procurement procedures and documents (SFM certificates, quarterly declarations, credit account, etc.) provide assurance that feedstock is originating from certified lands. Furthermore, DNR recognizes that biomass (tree tops, branches, foliage, non-merchantable woody stems, etc.) is an important source of nutrients for forest development and growth. The NB biomass policy identifies procedures to assess impacts of harvesting on sustainability and forest growth and provides guidelines in selecting eligible areas for biomass harvesting. Biomass removal is limited to forest stands within harvest blocks of approved forest management plans and must minimize soil disturbance (compaction, rutting & erosion) and not remove forest floor (Litter layer, soil surface, stumps and root systems). The Crown forest management system in NB is established under the *Crown Lands and Forest Act* and is monitored by DNR and citizens of NB. The government sets objectives and standards for management of the lands and Licensees are responsible for achieving those objectives. Under the Act, the Minister of Natural Resources evaluates Crown forest management performance every five years. The evaluation results are used to determine whether the Forest Management Agreement is extended or terminated **Nova Scotia**

	In NS, the current extent of whole-tree harvesting is low. The Department of Lands and Forestry have the means to classify ecological conditions and assess specific nutrient status through the provincial forest ecosystem classification (FEC) system and the nutrient budget model for NS. Research has shown that whole-tree harvesting (aside from commercial thinning or partial cuts) is detrimental to the productivity on forest sites. Regulatory amendments are being proposed to restrict whole-tree and full-tree harvesting in NS. *Nova Scotia's Code of Forest Practice* states that forest management will be designed and conducted in a manner that maintains and enhances the quality of air, water, and soil. BMP's are provided to private woodlot owners through regional organizations who assist private woodlot owners in their forests' management. The manual suggests consulting the Forest Ecosystem Classification guide to determine soil characteristics of the site when considering harvesting slash, limbs and tops. The *Wildlife Habitat and Protection Regulations*, made under section 40 of the Forests act have several requirements including: 1) legacy trees and habitat structure, which includes specific regulations in regards to number of trees, proportion of species, average height and diameter, and clump size, 2) special management zones for watercourses (> 50 cm wide), and 3) protection of watercourse (< 50 cm wide). BMPs are provided to private woodlot owners through regional organizations who assist private woodlot owners in their forests' management. **Quebec** The *Sustainable Forest Development Act* is used as a guideline when constructing forest management plans in QC. Crown lands are managed by the Minister of Natural Resources (MRN). 92% of forests are considered public lands, and as of 2013, 90% of productive public forests are certified through recognized standards (PEFC, FSC, and SFI). Furthermore, the Minister of Environment may designate a forest as an exceptional forest ecosystem at any time, and all forest development activities would be prohibited in these areas. The majority of secondary feedstock originating from QC is sourced from FSC FM certified lands. FSC FM standards have requirements for identifying BMPs for nutrient loss prevention from slash dispersal, for delimbing-at-stump, and for slash management (burning, piling, re-distribution). FSC-certified forests are 3rd party audited annually. The QC BMP manual provides guidelines for conservation and protection from nutrient loss (Saines Pratiques D'Intervention en Foret Privee, Guide Terrain, 4E, 2016). Supplier contracts and assertions provide assurance that suppliers are adhering local and national legislations and regulations. On an annual basis, the BP completes supplier evaluations on 25% of secondary suppliers. The evaluation, or supplier audit, consists of a site visit to review and collect documentation on forest sources (location of the stump) to ensure that feedstock originates from within the supply base, and to identify how certified feedstock is traced back to the forest management unit. This control measure provides assurance to the BP that feedstock originates from within the defined supply base of the SBE. The BP has implemented a purchase wood risk assessment for all round wood purchases. Round wood purchases are evaluated annually; and depending on the associated risk, may be assessed based on forest practice compliance or have site visits and field inspections facilitated by the BP. In addition, the marketing boards conduct SFI BMP surveys and reports on a random selection of private wood lots on an annual basis.
Means of Verification	Supplier contracts and assertions Wood procurement processes List of applicable laws and regulations Company risk assessments BP's purchase wood risk assessment

	BMP manuals PEFC audit SFM Standards Provincial &standards BMP manuals NB SIC BMP survey and reports (private woodlots) Crown and third party certification audit NB Forest Biomass Policy: https://www2.gnb.ca/content/gnb/en/services/services_renderer.201174.Crown_Lands_-_Harvest_Forest_Biomass_.html NS Forestry Laws and Policy: https://novascotia.ca/natr/forestry/laws/ QC Sustainable Forest Development Act: http://legisquebec.gouv.qc.ca/en/ShowDoc/cs/A-18.1
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.2.6	The Biomass Producer has implemented appropriate control systems and procedures to verify that negative impacts on ground water, surface water and water downstream from forest management are minimised (CPET S5b).
Finding	The *Clean Water Act*, established in 1989, includes important aspects of legislation related to protecting quality and quantity of water in rivers, streams and lakes, diversity of aquatic habitats and species, and drinking water supplies. Forestry operations are bound by this national legislation, which are enforced by provincial governments. Of the 33 forested ecoregions in Canada, the *WWF Conservation Status Index* lists the three ecoregions within the supply base as critical/endangered (https://www.worldwildlife.org/ecoregions/na0605). The *FSC National Risk Assessment for Canada* (Draft, 2018) [FSC NRA] assesses the risk of potential threats to the forests and other areas with high conservation value (HCV). The FSC NRA divides HCVs into 6 indicators: ○ HCV 1: Species diversity ○ HCV 2: Landscape-level ecosystems and mosaics ○ HCV 3: Ecosystems and habitats ○ HCV 4: Critical ecosystem services ○ HCV 5: Community needs ○ HCV 6: Cultural values HCV 1, 4, 5 and 6 are assessed by province/territory, whereas HCV 2 & 3 are assessed on the WWF ecoregion geographic scale. HCV 4 and 5 in the *FSC NRA* address the protection of water. HCV 4 is in regards to catchments. Catchments are considered the forested areas important for the provision of ecological services associated with waterbodies and watersheds. HCV 5 is with regard to

	protection of forested areas for the provision of water for a community. The regions within the defined supply base are considered low risk for both HCV 4 and 5 in the *FSC NRA*. **New Brunswick** Regulations protecting surface water under the *Clean Water Act* include the *Watershed Protected Areas Designation Order*, *Water Classification Regulation* and the *Watercourse and Wetland Alteration Regulation*. Most Crown forests are SFM certified and are 3rd party audited annually to ensure that best management practices (BMP) are implemented on harvest sites. Regional marketing boards supply BMP manuals and complete annual BMP audits on a selection of private woodlots. These data are summarized in an annual report. Adherence to the *Clean Water Act* and *Watercourse Buffer Zone guidelines* is also required in NB forests, and these are enforced by the provincial government. **Nova Scotia** In NS, the provincial government works with stakeholders and municipalities to protect surface waters through watershed management planning and the use of best management practices. In areas where municipalities rely on surface water sources for drinking water, the development of *Source Water Protection Plans* are required through Nova Scotia Environment. The plans serve as a guide to protect surface waters for aquatic life habitat. Documents on BMPs and forest planning in municipal drinking water supply areas in Nova Scotia have been created for guidance. There is further protection under the *Water Resources Protection Act*. *Nova Scotia's Code of Forest Practice* states that forest management will be designed and conducted in a manner that maintains and enhances the quality of air, water, and soil. The *Watercourse and Wildlife Habitat Protection regulations* require all forestlands to have buffer strips left along watercourses, legacy trees left in clumps, and coarse woody debris left in all types of forest harvesting activities. BMPs are provided to private woodlot owners through regional organizations who assist with their forests' management. **Quebec** Water quality in QC is protected through recently tightened standards, the *Regulation respecting the quality of drinking water* and *Regulation respecting groundwater catchment*. The *Sustainable Forest Development Act* covers environmental impacts to watercourses and groundwater on public lands, particularly buffer zones and breeding sites (FSC NRA Draft, 2018). All watercourses in QC are protected through the protection policy for lakeshores, riverbanks, littoral zones and floodplains under the *Environmental Policy Act*. Supplier contracts include a clause that require adherence to applicable legislation. Prior to the delivery of feedstock, suppliers must sign an assertion declaring that all feedstock originates from within the BP's defined supply base. On an annual basis, the BP completes supplier evaluations on 25% of secondary suppliers. The evaluation, or supplier audit, consists of a site visit to review and collect documentation on forest sources (location of the stump) to ensure that feedstock originates from within the supply base, and to identify how certified feedstock is traced back to the forest management unit. This control measure provides assurance to the BP that feedstock originates from within the defined supply base of the SBE. The BP has implemented a purchase wood risk assessment for all round wood purchases. Round wood purchases are evaluated annually; and depending on the associated risk, may be assessed based on forest practice compliance or have site visits and field inspections facilitated by the BP. In addition, the marketing boards conduct SFI BMP surveys and reports on a random selection of private wood lots on an annual basis. As part of the BP's due diligence system, risk assessments have been completed for each of the 3 source provinces.

Means of Verification	Supplier contracts and assertions List of applicable laws and regulations NBSIC surveys BP's annual supplier evaluations BP's purchase wood risk assessment BMP manuals FSC National Risk Assessment: https://ca.fsc.org/en-ca/standards/national-risk-assessment-01
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.2.7	The Biomass Producer has implemented appropriate control systems and procedures for verifying that air quality is not adversely affected by forest management activities.
Finding	Equipment used to harvest and generate biomass is regularly inspected and maintained. This includes the use of modern engine designs and the changing of air filters at specified periods. The *Clean Air Act* is the legal authority for controlling sources of air emissions in each province. Each province (NB, NS, and QC) carry out their own air quality monitoring programs. The data are compiled into a federal air quality health index and data are used to ensure compliance with the *Clean Air Act*. **New Brunswick** The provincial government continuously monitor and report on a variety of air pollutants at over 100 locations throughout the province. (*https://www2.gnb.ca/content/gnb/en/departments/elg/environment/content/air_quality/air_quality_monitoring.html*) All industries are required to take steps to cut emissions when levels begin to approach provincial standards and/or national guidelines. Every source of emissions in the province must obtain an air quality approval from the provincial government. The approval specifies operating conditions and emission limits. It is against the law to violate the terms of an approval. Current air quality operating approvals can be viewed online (*https://www2.gnb.ca/content/gnb/en/departments/elg/environment/content/air_quality/clean_air/approvals.html*) **Nova Scotia** The NS provincial government has air monitoring stations set up throughout the province. The ambient air monitoring stations measure air quality from many sources including power plants, mills, vehicles, and natural sources. These are compared to maximum permissible ground level concentrations in the *Nova Scotia Air Quality Regulations* and the *Canadian Ambient Air Quality Standards*. The monitoring stations monitor a variety of pollutants including: ground-level ozone (O_3), fine particulate matter ($PM_{2.5}$), carbon monoxide (CO), sulphur dioxide (SO_2), Total reduced sulphur (TRS), and nitrogen oxides & dioxide (NO_x, NO, NO_2). (*https://novascotia.ca/nse/airdata/*)

	Nova Scotia Air Zone Reports are accessible online and are provided through the Air Quality Management System, which is implemented across Canada though the Canadian Council of Ministers of the Environment (*https://novascotia.ca/nse/air/air-zone-reports.asp*). **Quebec** Data from monitoring stations throughout Quebec are compared to the Quebec Air Quality Standards and criteria. (http://www.iqa.mddelcc.gouv.qc.ca/contenu/index_en.asp) Emitters must report their emission in accordance with the Regulation respecting mandatory reporting of certain emission of contaminants into the atmosphere under the Environment Quality Act. (http://www.environnement.gouv.qc.ca/air/declar_contaminants/index-en.htm) Supplier Contracts include a clause that require adherence to applicable legislation. Prior to the delivery of feedstock to the BP's wood pellet plant, suppliers must sign an assertion declaring that all feedstock originates from within the BP's defined supply base.
Means of Verification	Supplier contracts and assertions Provincial and federal government reports List of applicable laws and regulations New Brunswick Air Quality Monitoring: https://www2.gnb.ca/content/gnb/en/departments/elg/environment/content/air_quality/air_quality_monitoring.html Nova Scotia Air Quality Monitoring: https://novascotia.ca/nse/airdata/ Quebec Air Quality Monitoring: http://www.iqa.mddelcc.gouv.qc.ca/contenu/index_en.asp)
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.2.8	The Biomass Producer has implemented appropriate control systems and procedures for verifying that there is controlled and appropriate use of chemicals, and that Integrated Pest Management (IPM) is implemented wherever possible in forest management activities (CPET S5c).
Finding	The supply base is traceable back to the defined supply base (Indicator 1.1.2). **About 70-80%** of the BP's feedstock is forest management (FM) certified and acquired through the PEFC chain of custody (COC) system. SFM certificate holders are required to maintain forest management and harvest plans consistent with best management practices (BMP), which include measures for protecting forest health and productivity. This includes the protection from pests and diseases. SFM standards have performance measures in place requiring participants to minimize the chemical use of pesticides and to use integrated pest management (IPM) where possible.

	The remaining ~20-30% is uncertified feedstock from managed forests; most is from private land in New Brunswick (NB) and a small percentage is from South Eastern Quebec (QC) or Nova Scotia (NS). Insects are one of the most important disturbance agents in Canada's forests and outbreaks of some key species, like the spruce budworm and the forest tent caterpillar are cyclical, whereas others like the bark beetle erupt under certain forest and climatic conditions (NRCAN, 2019). (https://www.nrcan.gc.ca/forests/report/disturbance/16406) To maintain the health of Canada's forests, provincial governments take on an integrated pest management (IPM) approach. Interventions are carried out based on knowledge of the short-term and long-term impacts and involve targeting both the area and pest in question. Forest ownership determines who is responsible for pest management, whether it be federal, provincial, municipal or private. The Canadian Forest Service (CFS) provides a scientific and technological support on forest pest matters to all jurisdictions. (https://www.nrcan.gc.ca/forests/fire-insects-disturbances/pest-management/13361) Pesticides are regulated by the federal, provincial and municipal governments. All pesticides must be registered by the Pest Management Regulatory Agency (PMRA) of Health Canada through the *Pest Control Products (PCP) Act*. Once registered, it receives a PCP Act Registration Number. The province regulates the sale, use, storage and disposal of pesticides. Vendors or applicators of restricted or commercial class pesticides may be required to obtain certification. In NB, the *Pesticides Control Act* and regulations are administered by the Department of Environment and apply to all forested lands. Provincial legislation ensures that pesticides are used, stored and disposed of to minimize impact on non-target species, human health and environment. For private woodlots, clause 12, 13, and 14 of the silviculture landowner agreement discuss compliance with DNR. The NB silviculture manual also specifies requirements for herbicide application and adhering to the *Pesticides Control Act*. (https://www2.gnb.ca/content/gnb/en/departments/erd/natural_resources/content/ForestsCrownLands/content/ForestPests/ForestPestManagement.html) In NS, to apply a commercial or restricted class pesticide, the applicator must hold a valid applicators certificate from the provincial government. Vendors must also hold valid vendors certificate. Approvals are required under the *Activities Designation Regulations* to apply pesticides on any forested land. (https://novascotia.ca/nse/pests/faqs.asp) In QC, the *Pesticides Management Code* govern the storage, sale and use of pesticides. The code requires applicators to obtain permits and certifications for use. The use of pesticides in Quebec forests is relatively limited following the government's commitment with the Forest Protection Strategy which eliminates the use of chemical pesticides in public forests. (http://www.environnement.gouv.qc.ca/pesticides/permis-en/code-gestion-en/aires-forest/index.htm) In general, all pesticides must be registered by Health Canada and any individual using a non-domestic pesticide must hold a Pesticide Applicator Certificate, and in some cases a permit. Supplier contracts include a clause that require adherence to all applicable legislation. Suppliers must also sign an assertion declaring that all feedstock originates from within the BP's defined supply base.
Means of Verification	Supplier contracts and assertions NB silviculture manual Silviculture agreement Pesticide licenses and permits List of applicable laws and regulations

Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.2.9	The Biomass Producer has implemented appropriate control systems and procedures for verifying that methods of waste disposal minimise negative impacts on forest ecosystems (CPET S5d).
Finding	The *Environmental Protection Act* provides direction on controlling pollution, managing wastes and reporting releases to the environment. Each province has requirements for the reporting of spills of hazardous substances and environmental contaminants (https://laws-lois.justice.gc.ca/eng/acts/c-15.31/page-14.html#h-34). In NB and QC, all spills must be reported to the provincial government. In NS, authorities must be notified if the unauthorized release of contaminants is greater than pre-determined level. Each province has a spill reporting hotline. When spills are reported, the spill response is evaluated and it is determined whether further action/follow-up or fines are required. Supplier contracts include a clause that require adherence to applicable legislation. Suppliers must also sign an assertion declaring that all feedstock originates from within the BP's defined supply base and is legally sourced.
Means of Verification	Supplier contracts and assertions List of applicable laws and regulations
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.3.1	Analysis shows that feedstock harvesting does not exceed the long-term production capacity of the forest, avoids significant negative impacts on forest productivity and ensures long-term economic viability. Harvest levels are justified by inventory and growth data.
Finding	Canada's forested areas have been stable over the last 25 years because of robust laws, management and requirements for reforestation of harvested Crown lands. From 1990 to 2016, Canada's forest area decreased by less than 0.5% (Figure 2.3.1-1).

YEAR	1990	1995	2000	2005	2010	2015
Forest area	348.3	348.0	347.8	347.6	347.3	347.1

Figure 2.3.1-1: Estimated area (millions of ha) of forest in Canada (State Of Canada's Forest Report, 2018)

The 0.5% decrease in forest area is heavily influenced by agriculture, mining, oil and gas industries as shown in Figure 2.3.1-2, and to a much lesser extent from the forest industry. Furthermore, the area harvested each year is less than 0.5% of Canada's 347 million hectares of forest, significantly less than the hectares affected by insects and forest fires each year (NRCan, 2018).

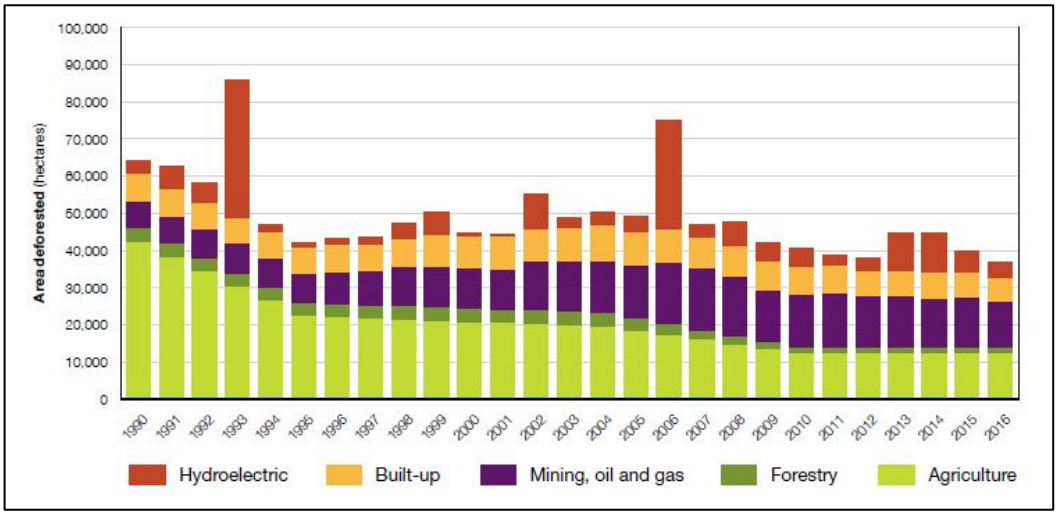


Figure 2.3.1-2: Estimated area (ha) of deforestation in Canada by sector (State of Canada's Forest Report, 2018)

About 90% of Canada's forests are on Crown lands. Each year, provincial governments specify an annual allowable cut. Harvest volumes are monitored to ensure that they are sustainable over the long term. Canada continues to harvest less than the estimated sustainable wood supply levels, as shown in Figure 2.3.1-3.

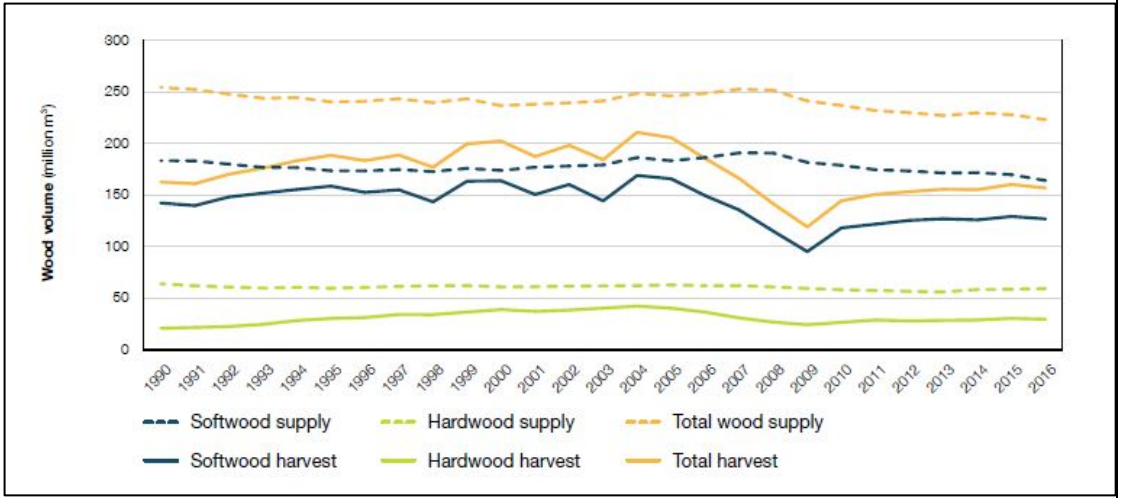


Figure 2.3.1-3: Harvest vs sustainable supply (State Of Canada's Forest Report, 2018)

In 2016, Canada harvested nearly 155 million cubic meters of industrial round wood, well below the estimated sustainable wood supply level of 223 million cubic meters. Harvest levels are expected to remain below the sustainable wood supply, given the strong provincial regulatory regimes in place (https://www.nrcan.gc.ca/forests/report/harvesting/16550) .

New Brunswick
Forest development surveys of Crown forests in New Brunswick (NB) provide quantitative stand data such as volume, density, and age by individual species. In harvesting, a variety of techniques are used (i.e. uneven-aged management) to ensure the long term sustainability of the forest.

Crown land licensees must follow best management practices and not exceed the annual allowable cut (AAC). Licensee-prepared forest management plans and maps show the location, time and general prescription of harvest activity to access the AAC. The plans must also include objectives for setting aside conservation forest and measures to ensure proper regeneration (natural or artificial) after a harvest. Most Crown land is 3rd party certified and undergo annual audits to SFM standards. These standards have requirements for sustaining harvest levels by monitoring inventory and growth data.

Annual reports submitted to the New Brunswick Department of Natural Resources (NBDNR) summarize the harvest by forest zone and annual volume harvested. After 5 and 10 years, the status of plantations and naturally regenerating areas including species mix, average tree height are re-evaluated. To ensure responsible resource development, NBDNR monitors the progress of Crown harvests on a quarterly cycle. During the 2016-2017 year, 87% of the AAC was harvested (Figure 2.3.1-4)

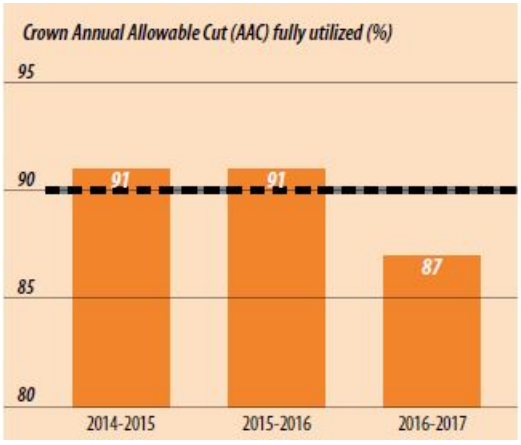


Figure 2.3.1-4: Crown Annual Allowable Cut (NB Energy and Resource Development, Annual Report 2016-2017)

In NB, regional marketing boards represent private woodlot owners. Marketing boards distribute BMP guides to private woodlot owners and contractors (*Best Management Practices: A Practical Guide to BMP's in New Brunswick's Private Woodlots*). The guide is supported by the SFI Implementation Committee in NB and lays out similar objectives to the SFI FM standard. The BMP manual provides suggestions for managing harvesting debris (slash), as it is beneficial for a portion of it to be evenly distributed across the cut. As the slash breaks down it returns nutrients to the soil helping to maintain site productivity.

The marketing boards offer assistance with forest management plans and mapping, as well as SFI logger training. Furthermore, the marketing boards' complete annual audits on a selection of private woodlots. Clause 12, 13, and 14 of the silviculture Landowner Agreement between private woodlot owners and the marketing boards discuss compliance with DNR. The NB silviculture manual also specifies requirements for maximizing and improving stand growth and for submission of reports on year 3, 8 and 9 indicating the growth status with

recommendations for treatments if required. This performance monitoring is included in the administrative funding provided under the silviculture program.

Nova Scotia
The Nova Scotia Department of Natural Resources (NSDNR) has been collecting data on forest harvest volumes and secondary forest products for 60 years. The forest inventory program collects inventory data via photo interpretation and permanent forest inventory plots. The inventory data helps to define and track volume and growth, and provides a basis for modelling volume, biomass and carbon in the forest. Furthermore, NSDNR's Timber Management Group collect data on silviculture and harvesting via trials, experiments and surveys. The *Spatially Related Forest Resources Information System* shows forest stand descriptions, ownership, wildlife habitat, wetlands information, and natural and protected areas(https://novascotia.ca/natr/forestry/gis/).

The Registry of Buyers, developed by NSDNR, is a data collection system that provides valuable forest use and management information. Under the *Forest Sustainability Regulations*, all registered buyers who have acquired more than 5,000 cubic meters of wood from private forest land must submit *Wood Acquisition Plans (WAP)* and pay into a silvicultural fund. Harvest volumes are summarized in the annual Registry of Buyers of Primary Forest Products Annual Report.
(https://novascotia.ca/natr/forestry/registry/ann_report.asp)

Forest harvesting levels in NS have decreased in recent years while the annual net change in forest ecosystem carbon has increased, as shown in the Figure 2.3.1-5.

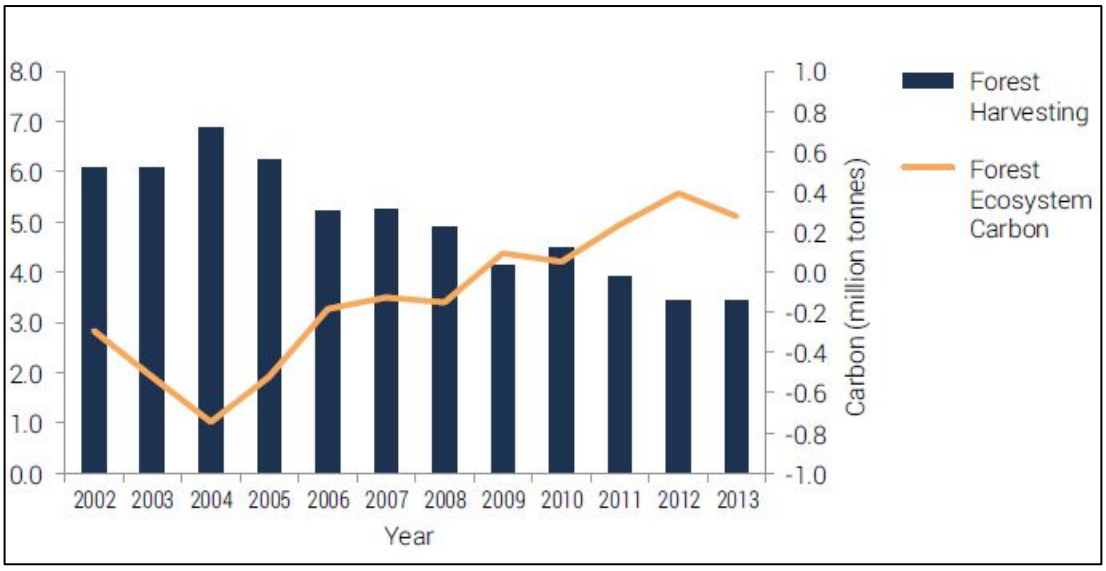


Figure 2.3.1-5: NS Harvest levels and Ecosystem Carbon shown in millions of cubic meters *(State of the Forest Report, 2016)*

One of the principles of *Nova Scotia's Code of Forest Practice* is to ensure that forest management practices are conducted in a way that secures the long term sustainable harvest of forest products. Forest modelling helps to determine if silviculture programs are effective at achieving the growth rates to support long term forecasted harvest levels. The timber harvest guidelines indicate that harvest levels must not exceed the forest's ability to grow wood and silviculture programs must be formulated to ensure this.
(https://novascotia.ca/natr/forestry/reports/Code-of-Forest-Practice.pdf)

The *Watercourse and Wildlife Habitat Protection regulations* require that on Crown and private lands that buffer strips be left along watercourses, legacy trees be left in clumps, and coarse woody debris be left in all types of forest harvesting and management activities.

	BMPs are provided to private woodlot owners through regional organizations who are available to assist private woodlot owners with their forests' management. Private woodlot owners are encouraged to adopt BMPs and must conform to the *NS Forest Act*. **Quebec** Québec (QC) has carried out three forest inventory programs over the last 40 years: the network now consists of more than 28,000 ecology observation points. These inventories have permitted the analysis of the forest ecosystems' evolution, their fragility, their productivity and their wood volume. The inventories are an effective means of monitoring forest growth and changes in the forest canopy over time. The *Sustainable Forest Development Act* is used as a guideline when constructing forest management plans in QC. Crown lands are managed by the Minister of Natural Resources (MRN). 92% of forests are considered public lands, and as of 2013, 90% of productive public forests are certified through recognized standards (PEFC, FSC, and SFI). SFM standards require BMPs to be carried out to promote the long term vitality and economic viability of the forest. The QC BMP manual (Saines Pratiques D'Intervention en Foret Privee, Guide Terrain, 4E, 2016) provides guidelines for silviculture treatments to promote long term growth and reduce negative impacts to the forest from harvesting. The majority of secondary feedstock originating from QC is sourced from FSC FM certified lands. FSC FM standards have requirements to maintain and enhance long term economic viability of the forest. This requires calculation of harvest levels at least every 10 years to ensure that they remain up to date with respect to inventory management objectives. Supplier contracts include a clause that require adherence to applicable legislation. Suppliers must also sign an assertion declaring that all feedstock originates from within the BP's defined supply base and is legally sourced.
Means of Verification	Supplier contract and assertion Provincial government reports List of applicable laws and regulations BMP manuals SFM certification State of Canada's Forest Report, 2018: https://www.nrcan.gc.ca/forests/report/16496 Natural Resources Canada, Measuring and Reporting: https://www.nrcan.gc.ca/forests/measuring-reporting/17487
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.3.2	Adequate training is provided for all personnel, including employees and contractors (CPET S6d).
Finding	**About 70-80%** of the BP's feedstock is forest management (FM) certified and acquired through PEFC chain of custody (COC) system. SFM certificate holders are required to maintain appropriate training for personnel and contractors so that they are competent to

	fulfil the responsibilities of the SFM standards. Furthermore, certificate holders undergo annual 3rd party audits, providing further assurance that this indicator is met. **The remaining ~20-30%** is uncertified feedstock from managed forests. The supply base is traceable back to the defined supply base (Indicator 1.1.2). The 20-30% of uncertified feedstock is primarily from private land in New Brunswick. Regional marketing boards represent private woodlot owners in the province. The marketing boards provide BMP manuals and will often provide SFI logger training to private woodlot owners and contractors. The most recent SFI logger training course was offered in 2016. All staff and contractors are trained to ensure they are aware and competent. The operations identify environmental and sustainable forestry training needs for employees and contractors to ensure that individuals performing tasks which can cause significant environmental impacts are competent on the basis of appropriate education, training and/or experience. Under the *Occupational Health and Safety Act*, each employer shall provide instruction, training and supervision as is necessary to ensure an employee's health and safety, provide and maintain in good condition such protective equipment as required by regulation and ensure that the equipment is used by an employee in the course of work. On an annual basis, the BP completes supplier evaluations on 25% of secondary suppliers. The evaluation, or supplier audit, consists of a site visit to review and collect documentation on forest sources (location of the stump).The BP has also implemented a purchase wood risk assessment for all round wood purchases. Round wood purchases are evaluated annually; and depending on the associated risk, may be assessed based on forest practice compliance or have site visits and field inspections facilitated by the BP. In addition, the marketing boards conduct SFI BMP surveys and report on a random selection of private wood lots on an annual basis. Supplier contracts include a clause that require adherence to applicable legislation. Suppliers must also sign an assertion declaring that all feedstock originates from within the BP's defined supply base and confirming adherence to applicable legislation. Also refer to Indicator 2.8.1 in regards to health and safety regulations.
Means of Verification	Supplier contract and assertion Private woodlot owner/contractor agreement Training programs & matrix Electronic training records BP's annual supplier evaluations BP's Purchase wood risk assessment List of applicable laws and regulations NB SFI logger training certificates
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator

2.3.3	Analysis shows that feedstock harvesting and biomass production positively contribute to the local economy, including employment.
Finding	The forest industry is one of Canada's most important manufacturing sectors. In 2017, ~210,000 people were employed in the forest industry, 7.2% of total exports were forest products, and $24.6 billion was contributed to the economy (https://www.nrcan.gc.ca/forests/report/economy/16517). The BP completed an economic analysis for the wood pellet plant and how it positively contributes to the local economy. The work force is hired locally in the adjoining communities where the pellet plant is located, and whenever possible, equipment, supplies and other resources are also sourced locally. There are 20 direct employees and the economic impact on local jobs cascades down from the pellet plant to trucking companies, local sawmills, harvesting contractors, etc. The facility also contributes to the community in the form of municipal taxes. Forest Nova Scotia's Forest Industry Economic Impact Report states that 11,500 Nova Scotians are employed directly and/or indirectly by the forest industry (Forest Nova Scotia, 2017). The total economic impact of the forest industry has increased from $1.5 billion in 2012 to $2.1 billion in 2017, and contributed $800 million to the provincial GDP in 2017. (http://forestns.ca/ns-forest-industry-economic-impact/) Forestry is one of the economic drivers of New Brunswick. Forest NB's *Economic Impacts Report* states 24,000 New Brunswickers are employed directly and/or indirectly by the forest industry. The forest industry contributes $1.7 billion to the New Brunswick economy. More communities benefit from economic impacts of forestry than almost any other sector in New Brunswick. (http://www.nbforestry.com/jobs-economy/) Forest industry in Quebec accounts for 2% of Quebec's GDP with $9 billion worth of exports in 2015 and 60,000 direct jobs, including 50,000 jobs in wood and paper manufacturing. The forest industry is an active presence and several municipalities depend entirely on the forest. Harvesting and processing are key economic drivers for many regions in Quebec. (*2016-2017 Budget – Competitiveness in the Quebec Forest Industry*)
Means of Verification	Supplier contract and assertion BP's economic analysis Employee addresses Account payables Supplier list Distance to suppliers Conference Board of Canada Economic Update: https://www.conferenceboard.ca NS Forest Industry Economic Impact: http://forestns.ca/ns-forest-industry-economic-impact/ NB Forest Industry Economic Impact: http://www.nbforestry.com/jobs-economy/ 2016-2017 Budget – Competitiveness in the Quebec Forest Industry: www.budget.finances.gouv.qc.ca/budget/2016-2017/en/documents/Forest.pdf
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

Comment or Mitigation Measure	N/A

	Indicator
2.4.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that the health, vitality and other services provided by forest ecosystems are maintained or improved (CPET S7a).
Finding	The supply base is traceable back to the defined supply base (Indicator 1.1.2). **About 70-80%** of the BP's feedstock is forest management (FM) certified and acquired through the PEFC chain of custody (COC) system. SFM certificate holders are required to maintain forest management and harvest plans consistent with best management practices. Furthermore, certificate holders undergo annual 3rd party audits to ensure that practices are consistent with SFM standards. **The remaining ~20-30%** is uncertified feedstock from managed forests; most is from private land in New Brunswick (NB) and a small percentage is from South Eastern Quebec (QC) or Nova Scotia (NS). Canada's provinces/territories have jurisdiction over the majority of Canada's forests and develop and enforce laws, regulations and policies related to the forest. They differ from one jurisdiction to another but all are based on SFM principles, developed in consultation with the public and industry and are grounded in scientific research and analysis. Forest laws ensure that timber harvesting is regulated and forests are re-established. **New Brunswick** Forest health and vitality are monitored through the provincial government. They determine the annual allowable cut for Crown and private woodlots based on ongoing research. Aerial photography and forest plots are used to chart the timber's growth and yields over time. These are updated annually using a computerized Geographical Information System (GIS). Most of the 20-30% of uncertified feedstock is from private land in New Brunswick. Regional marketing boards represent private woodlot owners in the province. Marketing boards distribute BMP guides to private woodlot owners or contractors – "Best Management Practices: A Practical Guide to BMP's in New Brunswick's Private Woodlots". The guide is supported by the SFI Implementation Committee in NB and lays out similar objectives to the SFI FM standard. This includes minimizing soil disturbance (rutting and sedimentation), selective harvesting, debris management (slash, tree tops, and dead wood), and proper watercourse and wetland protection. These BMPs are essential to the maintenance of healthy ecosystems. The marketing boards assist the private woodlot owners or contractors with forest management plans, timber inventory, harvest layout, and forest management plan development. The board will also offer SFI logger training to private woodlot owners and contractors. Private landowners and local communities in NB are diligent with monitoring of private forests, as they are an important source of income, employment, recreational activities and ecological benefits. NB Crown forest licensees must follow BMPs when implementing forest management plans. BMP manuals include goals for the maintenance of a full variety of healthy and resilient native forested ecosystems sustainable across their ecological range. This is achieved by maintaining functional patches of old forest across each ecoregion and representing the full diversity of mature forest ecosystems in protected natural areas. BMP

	manuals also specify guidelines for maintaining the function of site-specific habitats (bear den, rare species, etc.). Soil function is also an important component of a healthy forest. Harvest and silviculture operations on Crown land are required to preserve soil function, processes and health through minimizing disturbance and contamination. This includes minimizing rutting, spillage and net loss of productive forest area due to heavy harvest debris. **Nova Scotia** *Nova Scotia's Code of Forest Practice* states that forest management will be designed and conducted in a manner that maintains and enhances the quality of air, water, and soil. One of the principles of the Code is to ensure that forest management activities are conducted in a way that conserves and enhances the health and natural diversity of NS forest ecosystems. This includes management of the ecological landscape and stand level biodiversity through sustainable management practices. BMP's are provided to private woodlot owners through regional organizations who assist private woodlot owners in their forests' management. The forest protection division helps to maintain the health of NS woodlands by protecting them from pests and fires, and are divided into three sections: • The forest health section (advice and management of pests) • Risk services section (Provincial forest protection program) • Wildfire management section (Wildfire management) Each section works together to maintain forest health in Nova Scotia. The *Forests Act* was implemented to develop a healthy productive forest capable of yielding high volumes of high quality product. The Act is targeted to both private woodlot owners and Crown lands in the province. The provincial government is responsible for ensuring the enforcement of these acts. The NS Registry of Buyers requires businesses to inventory all primary forest products acquired for processing. Registered buyers contribute to a silviculture fund based on a volume of wood acquired basis. Annual reports list wood volumes harvested throughout the province. The registry also provides reliable data on market demands and estimates on sustainable harvest levels. **Quebec** The *Sustainable Forest Development Act* is used as a guideline when constructing forest management plans in QC. 92% of forests are considered public lands, and as of 2013, 90% of productive public forests were certified through recognized standards (PEFC, FSC, and SFI). SFM standards require BMPs to be carried out to promote the long term vitality and economic viability of the forest. The QC BMP manual (Saines Pratiques D'Intervention en Foret Privee, Guide Terrain, 4E, 2016) provides guidelines for silviculture treatments to promote long term growth and reduce negative impacts to the forest from harvesting. The majority of secondary feedstock originating from QC is sourced from FSC FM certified lands. FSC FM standards have requirements to maintain or enhance long term economic viability of the forest. The provincial government reports on the health and vitality of the province's forests every 5 years, and includes a summary of the volume of timber harvested, natural disturbances (fire, insects & disease) and forest protection measures. The supply base is defined and is traceable back to the source (Indicator 1.1.2) On an annual basis, the BP completes supplier evaluations on 25% of secondary suppliers. The evaluation, or supplier audit, consists of a site visit to review and collect documentation on forest sources (location of the stump) to ensure that feedstock originates from within the supply base, and to identify how certified feedstock is traced

	back to the forest management unit. This control measure provides assurance to the BP that feedstock originates from within the defined supply base of the SBE. The BP has implemented a purchase wood risk assessment for all round wood purchases. Round wood purchases are evaluated annually; and depending on the associated risk, may be assessed based on forest practice compliance or have site visits and field inspections facilitated by the BP. In addition, NB marketing boards conduct SFI BMP annual surveys and reports on a random selection of private woodlots. These surveys evaluate conformance with BMPs and includes an evaluation of site cleanliness, soil quality (clean of oil and fuel spills, minimized ruts, use of slash), protection of wildlife habitats, and proper road and water crossings to prevent siltation. Supplier contracts include a clause that require adherence to applicable legislation. Suppliers must also sign an assertion declaring that all feedstock is legally sourced from within the BP's defined supply base.
Means of Verification	Supplier contracts and assertions NB SIC BMP survey and reports (private woodlots) Crown land licensee audits BP's annual supplier evaluations BP's purchase wood risk assessment List of applicable laws and regulations BMP manuals Natural Resources Canada, Measuring and Reporting: https://www.nrcan.gc.ca/forests/measuring-reporting/17487 Quebec - Chief Forester Reports: http://forestierenchef.gouv.qc.ca/ New Brunswick – New Approaches for Private Woodlots http://www2.gnb.ca/content/dam/gnb/Departments/nr-rn/pdf/en/ForestsCrownLands/NewApproachesForPrivateWoodlots.pdf New Brunswick–Balanced management approach for New Brunswick's Crown Forest http://www2.gnb.ca/content/dam/gnb/Departments/nr-rn/pdf/en/ForestsCrownLands/BMAF.pdf Nova Scotia – Registry of Buyers annual report http://novascotia.ca/natr/forestry/registry/ann_report.asp Nova Scotia Code of Forest Practice & Acts: https://novascotia.ca/natr/forestry/laws/ Quebec BMP manual: https://www.foretprivee.ca/je-protege-ma-foret/saines-pratiques-dintervention-forestiere/?contenu=les-interventions-en-foret FSC National Risk Assessment: https://ca.fsc.org/en-ca/standards/national-risk-assessment-01
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator

2.4.2	The Biomass Producer has implemented appropriate control systems and procedures for verifying that natural processes, such as fires, pests and diseases are managed appropriately (CPET S7b).
Finding	The supply base is traceable back to the defined supply base (Indicator 1.1.2). **About 70-80%** of the BP's feedstock is forest management (FM) certified and acquired through the PEFC chain of custody (COC) system. SFM certificate holders are required to maintain forest management and harvest plans consistent with best management practices (BMP). Furthermore, certificate holders undergo annual 3rd party audits to ensure that practices are consistent with SFM standards. **The remaining ~20-30%** is uncertified feedstock from managed forests; most is from private land in New Brunswick (NB) and a small percentage is from South Eastern Quebec (QC) or Nova Scotia (NS). Forest fires, pests and diseases are monitored through each provincial government. **New Brunswick** The Department of Natural Resources' (NBDNR) Forest Pest Management Group is responsible for protecting forests from insects and disease. Common pests and diseases and a summary of forest pest conditions are reported and are available on the NBDNR website. https://www2.gnb.ca/content/gnb/en/departments/erd/natural_resources/content/ForestsCrownLands/content/ForestPests.html The provincial government's pest management program acts as a detection, monitoring and forecasting system. On an annual basis, detection and monitoring surveys (aerial, trapping and ground surveys) are completed to assess the potential impact of pests. If the pests surpass a previously determined threshold, preventative, suppressive or regulatory controls are used to control them. NB also has an online reporting system for the public to report forest pests or disease. (https://www2.gnb.ca/content/gnb/en/services/services_renderer.201173.html) Forest fires are monitored through DNR's Forest Fire Watch. If at any time the fire hazard in the province is high, the provincial government will restrict forestry operations in the province. The 20-30% of uncertified feedstock is primarily from private land in NB. Regional marketing boards represent private woodlot owners in the province. Marketing boards distribute BMP guides to private woodlot owners or contractors – "*Best Management Practices: A Practical Guide to BMP's in New Brunswick's Private Woodlots*". The guide is supported by the SFI Implementation Committee in NB and lays out similar objectives to the SFI FM standard. The guide provides guidance on the identification of invasive and exotic plants and animals and associated control measures. The marketing boards assist the private woodlot owners or contractors with forest management plans and mapping when needed. **Nova Scotia** The provincial government's forest protection branch helps to maintain the health of NS forests by protection from pests and fires. The branch is separated into 3 sections: 1) forest health section (advice and management of pests), 2) risk services section (forest protection program), and 3) wildfire management section. Each work together to ensure that fires, pests and diseases are managed throughout the province. The forest health group's vision is to use integrated pest management methods to promote healthy forest. Risk services group work on developing science and technology and building support tools for forest protection initiatives (https://novascotia.ca/natr/forestprotection/). Wildfire statistics are available on the NSDNR website:(https://novascotia.ca/natr/forestprotection/stats.asp) *Nova Scotia's Code of Forest Practice* states that forest management will be designed and conducted in a manner that maintains and enhances the quality of air, water, and soil. One of

	the principles in the code is to conduct forest management practices to secure a long term sustainable harvest of forest products. The guideline suggests monitoring, assessing risk, and protection to prevent impacts from insects, diseases, and fire through integrated management strategies. Regional organizations provide BMP guides to private woodlot owners and will also assist with private forest management. **Quebec** The *Sustainable Forest Development Act* is used as a guideline when constructing forest management plans in QC. 92% of forests are considered public lands, and as of 2013, 90% of productive public forests were certified through recognized standards (PEFC, FSC, and SFI). SFM standards require BMPs are carried out to promote the long term vitality and economic viability of the forest. The QC BMP manual (Saines Pratiques D'Intervention en Foret Privee, Guide Terrain, 4E, 2016) provides guidelines for silviculture treatments to promote long term growth and reduce negative impacts to the forest from harvesting. The majority of secondary feedstock originating from QC is sourced from FSC FM certified lands. FSC FM standards have requirements to maintain and enhance long term economic viability of the forest. The provincial government reports on the health and vitality of the province's forests every 5 years, and includes a summary of the volume of timber harvested, natural disturbances (fire, insects & disease) and forest protection measures. Forest protection strategies include measures to reduce the vulnerability of forests to insects and disease by planning preventative silvicultural interventions. The use of pesticides in the forest is relatively limited following the application of the government commitment to the Forest Protection Strategy which includes the elimination of chemical pesticides and herbicides in public forests. (https://mffp.gouv.qc.ca/les-forets/protection-milieu-forestier/strategie-protection-forets/) On an annual basis, the BP completes supplier evaluations on 25% of secondary suppliers. The evaluation, or supplier audit, consists of a site visit to review and collect documentation on forest sources (location of the stump) to ensure that feedstock originates from within the supply base, and to identify how certified feedstock is traced back to the forest management unit. This control measure provides assurance to the BP that feedstock originates from within the defined supply base of the SBE. The BP has implemented a purchase wood risk assessment for all round wood purchases. Round wood purchases are evaluated annually; and depending on the associated risk, may be assessed based on forest practice compliance or have site visits and field inspections facilitated by the BP. In addition, the marketing boards conduct SFI BMP surveys and reports on a random selection of private wood lots on an annual basis. These surveys evaluate conformance with BMPs in each evaluated block. Supplier contracts include a clause that require adherence to applicable legislation. Suppliers must also sign an assertion declaring that all feedstock is legally sourced from within the BP's defined supply base.
Means of Verification	Supplier contracts and assertions NB SIC BMP survey and reports (private woodlots) BP's annual supplier evaluation List of applicable laws and regulations BMP manuals Canadian Forest Fire database: http://cwfis.cfs.nrcan.gc.ca/ha/nfdb Canadian Wildland Fire Information System http://cwfis.cfs.nrcan.gc.ca/interactive-map Quebec - chief forester reports: http://forestierenchef.gouv.qc.ca/ NB forest fire watch:

	https://www2.gnb.ca/content/gnb/en/news/public_alerts/forest_fire_watch.html Forest fire protection regulation: https://novascotia.ca/just/regulations/regs/fofire.htm New Brunswick – New Approaches for Private Woodlots http://www2.gnb.ca/content/dam/gnb/Departments/nr-rn/pdf/en/ForestsCrownLands/NewApproachesForPrivateWoodlots.pdf New Brunswick – A balanced management approach for New Brunswick's Crown Forest http://www2.gnb.ca/content/dam/gnb/Departments/nr-rn/pdf/en/ForestsCrownLands/BMAF.pdf Nova Scotia – Registry of Buyers annual report http://novascotia.ca/natr/forestry/registry/ann_report.asp
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.4.3	The Biomass Producer has implemented appropriate control systems and procedures for verifying that there is adequate protection of the forest from unauthorised activities, such as illegal logging, mining and encroachment (CPETS7c).
Finding	The supply base is traceable back to the defined supply base (Indicator 1.1.2). Biomass is transported on trucks to the wood pellet plant. The BP purchases certified and uncertified fibre and round wood that originates from New Brunswick (NB), Nova Scotia (NS), and Quebec (QC). Primary round wood in New Brunswick and Quebec is sold through regional marketing boards. Marketing boards verify ownership of primary forest products through the Parcel Identification Number (PID) located on transportation certificates. The *Transportation of Primary Forest Products Act* requires the accurate completion of TC for each load of primary feedstock. The TC includes the PID which can trace the fiber back to the forest management unit. TCs are subject to audits through the provincial Department of Natural Resources (DNR). In Nova Scotia, any industry that procures more than 5,000 cubic meters of primary wood per year must report information on volumes and harvest sites to provincial DNR. These data are summarized in annual reports. The due diligence system (DDS) employed through the BP's PEFC COC certification includes requirements for local knowledge of supply base by staff, risk assessments, and supplier assertions. Regional risk assessments have been prepared for the entire supply base (NS, NB, and QC) and are reviewed on an annual basis. Supplier contracts include a clause requiring legal compliance. Assertions signed by each supplier declare that feedstock is legally sourced from within the BP's defined supply base of NB, NS or QC. Strong legislation is in place in NB, NS, and QC to ensure the scaling and transportation of logs and wood fibre is documented. Supplier contracts ensure that suppliers are adhering to applicable legislation and assertions state that wood fibre does not originate from controversial sources i.e. illegal or unauthorized sources (as discussed in previous findings).

	Risk assessments for each of the provinces through the BP's PEFC COC due diligence system.
Means of Verification	Supplier contracts and assertions NB, NS, QC risk assessment NB SIC BMP survey and reports (private woodlots) NB Crown licensee audits Transportation certificates Due diligence system List of applicable laws and regulations Canada's Legal Forest Products: http://www.sfmcanada.org/en/forest-products/legal-forest-products
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.5.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that legal, customary and traditional tenure and use rights of indigenous people and local communities related to the forest are identified, documented and respected (CPET S9).
Finding	*The Canadian Charter of Rights and Freedoms* forms the first part of the *Constitution Act* (1982). The bill guarantees certain political rights of Canadian citizens and civil rights to everyone in Canada. Aboriginal rights, like treaty rights, are recognized by Section 35 of the Constitution Act. Historically, aboriginal rights have been achieved by way of treaty or land claims settlement rather than through legislation. Supplier contracts/assertions require legal compliance to local and national regulations and legislation. The *new Aboriginal Forestry Initiative* (AFI) is the federal government's approach to enhance aboriginal participation in Canada's forest sector. The AFI is supported by Natural Resources Canada and Aboriginal Affairs and Northern Development Canada.
Means of Verification	Supplier contracts and assertions US Department of State on Canadian Human Rights: http://www.state.gov/g/drl/rls/hrrpt/2005/61719.htm National Aboriginal Rights Association: http://www.nafaforestry.org/pdf/2015/First%20Nation-Held%20Forest%20Tenure%20Report%202015.pdf Indigenous Forestry Initiative: http://www.nrcan.gc.ca/forests/federal-programs/13125
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**

Comment or Mitigation Measure	N/A

	Indicator
2.5.2	The Biomass Producer has implemented appropriate control systems and procedures for verifying that production of feedstock does not endanger food, water supply or subsistence means of communities, where the use of this specific feedstock or water is essential for the fulfilment of basic needs.
Finding	In Canada, legal disposition is in place to ensure that harvesting of feedstock doesn't encroach on the fulfilment of basic needs. The *FSC National Risk Assessment for Canada* (draft, 2018) [FSC NRA] assesses resources that are fundamental to basic necessities of local communities or indigenous peoples. Water (sources for irrigation and community water) and areas of subsistence harvesting for indigenous peoples (hunting, fishing, trapping and plant collection) were evaluated. Each province delineates community watersheds as sources for drinking water or irrigation and has sufficient regulatory measures to mitigate any threats. Legal mechanisms are in place to mitigate the potential impacts to areas of subsistence harvesting for indigenous people. The three provinces within the defined supply base were deemed low risk by the FSC NRA. (https://ca.fsc.org/en-ca/standards/national-risk-assessment-01) In New Brunswick (NB), the *Clean Water Act* aims to protect the quality of water for drinking and recreation. The *Watercourse and Wetland Alteration Regulation* of the *Clean Water Act* is intended to protect provincial streams rivers, wetlands and lakes from work or ground disturbance, and any company working within 30 meters is required to have a permit. About 40% of the population in New Brunswick obtain their water supply from surface watershed. Watersheds are protected under the *Watershed Protected Area Designation Order*. Forestry operations located within setback zones have restrictions on the type and volume of harvesting allowed. The *NB Private Woodlot Silviculture Program* manual provides guidance for adherence to NB regulations in regards to water conservation and protection. The *NB Crown land forest management manual* provides BMPs for maintaining the integrity of watercourses and wetlands to preserve the physical, chemical and biological properties and functions in their natural state. Furthermore, designated buffer zones must be adhered to in areas surrounding traditional high-recreation use waterways. Watercourse and wetland buffer zones are one of the management tools used to protect water quality and aquatic habitat on Crown land (Table 1 & 2, *Forest Management Manual for New Brunswick Crown Lands – Results-Based Forestry Option*). In Nova Scotia (NS), the *Code of Forest Practice* is mandatory on Crown land and recommended on private lands. The Code provides BMPs for maintaining and enhancing the quality of water (Code Principle 1.6): • Road and trail layouts must be designed to minimize the impact of construction activities on water regimes (1.6.1). • Designated watersheds are to have no more than 25% of the area in a state of recent (5 years or less) forest timber harvest (1.6.2) • Forest management within designated municipal water supply areas will require *Source Water Protection Plans* to protect water supplies (1.6.3).

	In Quebec (QC), annual forest management plans are based on a 5-year program, and must be approved by the Minister. The *Sustainability Forest Development Act* applies to both private and Crown forest, and establishes a forest regime designed to implement sustainable forest management through ecosystem-based development. This Act includes measures for the conservation of water, the protection of lakes, watercourse, riparian areas and wetlands, and water quality. Forestry operations building bridges or culverts or working near lakes and watercourses must comply with rigorous regulations to preserve the quality of the aquatic environment. (https://mffp.gouv.qc.ca/english/forest/understanding/understanding-management.jsp) Supplier contracts include a clause that require adherence to legislation and suppliers must sign an assertion that declares all feedstock is legally sourced from within the BP's defined supply base.
Means of Verification	Supplier contracts and assertions NB, NS and QC risk assessments BMP manuals Provincial Regulations FSC National Risk Assessment: https://ca.fsc.org/en-ca/standards/national-risk-assessment-01 NB Clean Water Act: https://www.canlii.org/en/nb/laws/stat/snb-1989-c-c-6.1/76685/ NS Code of Forest Practice: https://novascotia.ca/natr/forestry/laws/ PQ Sustainable Forest Development Act: http://legisquebec.gouv.qc.ca/en/ShowDoc/cs/A-18.1
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.6.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that appropriate mechanisms are in place for resolving grievances and disputes, including those relating to tenure and use rights, to forest management practices and to work conditions.
Finding	90% of Canada's land area is Crown land (Federal & Provincial). The federal and provincial governments regulate the tenure & use rights and forest management practices on their land. Private land tenure is regulated through provincial acts and regulations (*NB's Land Titles Act, NS's Land Registration Act, and the Land registry of Quebec*). Private land use rights are regulated by the Provincial acts and municipal bylaws (*NB's Community Planning Act, NS Municipal Government Act, QC's Act Respecting Land Use Planning and Development*). Supplier contracts provide assurance that suppliers are following applicable legislation and regulations in regards to grievances and disputes, furthermore the contracts contain a clause related to dispute resolution.

	Furthermore, the BP has an employee safety orientation, which includes a review of employee rights and health and safety regulations.
Means of Verification	Supplier contracts and assertions Provincial and federal legislation Private woodlot owner/contractor agreements Safety orientation program EMS manual
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.7.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that Freedom of Association and the effective recognition of the right to collective bargaining are respected.
Finding	Rights to Freedom of Association and to Collective Bargaining are protected under the Canadian Charter of Rights. Supplier contracts and assertions provide assurance that suppliers are complying with local and national legislation and regulations. Shaw Resources provides all employees with an orientation handbook and policy manual. Safe job procedures and appropriate training is in place and is documented in a training matrix by the Health and Safety Coordinator. Occupational Health and Safety regulations for NB and NS are available on the company server (Health & Safety Act, WHMIS & First Aid regulations, and etc.). Shaw Resources' policy statement states that practical and effective measures are in place to protect the health and safety of employees, customers and contractors. The company motto is "No one will be hurt today or tomorrow". The Belledune pellet plant is unionized and currently has a collective agreement with the BP. This demonstrates that workers have the rights of Freedom of Association and Collective Bargaining and have exercised them. Supplier contracts and assertion provide assurance that suppliers are following applicable legislation and regulations.
Means of Verification	Supplier contracts and assertions Provincial and Federal Employment Standard Acts and labour codes Canadian Charter of Rights Policy manual Training matrix BP's Collective agreement
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.7.2	The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is not supplied using any form of compulsory labour.
Finding	Human Resources staff complete an orientation with all new employees. The orientation includes a review of company policies (with built in requirements for legal compliance), employee identification verification, and employment contracts. Furthermore, employees are entered into the payroll system and receive payment and paystubs for work completed. The BPs policies are in compliance with regulations on compulsory labour (including the right to refuse work that is unsafe). Forest employment in Canada is regulated under federal and provincial labour codes to provide for a safe and healthy workplace, protect workers' rights to organize and are consistent with the ILO provisions. Supplier contracts and assertion provide assurance that suppliers are following applicable legislation and regulations.
Means of Verification	Supplier contracts & assertions Provincial and Federal Employment Standard Acts and labour codes Company human resource manuals and policies Employee identification Employee contract Payroll system and paystubs US Department of State on Canadian Human Rights: http://www.state.gov/g/drl/rls/hrrpt/2005/61719.htm Government of Canada Labour Program: https://www.canada.ca/en/employment-social-development/corporate/portfolio/labour.html Canadian Labour Standards Regulations: http://laws.justice.gc.ca/eng/regulations/C.R.C.,_c._986/ Government of Canada Employment Standards: http://www.cic.gc.ca/english/work/labour-standards.asp
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.7.3	The Biomass Producer has implemented appropriate control systems and procedures to verify that feedstock is not supplied using child labour.
Finding	Unicef's global database Indicates that 150 million children worldwide are engaged in child labour (https://data.unicef.org/topic/child-protection/child-labour/). The data are

	broken down by country and show that there are 0 cases of child labour in Canada. The data are based on UNICEF-supported surveys. Human Resources staff complete an orientation with all new employees. This includes a review of company policies (with built in requirements for legal compliance), employee identification verification, and employment contracts. Furthermore, employees are entered into the payroll system and receive paystubs for work completed. The BP's corporate policy manual states that all new employees must have a minimum of grade 12 education or a level of education, training and skill deemed appropriate for the position. Forest employment in Canada is regulated under federal and provincial labour codes which prohibit child labour, provide for a safe and healthy workplace, protect workers' rights to organize and are consistent with the ILO provisions. There is no evidence of child labour violations. Supplier contracts and assertion provide assurance that suppliers are following applicable legislation and regulations.
Means of Verification	Supplier contracts & assertions Provincial and Federal Employment Standard Acts and labour codes Company human resource manuals and policies Employee identification Employee contract Payroll system and paystubs Unicef's Global Database https://data.unicef.org/ US Department of State on Canadian Human Rights: http://www.state.gov/g/drl/rls/hrrpt/2005/61719.htm Government of Canada Labour Program: https://www.canada.ca/en/employment-social-development/corporate/portfolio/labour.html Canadian Labour Standards Regulations: http://laws.justice.gc.ca/eng/regulations/C.R.C.,_c._986/ Government of Canada Employment Standards: http://www.cic.gc.ca/english/work/labour-standards.asp
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.7.4	The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is not supplied using labour which is discriminated against in respect of employment and occupation.
Finding	Human Resources staff complete an orientation with all new employees. This includes a review of company policies (with built in requirements for legal compliance), employee identification verification, and employment contracts. Furthermore, employees are entered into the payroll system and receive paystubs for work completed. The BP's corporate policy manual states that employees will not unlawfully discriminate against or harass on

	any basis and that there will be no discrimination towards any employee with respect to employment and occupation. Forest employment in Canada is regulated under federal and provincial labour codes which prohibit child labour, provide for a safe and healthy workplace, protect workers' rights to organize and are consistent with the ILO provisions. There is no evidence of discrimination violations between the company and their workers. Supplier contracts and assertion provide assurance that suppliers are following applicable legislation and regulations.
Means of Verification	Supplier contracts & assertions Provincial and Federal Employment Standard Acts and labour codes Company human resource manuals and policies e.g. anti-discrimination policies Employee contract Employee identification Payroll system & paystubs US Department of State on Canadian Human Rights: http://www.state.gov/g/drl/rls/hrrpt/2005/61719.htm Government of Canada Labour Program: https://www.canada.ca/en/employment-social-development/corporate/portfolio/labour.html Canadian Labour Standards Regulations: http://laws.justice.gc.ca/eng/regulations/C.R.C.,_c._986/ Government of Canada Employment Standards: http://www.cic.gc.ca/english/work/labour-standards.asp
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.7.5	The Biomass Producer has implemented appropriate control systems and procedures for verifying that feedstock is supplied using labour where the pay and employment conditions are fair and meet, or exceed, minimum requirements.
Finding	Human Resources staff complete an orientation with all new employees. This includes a review of company policies (with built in requirements for legal compliance), employee identification verification, and employment contracts. Furthermore, employees are entered into the payroll system and receive paystubs for work completed. The BP's corporate policy complies with regulations on minimum wage and remuneration. Forest employment in Canada is regulated under federal and provincial labour codes. Forest workers are protected by either federal or provincial laws. Employment standard laws protect the rights of workers in relation to work hours, pay rate, vacation, holidays, breaks, leaves of absences or termination. Supplier contracts and assertion provide assurance that suppliers are following applicable legislation and regulations.

Means of Verification	Supplier contracts & assertions Provincial and Federal Employment Standard Acts and labour codes Employee contract Employee Identification Payroll system and paystubs US Department of State on Canadian Human Rights: http://www.state.gov/g/drl/rls/hrrpt/2005/61719.htm Government of Canada Labour Program: https://www.canada.ca/en/employment-social-development/corporate/portfolio/labour.html Canadian Labour Standards Regulations: http://laws.justice.gc.ca/eng/regulations/C.R.C.,_c._986/ Government of Canada Employment Standards: http://www.cic.gc.ca/english/work/labour-standards.asp
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.8.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that appropriate safeguards are put in place to protect the health and safety of forest workers (CPET S12).
Finding	Worker's unions, government organizations, and employers monitor and verify health and safety requirements, equipment and safe work practices by workers. Furthermore the Worker's Compensation Boars have inspectors that verify work sites (including forestry operations) and can fine employers that aren't following health and safety regulations. Canada is a model for health and safety in the workplace and is designated as low risk in the *FSC National Risk Assessment for Canada* (draft, 2018). The provincial government is responsible for the implementation and enforcement of occupational health and safety regulations in each province. In New Brunswick, WorkSafe NB is responsible for overseeing the implementation and application of NB's *Occupational Health and Safety Act*. WorkSafe NB lists recent court cases, arbitration and compliance decision on the WorkSafe NB website: https://www.worksafenb.ca/policy-and-legal/cases-and-decisions/arbitration-decisions/. In Nova Scotia, the Department of Labour and Advanced Education are responsible for the enforcement of the provincial *Occupational Health and Safety Act* and regulations. The Department completes regular audits and responds to complaints in regards to health and safety and have the right to issue warnings, orders, recommendations or fines. Non-compliances and convictions can be found on the provincial website: https://novascotia.ca/lae/healthandsafety/ In Quebec, it is the Commission of Health and Security at Work (CSST) that is responsible for the enforcement of the *Occupational Health and Safety Act* in Quebec. Workplaces that are not in compliance with the act can be issued warnings, orders, recommendations, or fines. The CSST website: https://www.csst.qc.ca/lois_reglements_normes_politiques/Pages/loi_35.aspx

	Marketing boards often offer SFI logger training to private woodlot owners and contractors, while Crown and certified lands are required to have an appropriate level of training and education for the proper implementation of sustainable forest practices and objectives. Supplier contracts and assertion provide assurance that suppliers are following applicable legislation and regulations.
Means of Verification	Supplier contracts & assertions Provincial Occupational Health and Safety acts, regulations, and websites BP's health and safety program BP's Purchase wood risk assessment SFI logger training records
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.9.1	Biomass is not sourced from areas that had high carbon stocks in January 2008 and no longer have those high carbon stocks.
Finding	Wood fibre is not sourced from wetlands, peatlands, riparian reserve zones or protected areas. All harvesting is regulated by provincial forestry regulations which have stringent controls to ensure the protection of areas deemed to have high carbon stocks. The *National Inventory Report on Greenhouse Gas Sources and Sinks in Canada* (1990-2016), has shown an overall decrease in carbon emissions (Mt CO_2 Equivalent) for New Brunswick, Nova Scotia and Quebec over the period of 1990 to 2016. The Canadian government estimates sustainable wood supply by using information from all jurisdictions. Provincial Crown land harvests are regulated by the annual allowable cut (AAC). The AAC is the maximum volume of timber that may be harvested annually to ensure resource sustainability. The aggregate of all AACs throughout the country has been relatively constant since 1990, and in 2014, only 2/3 of the allowable cut was harvested (The State of Canada's forest, 2016).

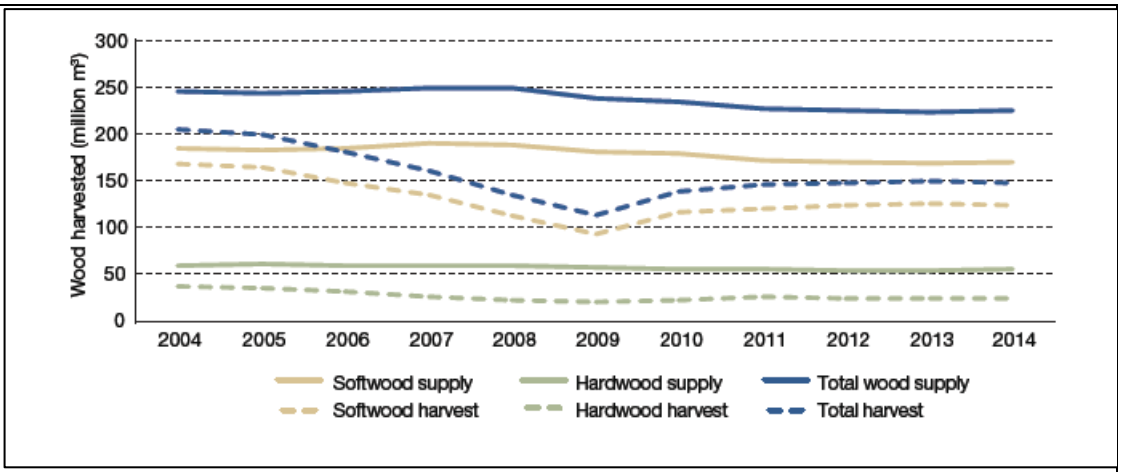


Figure 2.9.1-1: Annual harvest versus supply deemed sustainable for harvest, 2004-2014 (The State of Canada's Forests Annual Report, 2016)

The Canadian Forest Service (CFS) uses the National Forest Carbon Monitoring, Accounting and Reporting System (NFCMARS) to quantify GHG emissions and removals by forests, estimate the balance of the fluxes and track changes over time. Deforestation affects less than 0.02% of Canada's forests each year (NRCan, 2016).

In New Brunswick, Crown land licensees must have forest management plans that demonstrate sustainability over an 80-year period. The 2008 Forest Report indicated that actual harvest levels were below sustainable harvest levels. Private woodlot harvests are monitored and for the 2012 to 2013 year shows that the actual cut was much lower than the AAC.

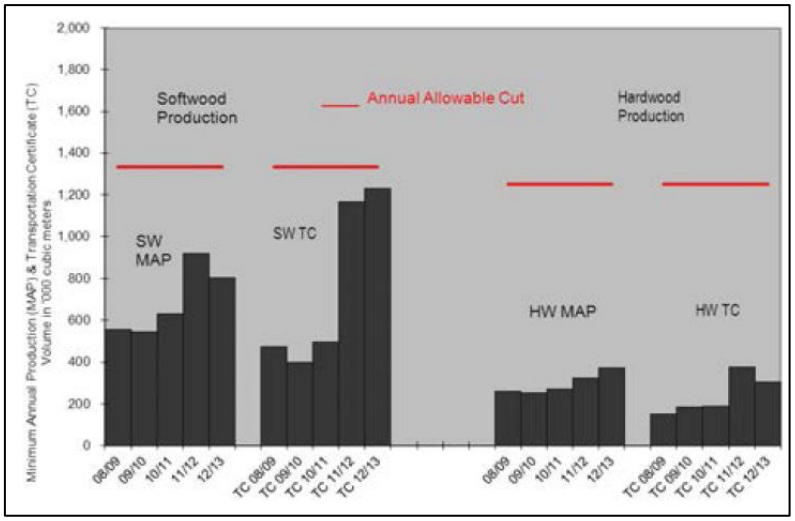


Figure 2.9.1-2: NB Private Woodlot production compared to Annual Allowable Cut in NB (New Brunswick Forest Products Commission Annual Report, 2013)

In Nova Scotia, the *State of the Forest Report* states that forests have become a carbon sink since 2009, storing more carbon than what is being lost from forest harvesting. Furthermore, long term estimates of available wood supply indicate that harvest levels are sustainable.

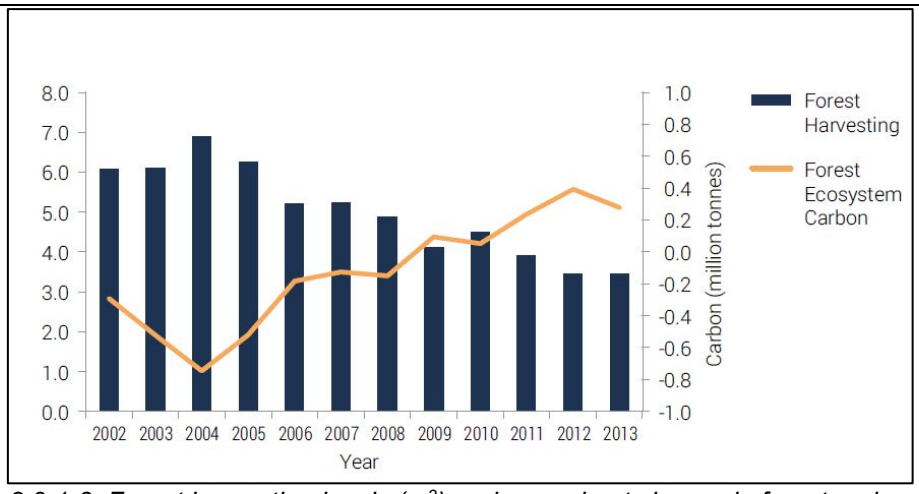


Figure 2.9.1-3: Forest harvesting levels (m^3) and annual net change in forest carbon in NS, 2002-2013 (State of the Forest Report, 2016)

In Quebec, the chief forester is responsible for calculating and updating the AAC every 5 years. The calculation includes the anticipated effects of natural disturbances from fire, insect infestations and disease. The AAC has decreased considerably in the past few years (The Quebec Economic Plan, 2016-2017)

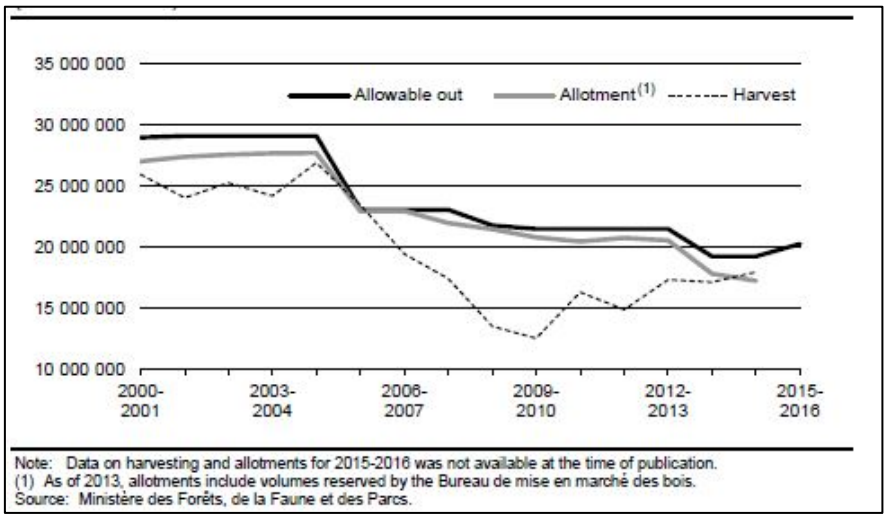


Figure 2.9.1-4: Changes in allowable cut, allotments and harvest from public forests in Quebec (The Quebec Economic Plan, 2016)

Supplier contracts and assertion provide assurance that suppliers are following applicable legislation and regulations.Each of the provinces have BMP manuals that help to ensure that controls are in place to prevent environmental impacts.

Means of Verification	Supplier contracts and assertions Provincial and federal legislation Government reports BMP manuals State of Canada's Forest Report: https://www.nrcan.gc.ca/forests/report/16496 National Pollution Release Inventory: https://www.canada.ca/en/services/environment/pollution-waste-management/national-pollutant-release-inventory.html

	Canadian National Forest Monitoring, Carbon and Accounting System: https://www.nrcan.gc.ca/forests/climate-change/carbon-accounting/13087 New Brunswick Forest Product Commission Report: https://www2.gnb.ca/content/dam/gnb/.../nr.../ForestsCrownLands/.../2012-2013.pdf Nova Scotia State of the Forest Report 2016: https://novascotia.ca/natr/forestry/reports/State_of_the_Forest_2016.pdf Quebec Economic Plan: www.budget.finances.gouv.qc.ca/budget/2016-2017/en/.../EconomicPlan.pdf
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.9.2	Analysis demonstrates that feedstock harvesting does not diminish the capability of the forest to act as an effective sink or store of carbon over the long term.
Finding	Reforestation is mandated for all Crown lands within each of the provinces and the company's supply areas. The Canadian government estimates sustainable wood supply by using information from all jurisdictions. Provincial Crown land harvests are regulated by the annual allowable cut (AAC). The aggregate of all AACs throughout the country has been relatively constant since 1990, and in 2014, only 2/3 of this allowable cut was harvested (The State of Canada's forest, 2016). The National Inventory Report on Greenhouse Gas Sources and Sinks in Canada (1990-2016), has shown an overall decrease in carbon emissions (Mt CO_2 Equivalent) for New Brunswick, Nova Scotia and Quebec over the period of 1990 to 2016. The Land Use, Land-Use Change and Forestry Sectors reported anthropogenic GHG fluxes between atmosphere and Canada's managed lands as having a net flux that amounted to the removal of 28 MT of atmospheric CO_2. The New Brunswick (NB) provincial government defines goals, objectives and requirements for forest management plans. They also define the boundaries of protected areas, habitats and other special management zones that form the conservation forest. NB Crown land licensees must have forest management plan maps that span a period of 10 year and are sustainable over 80 years. NBDNR evaluates licensee's forest management performance on a five year interval, which is based on a set of predetermined goals, objectives, indicators and outcomes. Any catastrophic natural disturbance (forest fire, insect outbreak, disease, etc.) triggers an update to the plan. Harvesting from private forest sources in NB is monitored through regional marketing boards. Marketing boards offer assistance to private woodlot owners with forest management planning, including calculating timber inventory, defining harvest layout, and developing management plans. The marketing boards will also offer programs that promote sustainable forest management and for SFI logger training. The provincial government partners with private woodlot owners and marketing boards to fund silviculture treatments. A *Landowner Agreement* must be signed with Department of Energy and Resource Development (ERD) to be eligible for silviculture treatment on a private woodlot. Any woodlot that has received silviculture funding may be inspected to

	ensure best management practices (BMPs) and guidelines outlined in the *New Brunswick Private Woodlots Silviculture Manual* are being followed. In Nova Scotia, the enforcement of the *NS Forests Act* on Crown and private lands supports the development of a healthy productive forest capable of yielding high volumes of high quality product. The enforcement division of NSDNR completes regular inspections of harvest sites. *Nova Scotia's Code of Forest Practice* promotes sustainable forest management (SFM) in the province. SFM is required on Crown lands and highly encouraged on private woodlots in Nova Scotia. The majority of primary wood products supplied to industry in the province are from private sources. The provincial government develops forest management training programs and financial incentives to further encourage the sustainable use of private woodlots. The Nova Scotia Registry of Buyers requires businesses to inventory all primary forest products acquired for processing. Registered buyers contribute to a silviculture fund based on the volume of wood acquired. The *Registry of Buyers' annual report* outlines the volumes of wood harvested throughout the province and provides reliable data on market demands and estimates on sustainable harvest levels. In Quebec, the *Sustainable Forest Development Act* was implemented in 2010. The act gives the Minister of Natural Resources (MRN) greater control and responsibility over Crown forest management. This includes maintaining ecosystem-based management plans that maintain ecosystem biodiversity and viability. The MRN offers technical and financial support to woodlot owners that practice sustainable forest management. This support is presented through regional agencies that help with the preparation of a protection and development plan and financial and technical support. Only certified private forests have access to these government programs Supplier contracts and assertion provides assurance that suppliers are following applicable legislation and regulations. See 2.9.1 in regards to sustainable harvest levels.
Means of Verification	Supplier contracts and assertions NB SIC survey Federal and Provincial Acts & Regulations Provincial and federal government reports NB SIC BMP survey and reports (private woodlots) Best management practices
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A

	Indicator
2.10.1	Genetically modified trees are not used.
Finding	The Food and Agricultural Organization of the United Nations summarizes that no GMO trees are used commercially in Canada. Genetically engineered forest trees are not

	approved for commercial plantings in Canada. The Federal Food Inspection Agency confirms that confined field trials of plants with novel traits are limited to scientific research. None of the harvested tree species are listed on the list of plants with novel traits (PNT) on the CFIA database. The 2018 *FSC National Risk Assessment for Canada* (draft, 2018) assigned a low risk for the use of genetically modified tree usage in Canada.
Means of Verification	Supplier contracts and assertions FAO Reports CFIA Database FSC National Risk Assessment: https://ca.fsc.org/en-ca/standards/national-risk-assessment-01
Evidence Reviewed	All means of verification reviewed
Risk Rating	☑ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	N/A