Supply Base Report: Alabama Pellets - Aliceville

Re-assessment

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; re-published 3 April 2020

Contents

1 Overview

Producer name:	Pinnacle Renewable Energy Inc. – Alabama Pellets LLC
Producer location:	6777 Highway 17 South, Aliceville, AL 35442
Geographic position:	88° 14’30.37” W, 33° 4’24.28” N
Primary contact:	Joseph Aquino – Head of Sustainability
Company website:	www.pinnaclepellet.com
Date report finalised:	01/May/2020
Close of last CB audit:	11/Dec/2020
Name of CB:	SCS Global Services
Translations from English:	N/A
SBP Standard(s) used:	Standard 1 ver. 1.0, Standard 2 ver. 1.1, Standard 4 ver. 1.0, Standard 5 ver. 1.0
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://www.pinnaclepellet.com/sustainability/compliance-reports/

Indicate how the current evaluation fits within the cycle of Supply Base Evaluations				
Reassessment	**First Surveillance**	**Second Surveillance**	**Third Surveillance**	**Fourth Surveillance**
X	☐	☐	☐	☐

2 Description of the Supply Base

2.1 General description

Location

The wood pellet production facility (BP) is located in the Southeast U.S. in Pickens County near Aliceville, Alabama. The facility is approximately ten miles from the Mississippi state line and is adjacent to the Tennessee-Tombigbee Waterway in a rural area where forestry and agriculture (e.g. crops, cattle) are prevalent and are the primary sources of income. Much of the forest land in this area is privately owned. Known as the Black Belt Prairie Region, the area is characterized by weathered rolling plains containing various hardwood and mixed hardwood/pine forests.

Supply Base

The supply base area for secondary feedstock includes Alabama, Mississippi, Georgia, South Carolina, North Carolina, Tennessee, Arkansas, and Louisiana in addition to certain counties in Florida, Texas, and Missouri, Kentucky. The origin of primary softwood feedstock is limited to Alabama and Mississippi mainly due to haul distance constraints. The majority of feedstock is generated within approximately 120 miles of the plant; however, the supply base area includes the supply basins for secondary feedstock suppliers.

There are three broad categories of land ownership in the US:

- Federal Lands – approx. 33%
- Private lands – approx. 60%
- State, public agencies and Indigenous Lands – approx.. 7%

The following ownership structure is taken from the FSC US Controlled Wood Risk Assessment and is a good description of ownership structure in the BP's supply base.

Federal land ownership:

- The Bureau of Land Management, managing the "public lands" (100 million hectares, mostly not forested land, but including the commercially valuable forests of the O & C lands in western Oregon)
- The US Forest Service, managing the national forests and grasslands and some special reserved lands; by far the largest seller of legal timber from federal lands (78 million hectares, including non-forest lands and lands reserved from commercial harvest)
- The US Fish and Wildlife Service, managing the national wildlife refuges (35 million hectares, with the largest of its holdings in Alaska)
- The National Park Service, managing national parks, monuments, historic sites, etc. (32 million hectares, also with the majority of its holdings in Alaska)
- The Department of Defence, managing military reservations (7 million hectares)

State, Public Agencies and Indigenous Lands:

- State and local laws govern the classification and management of lands held by state and local governments (about 18 million hectares of potential timberlands).

- Typically, state or local land management agencies, such as forestry commissions or parks departments, manage these lands.
- Local governments keep land tenure records. In some states, the courts keep the records. In some, the recorder is an administrative office of a local government.
- Local or state governments handle business registration, and state governments handle creation of corporations and other legal persons. A business incorporated in one state but operating in several states may have to register as a “foreign” corporation and designate a local agent in each state. In some states, businesses must also register with the state taxing authority.

Private Land Ownership:

- For privately owned lands, state and local laws and institutions largely govern tenure.
- State laws govern the sale or transfer of rights to land, the rights of property owners and occupants, and the recording of interests and rights to land.
- The general laws for contracts and property transactions govern most transfers of rights to manage and harvest on private lands. These are largely state laws. A private landowner will typically enter into a contract with a logger allowing the logger to harvest timber.
- Private lands may be leased long-term for timber production, but it’s actually more common for private landowners to lease their lands for hunting and recreation, reserving for themselves the right to sell or harvest timber.

Supply Base Regions

1. Alabama	**2. Louisiana**
3. Mississippi	**4. Florida**
5. Georgia	**6. South Carolina**
7. North Carolina	**8. Texas**
9. Arkansas	**10. Tennessee**
11. Kentucky	

Feedstock Procurement

BP purchases secondary residuals from various sawmills in Alabama and Mississippi. Primary feedstock is sourced from tracts in Alabama and Mississippi. Only softwood species are utilized for primary feedstock, no hardwood species are utilized. A gradual increase in the availability of residual material is underway throughout the region and coincides with increased housing starts.

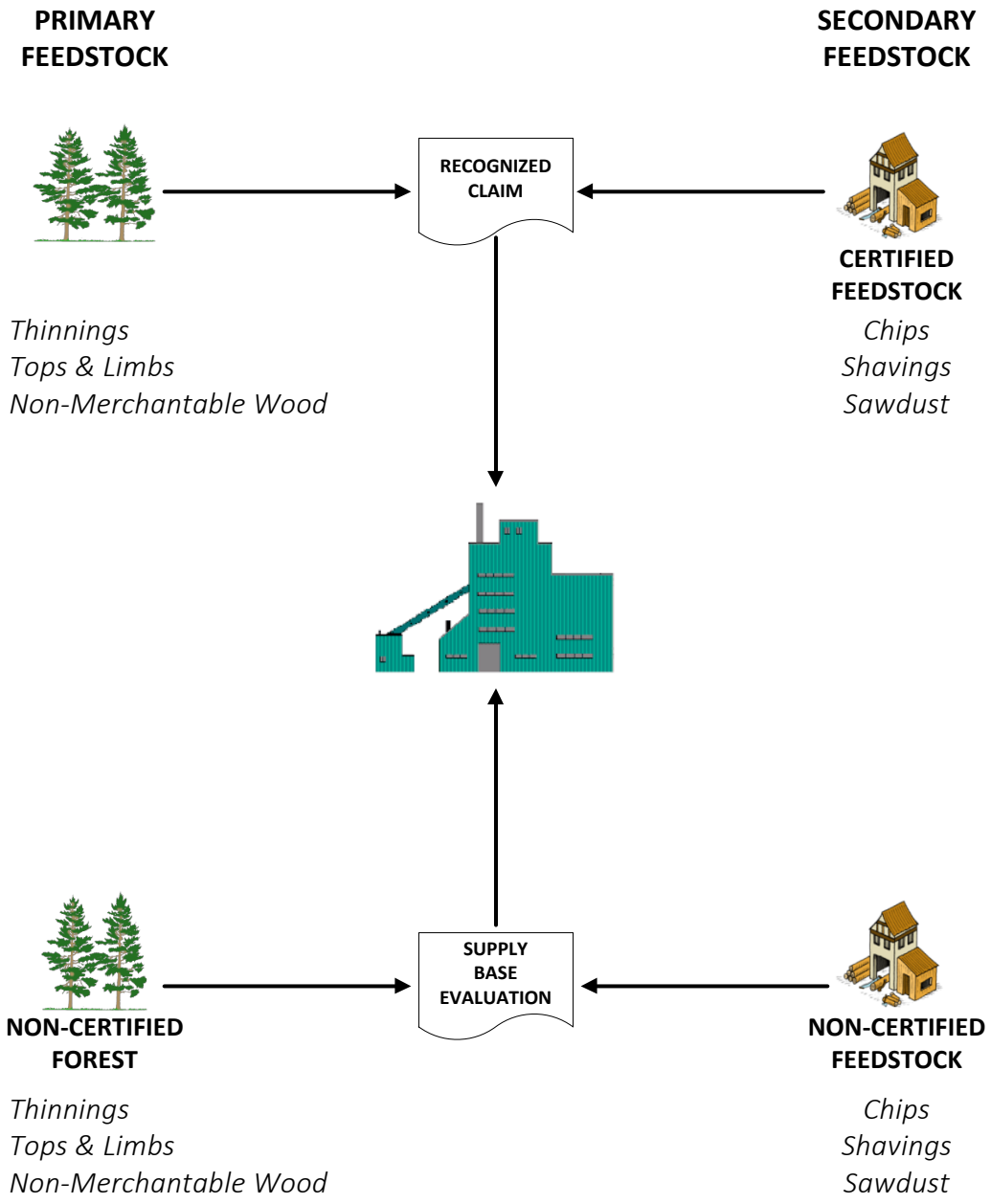
2.2 Actions taken to promote certification amongst feedstock supplier

Customer demand for certified wood products drives forest certification in the US. PREI requires that claim certificates for PEFC certified fibre are issued from PEFC certified suppliers. PREI has developed a robust supplier communication program that underscores the importance of certification and the role landowners have in ensuring effective forest management. Pinnacle promotes certification schemes with suppliers as it is a core value of Pinnacles business. Pinnacle provides suppliers with the tools necessary to achieve certification compliance through shared knowledge.

2.3 Final harvest sampling programme

The expected rotation length for round wood softwood in BP's catchment is <40 years which is below the threshold required by the Standard for a final harvest sampling program.

2.4 Flow diagram of feedstock inputs showing feedstock types



2.5 Quantification of the Supply Base

a. Suppy Base Area:	183,951,715	(ac)	74,442,684	(ha)	*(total including all forest types)*	
b. Tenure by type:						
- Private	151,235,223	(ac)	61,202,777	(ha)	85.0	(%) *estimated*
- Public	26,716,492	(ac)	10,811,790	(ha)	15.0	(%) *estimated*
- Community Concession	-	(ac)	-	(ha)		(%) *de minimis*
c. Forest by Type:	183,951,715	(ac)	74,442,684	(ha)	Temperate	
d. Forest Management byType:						
- Plantation	44,471,887	(ac)	17,997,150	(ha)		
- Managed Natural	125,531,845	(ac)	50,800,980	(ha)	*estimated*	
- Natural	13,947,983	(ac)	5,644,553	(ha)	*estimated at 10% of Managed Natural*	

e. Certified Forest by Scheme:

	ATFS (ac)	ATFS (ha)	SFI (ac)	SFI (ha)	FSC (ac)	FSC (ha)
- Alabama	2,762,304	1,117,866	2,944,878	1,191,751	670,919	271,512
- Mississippi	1,320,647	534,447	2,104,972	851,853	250,868	101,523
- Louisiana	1,052,129	425,782	2,962,742	1,198,980	619,974	250,895
- Arkansas	559,518	226,429	3,199,995	1,294,993	1,356,171	548,823
- Tennessee	340,879	137,949	475,216	192,313	100,436	40,645
- North Carolina	406,418	164,472	1,097,424	444,112	190,974	77,285
- South Carolina	1,112,169	450,079	1,126,774	455,990	327,299	132,453
- Georgia	1,924,197	778,696	2,419,141	978,992	81,601	33,023
- Florida	1,082,355	438,014	1,879,588	760,643	126,404	51,154
- Texas	788,625	319,145	2,391,417	967,773	163,479	66,158
- Missouri	127,563	51,623	-	-	238	96
	11,476,804	4,644,502	20,602,147	8,337,400	3,888,363	1,573,566

Feedstock

a. Total PWAL volume of Feedstock: 486,371.92 st

b. Total volume of primary feedstock: 1831.58 st

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

d. PWAL:

- Primary feedstock certified to an SBP-approved Forest Management Schemes – **0%**

- Primary feedstock not certified to an SBP-approved Forest Management Schemes – **100%**

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

1. Loblolly Pine (Pinus taeda)
2. Shortleaf Pine (Pinus echinata)
3. Slash Pine (Pinus elliotti)
4. Virginia Pine (Pinus Virginiana)
5. Longleaf Pine (Pinus palustris)

f. Volume of primary feedstock from primary forest – **0 st**

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

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

h. Total volume of secondary feedstock: 484,540.34 st
i. Origin: AL, MS, LA, AR, TX, SC, NC, GA, FL, TN, KY, MO
j. Type: Sawmill residuals, sawdust, bark, shavings, chips

k. Total Volume of tertiary feedstock: 0 odt
l. Origin:

3 Requirement for a Supply Base Evaluation

SBE completed	SBE not completed
X	☐

4 Supply Base Evaluation

4.1 Scope

The SBE covers a relatively large supply base area in order to capture the extensive list of suppliers within the supply base under one risk assessment. The supply base catchment is significantly larger than the actual supply base. The actual supply base reflects the counties where BP suppliers operate and it fluctuates over a year to year basis. The areas covered under the SBE covers these areas to avoid having to adjust the area covered under the SBE each year.

4.2 Justification

The size of the supply base area (SBA) ensures coverage of all current and potential harvesting areas in south eastern US. The process of identifying risk uses the best publicly available information as well as BP procedures to draw conclusions on risk designations. The FSC US National Risk Assessment was also used extensively where the SBE overlaps with the data in the FSC NRA. The findings for each indicator attempt to illustrate how BP procedures mixed with government legislation ensure the indicator will be addressed. It also incorporates how the effectiveness of those indicators are measured over time to ensure that risk that may not be present today remains that way in the future. The SBE analysis was thorough and includes data from many sources.

4.3 Results of Risk Assessment

The risk assessment resulted in specified risk for indicators:

- 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.
- 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.
- 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).
- 2.2.4 - The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b).
- 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).

The remaining indicators resulted in a low risk designation due to a combination of BP procedures and government legislation.

4.4 Results of Supplier Verification Programme

N/A

4.5 Conclusion

The US is a region known for its strong legal framework. The US has many federal and provincial pieces of legislation related to forest management and forest practices that support some of the works cited in the supply base evaluation. Much of the forested land in the US has extensive data used tyo quantify how forests change over time. The US also maintains a robust land registry system to ensure legality factors remain low risk due to the strong rule of law in place.

The areas determined as specified risk are not necessarily due to a lack of legislative processes in place. Rather they are due to the high percentage of privately owned forest lands and the lack of a collective legislative process governing the use of those timberlands. The mitigation measures for the specified risk indicators are detailed in the mitigation measures section.

5 Supply Base Evaluation Process

The SBE was compiled in combination with Pinnacle Renewable Energy Inc. and a team of external certification consultants. The team consisted of subject matter experts that provided thorough analysis on the applicable findings and evidence to base the risk designations. The subject matter experts have extensive certification and risk analysis experience throughout the US states. Upon completion, the SBE was reviewed by internal staff to ensure the indicators aligned with company procedures.

6 Stakeholder Consultation

The BP conducted a stakeholder consultation for a period of thirty (30) days beginning October 18, 2017 and ending November 17, 2017 in conjunction with a supply base scope change. A list of relevant stakeholders was developed based upon several criteria including: the geographic scope of the Supply Base, stakeholders from FSC/PEFC/SFI audits and consultations, relevant federal and state natural resource agencies, private conservation organizations, indigenous peoples, academia, advocacy organizations, professional organizations, as listed below. The list of potential stakeholders was reviewed with the CB prior to the consultation. A notice to all interested parties was also posted on The BP's website during the entire consultation period.

Requests for comment were issued to 126 potential stakeholders and of this amount, 9 were returned as undeliverable, with a delivery success rate of approximately 93% (117 potential stakeholders). The distribution of requests by potential stakeholder group is as follows.

Natural Resource Agencies	50	39.7%
Nongovernmental Organizations	22	17.5%
Academia/Research/Advocacy	19	15.1%
Professional Organizations	16	12.7%
Industry	6	4.8%
Consultancies	5	4.0%
Indigenous Peoples	4	3.2%
Certification Standards	4	3.2%
Total Solicited Requests	126	100.0%

In conjunction with the supply base scope change, the CB also conducted a stakeholder consultation which did not result in any negative feedback.

6.1 Response to stakeholder comments

Tim L. Gothard, Alabama Wildlife Federation Executive Director

Requested general information regarding SBP, and specific information on the Standard's focus on High Conservation Value areas, land conversion, expansion of the pellet industry in the US Southeast, and fiber consumption.

Response:

Provided a 4.5-page document consisting of 20 Frequently Asked Questions which addressed Mr. Gothard's request. A copy of the document is available upon request.

No other feedback was received.

7 Overview of Initial Assessment of 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

Not Applicable - No indicators are considered to be unspecified risk and therefore a supplier verification program is 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

The BP implements a supplier mapping and communication program to monitor the activities of its suppliers across the supply area. The supplier mapping and communication program is applicable to secondary feedstocks as primary feedstocks are tracked by location prior to purchasing. The BP collects the following information using the secondary supplier questionnaire:

- General supplier information including location of mill
- Certification status
- How they collect and track their timber procurement activities – scale tickets, severance taxes
- BMP monitoring of procurement activities
- BMP violations in the review period
- Awareness of land conversion in their sourcing area
- Awareness of HCV's in their sourcing area
- General procurement practices – timber types, species, quality
- Complete counties where timber was sourced for the review period

The BP uses this information, particularly the county list, it collects from suppliers to determine the extent of the supply base area. If the supply base area exceeds the previous years area, the BP will include the new area during the next assessment period. The BP checks for overlaps with HCV areas to determine where there is overlap. A detailed package is compiled for each supplier to inform them of the findings.

The educational packages provided to each supplier allows them to make better informed procurement decisions. Through sharing of this data, the information becomes more widely known to all actors in the supply chain, effectively increasing the awareness of sensitive areas in the supply base and the threats that pose risks to these sensitive areas.

Over time, the BP can use the information received from its suppliers to develop a risk matrix to determine if any suppliers or sourcing areas require additional mitigations or interventions.

The information provided by the secondary suppliers are reviewed annually and verified by third party auditors to ensure they are complete and correct. The annual information collection and verification exercise reviews the mitigations effectiveness. Any deficiencies are uncovered and new methodologies are developed to close any uncovered gaps. This system is robust, replicable, reviewed annually and revised if necessary. It requires concerted effort by both the BP and its suppliers and will strengthen over time.

In conclusion, the mitigation measure is effective at identifying where all feedstock is sourced back to the concession of harvest. It is also effective at identifying which suppliers are at risk of non-compliance with an HCV area management strategy. The mitigation process identifies which forest management practices are effective at addressing the HCV concern and is communicated to the suppliers. The information provided by the supplier is verified for correctness and completeness during annual review audits.

9.2 Monitoring and outcomes

2020 marks the first year of the supplier mapping and communication mitigation. The supplier

mapping documents will be provided to each supplier on an annual basis and reviewed with the supplier half way through the audit cycle. The intent of the monitoring exercise will be to determine if supplier behaviour is changing due to the information being provided by the BP. This will confirm the effectiveness of the mitigation measures and will reinforce the work that is being by the BP to make other wood products industry aware of the requirements of the biomass industry.

10 Detailed Findings for Indicators

Detailed findings for each Indicator are given in Annex 1.

11 Review of Report

11.1 Peer review

The Supply Base Report (SBR) was peer reviewed by external subject matter experts who have extensive knowledge of certification requirements throughout the US. The subject matter experts provide expertise in the resource sector across Canada.

11.2 Public or additional reviews

N/A

12 Approval of Report

Approval of Supply Base Report by senior management			
Report Prepared by:	***Joe Aquino***	***Head of Sustainability***	***May 01, 2020***
	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:	***Vaughan Bassett***	***Senior Vice President – Sales and Logistics***	***May 01, 2020***
	Name	**Title**	**Date**
Report approved by:	***[name]***	***[title]***	***[date]***
	Name	**Title**	**Date**
Report approved by:	***[name]***	***[title]***	***[date]***
	Name	**Title**	**Date**

13 Updates

N/A

13.1 Significant changes in the Supply Base

N/A

13.2 Effectiveness of previous mitigation measures

N/A

13.3 New risk ratings and mitigation measures

N/A

13.4 Actual figures for feedstock over the previous 12 months

Supply Base

a. Suppy Base Area:	183,951,715	(ac)	74,442,684	(ha)	*(total including all forest types)*	
b. Tenure by type:						
- Private	151,235,223	(ac)	61,202,777	(ha)	85.0 (%)	*estimated*
- Public	26,716,492	(ac)	10,811,790	(ha)	15.0 (%)	*estimated*
- Community Concession	-	(ac)	-	(ha)	(%)	*de minimis*
c. Forest by Type:	183,951,715	(ac)	74,442,684	(ha)	Temperate	
d. Forest Management byType:						
- Plantation	44,471,887	(ac)	17,997,150	(ha)		
- Managed Natural	125,531,845	(ac)	50,800,980	(ha)	*estimated*	
- Natural	13,947,983	(ac)	5,644,553	(ha)	*estimated at 10% of Managed Natural*	

e. Certified Forest by Scheme:

	ATFS (ac)	ATFS (ha)	SFI (ac)	SFI (ha)	FSC (ac)	FSC (ha)
- Alabama	2,762,304	1,117,866	2,944,878	1,191,751	670,919	271,512
- Mississippi	1,320,647	534,447	2,104,972	851,853	250,868	101,523
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- Arkansas	559,518	226,429	3,199,995	1,294,993	1,356,171	548,823
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- North Carolina	406,418	164,472	1,097,424	444,112	190,974	77,285
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- Texas	788,625	319,145	2,391,417	967,773	163,479	66,158
- Missouri	127,563	51,623	-	-	238	96
	11,476,804	4,644,502	20,602,147	8,337,400	3,888,363	1,573,566

Feedstock

f. Total volume of feedstock: 200,000-400,000 green metric tons

g. Volume of primary feedstock: 0-200,000 green metric tons

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

Subdivide by SBP-approved Forest Management Schemes.

- Large forest holdings certified to an SBP-approved Forest Management Schemes: 80%-100%
- Large forest holdings not certified to an SBP-approved Forest Management Schemes: 0%-19%

- Small forest holdings certified to an SBP-approved Forest Management Schemes: 0%-19%

- Small forest holdings not certified to an SBP-approved Forest Management Schemes: 0%-19%

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

Loblolly Pine (Pinus taeda)

Shortleaf Pine (Pinus echinata)

Slash Pine (Pinus elliotti)

Virginia Pine (Pinus Virginiana)

Longleaf Pine (Pinus palustris)

j. Volume of primary feedstock from primary forest: None

k. List percentage of primary feedstock from primary forest (i), by the following categories.

Subdivide by SBP-approved Forest Management Schemes.

- *Primary feedstock* from primary forest certified to an SBP-approved Forest Management Schemes: 0%

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

l. Volume of secondary feedstock: 80%-100% residues

m. Volume of tertiary feedstock: 0%-19%

13.5 Projected figures for feedstock over the next 12 months

a. Suppy Base Area:	183,951,715	(ac)	74,442,684	(ha)	*(total including all forest types)*		
b. Tenure by type:							
- Private	151,235,223	(ac)	61,202,777	(ha)	85.0	(%)	*estimated*
- Public	26,716,492	(ac)	10,811,790	(ha)	15.0	(%)	*estimated*
- Community Concession	-	(ac)	-	(ha)		(%)	*de minimis*
c. Forest by Type:	183,951,715	(ac)	74,442,684	(ha)	Temperate		
d. Forest Management byType:							
- Plantation	44,471,887	(ac)	17,997,150	(ha)			
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e. Certified Forest by Scheme:

	ATFS (ac)	ATFS (ha)	SFI (ac)	SFI (ha)	FSC (ac)	FSC (ha)
- Alabama	2,762,304	1,117,866	2,944,878	1,191,751	670,919	271,512
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- Missouri	127,563	51,623	-	-	238	96
	11,476,804	4,644,502	20,602,147	8,337,400	3,888,363	1,573,566

Feedstock

a. Total PWAL volume of Feedstock: 450,000 – 500,000 st

b. Total volume of primary feedstock: 0 – 20,000 st

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

d. PWAL:

- Primary feedstock certified to an SBP-approved Forest Management Schemes – **0%**
- Primary feedstock not certified to an SBP-approved Forest Management Schemes – **100%**

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

6. Loblolly Pine (Pinus taeda)
7. Shortleaf Pine (Pinus echinata)
8. Slash Pine (Pinus elliotti)
9. Virginia Pine (Pinus Virginiana)
10. Longleaf Pine (Pinus palustris)

f. Volume of primary feedstock from primary forest – **0 st**

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

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

h. Total volume of secondary feedstock: 400,000 – 450,000 st
i. Origin: AL, MS, LA, AR, TX, SC, NC, GA, FL, TN, KY, MO
j. Type: Sawmill residuals, sawdust, bark, shavings, chips

k. Total Volume of tertiary feedstock: 0 odt
l. Origin:

Annex 1: Detailed Findings for Supply Base Evaluation Indicators

	Indicator
1.1.1	The Biomass Producer's Supply Base is defined and mapped.
Finding	BP sources primary soft wood round wood from within the states of Alabama and Mississippi. The BP does not source any primary feedstock from other states nor does it source primary hard wood from any state. BP also sources soft wood and hard wood residual wood from Alabama and Mississippi where the source of the wood may originate from twelve additional states: • Louisiana • Florida • Georgia • North Carolina • South Carolina • East Texas • Arkansas • Oklahoma • Missouri • Tennessee • Kentucky • Virginia The majority of wood fiber sourced by the BP originates from the conifer forests or hardwood mixed forests in the States of Alabama and Mississippi. Suppliers of residuals may source from these states as well as from states listed in the description of the supply areas. For primary sources, each tract ownership and origin of wood is recorded on the wood order, which forms part of the contract. For secondary sources, the BP collects the counties from which suppliers source wood to by conducting annual supplier audits. The county list determines the extent of the supply base area. The supply base area has been extended sufficiently to ensure that all areas where timber can be sourced from is captured in the risk assessment. The Supply Base is defined as part of demonstrating conformance to the following Sustainability Standards: PEFC Chain of Custody and Due Diligence System Sustainable Biomass Program
Means of Verification	• Contracts • SBA map • Electronic receipt records • Severance tax payment records • Site visits to select tracts • Secondary Questionnaires

Evidence Reviewed	• Contracts • SBA map • Electronic receipt records • Severance tax payment records • Site visits to select tracts • Secondary Questionnaires
Risk Rating	**X Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	**N/A**

	Indicator
1.1.2	Feedstock can be traced back to the defined Supply Base.
Finding	**For primary sources purchased by the BP:** BP sources primary soft wood round wood from within the states of Alabama and Mississippi. The BP does not source any round wood from other states nor does it source primary hard wood from any state. The BP maintains formal contracts and records of payments and receipts. Wood receipts originate from loggers, dealers and other landowners. Title to the wood is exchanged as it crosses the scale at the pellet mill. A load slip is generated for each load of primary wood as it crosses the scale. The load slip contains information related to supplier and location. These documents and records are kept at the mill site for 5 years. Wood suppliers fill out a wood order that includes the following location information: Transaction ID County State Included with the wood order is a supplier questionnaire that collects additional information related to location and other sustainability information. The supplier questionnaire is filled out annually for each supplier. **For secondary sources purchased by the BP:** The Procurement Staff works closely with suppliers of residuals to document the county of origin of all residue wood. Legally binding Wood Purchase Agreements require suppliers to support the collection of information to implement control measures if needed. The Procurement Staff periodically reviews information from suppliers of by-products to verify: a) The species used are consistent with the BP's Risk Assessment. b) The type and quantity of material are commercially available from the declared supply area. c) The description of the supplier's procurement territory is logical and economically feasible.

	d) Purchase records retained by the supplier validate the counties where the wood originated. A supplier questionnaire is provided to each secondary supplier annually. The questionnaire identifies county level information related to the suppliers sourcing area. The questionnaire acts as an annual audit of supplier information to ensure the BP can continually trace feedstock back to the defined supply base.
Means of Verification	• Scale receipt records • Severance tax payment records • Contracts • Supplier Questionnaire • Chain of Custody Procedures
Evidence Reviewed	• Scale receipt records • Severance tax payment records • Contracts • Supplier Questionnaire • Chain of Custody Procedures
Risk Rating	**X Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	**N/A**

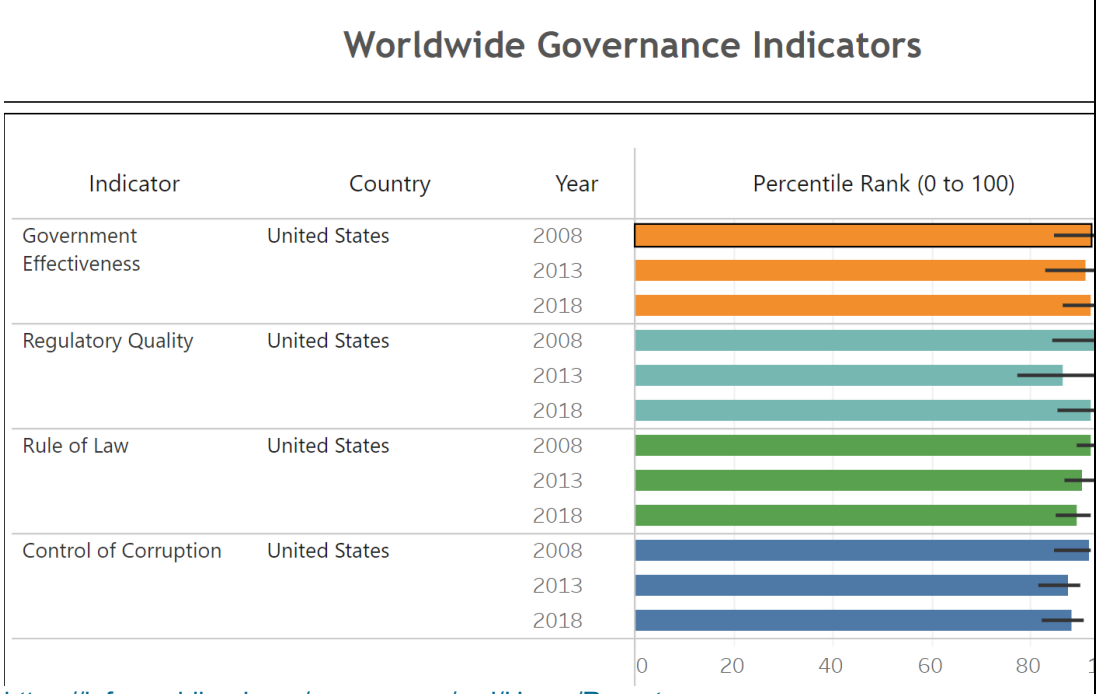
	Indicator
1.1.3	The feedstock input profile is described and categorised by the mix of inputs.
Finding	The BP utilizes almost exclusively secondary feedstock in form of wood industry residues: • Sawdust • Shavings • Chips • Hog fuel/bark. The BP utilizes only small portions of primary feedstock that could be in the form of: • early thinning's (˜12-15 years) • tree tops, branches, limbs • low value roundwood Feedstock types are identified, categorized, and recorded electronically upon receipt using an Enterprise wide tracking system. The tracking system produces a unique load ID for each individual load ensuring Supplier, product type, weight, moisture and other defining characteristics are recorded. The electronic tracking system allows for easy access to reports including the input profile of all feedstock types. The BP is certified to the PEFC Chain of custody standard, which requires internal audits and external audits to demonstrate compliance. The information recorded in the electronic tracking system is audited during internal and external audits to ensure the information is monitored for accuracy.

Means of Verification	• Scale receipt records • Severance tax payment records • Contracts • Supplier Questionnaire • Chain of Custody Procedures – Product Group List
Evidence Reviewed	• Scale receipt records • Severance tax payment records • Contracts • Supplier Questionnaire • Chain of Custody Procedures – Product Group List
Risk Rating	**X 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	The FSC National Risk Assessment (FSC NRA) concluded low risk for illegally harvested wood. There are three broad categories of land ownership in the US: • Federal Lands – approx. 33% • Private lands – approx. 60% • State, public agencies and Indigenous Lands – approx.. 7% **Federal land ownership**: • The Bureau of Land Management, managing the "public lands" (100 million hectares, mostly not forested land, but including the commercially valuable forests of the O & C lands in western Oregon) • The US Forest Service, managing the national forests and grasslands and some special reserved lands; by far the largest seller of legal timber from federal lands (78 million hectares, including non-forest lands and lands reserved from commercial harvest) • The US Fish and Wildlife Service, managing the national wildlife refuges (35 million hectares, with the largest of its holdings in Alaska) • The National Park Service, managing national parks, monuments, historic sites, etc. (32 million hectares, also with the majority of its holdings in Alaska) • The Department of Defence, managing military reservations (7 million hectares) The government has a robust land records database where ownership can be easily verified. Public forests in the US are managed either at the state / local level, or by the US Forest Service or the Federal Bureau of Land Management (which conducts its own timber management and timber sales programs). In many cases a harvesting permit, which acts like a concession license is required. On public lands (mainly those managed at the federal level by the US Forest Service) a Timber Sale Contract is required that specifies environmental compliance and a fee based on an evaluation of the timber value. **State, Public Agencies and Indigenous Lands:** • State and local laws govern the classification and management of lands held by state and local governments (about 18 million hectares of potential timberlands).

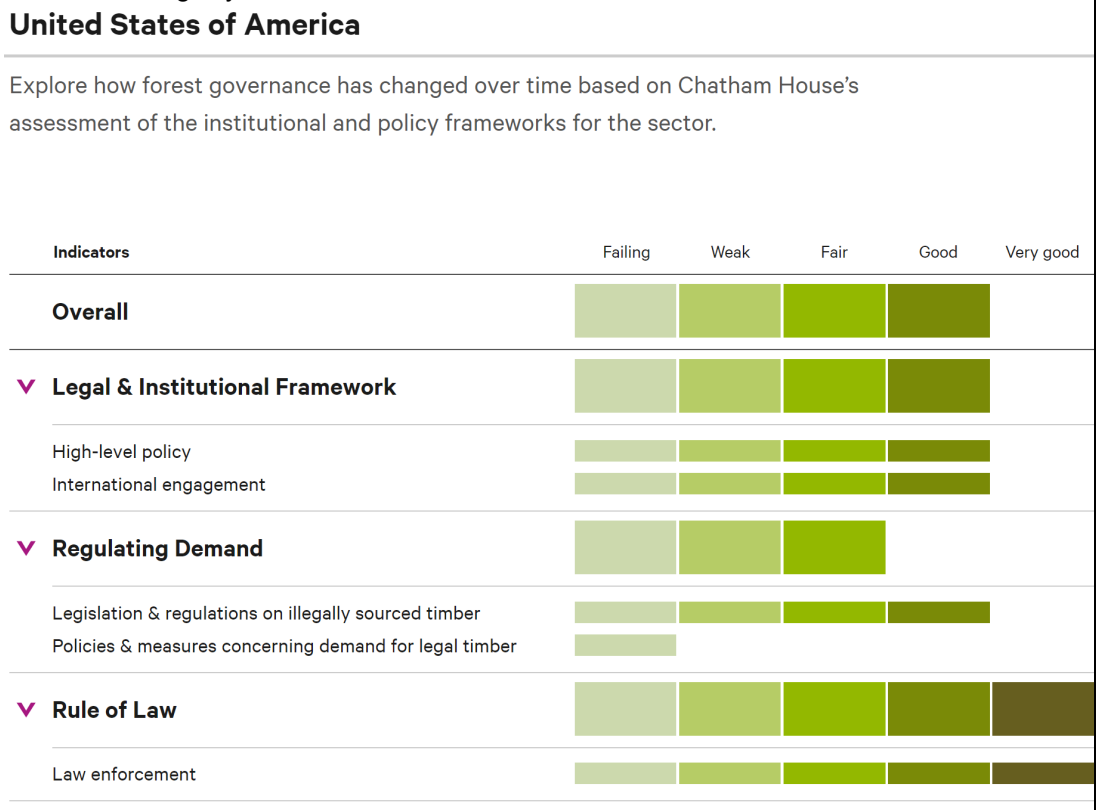
	• Typically, state or local land management agencies, such as forestry commissions or parks departments, manage these lands. • Local governments keep land tenure records. In some states, the courts keep the records. In some, the recorder is an administrative office of a local government. • Local or state governments handle business registration, and state governments handle creation of corporations and other legal persons. A business incorporated in one state but operating in several states may have to register as a "foreign" corporation and designate a local agent in each state. In some states, businesses must also register with the state taxing authority. **Private Land Ownership**: • For privately owned lands, state and local laws and institutions largely govern tenure. • State laws govern the sale or transfer of rights to land, the rights of property owners and occupants, and the recording of interests and rights to land. • The general laws for contracts and property transactions govern most transfers of rights to manage and harvest on private lands. These are largely state laws. A private landowner will typically enter into a contract with a logger allowing the logger to harvest timber. • Private lands may be leased long-term for timber production, but it's actually more common for private landowners to lease their lands for hunting and recreation, reserving for themselves the right to sell or harvest timber. • Another form of long-term management control over land is the conservation easement. These are becoming more common in the United States. The private owner grants a third party (typically a government or a non-governmental conservation organization) the right to block uses of the land. The easement may require the land to be kept in a natural state, or it may allow some commercial use if it is consistent with the purpose of the easement. For example, an easement to protect the views of land around an historic village might allow farming or forestry to continue but would prohibit construction of modern roads or structures. Conservation easements are transfers of rights that bind subsequent owners of the land, and as such the easements are usually recorded in the land records. In return for the easement, the land owner may get a purchase payment, may enjoy lower property taxes due to the reduced market value of land subject to the easement, or may get a one-time deduction for income tax purposes reflecting the value of a donated easement. • State forestry commission conduct annual audit of harvesting activities on private lands and results show a high degree of compliance with BMP's (>90%) In all land ownership cases in the US there are substantial legal requirements that ensure legality and ownership can be demonstrated. In addition to government legislation, the BP also implements control measures and procedures to ensure legality and ownership can be demonstrated: • The BP requires valid contracts with feedstock suppliers. • The BP collects load details to determine where deliveries originate. • The BP maintains records of payments and receipts for all delivered wood. Wood receipts originate from loggers, dealers and other landowners. Title to the wood is exchanged as it crosses the scale at the pellet mill. A load slip is generated for each load of primary wood as it crosses the scale. The Procurement Staff periodically reviews information from suppliers contained in a supplier questionnaire. The questionnaire identifies county level information related to the suppliers sourcing area. The supplier questionnaire is completed annually for most suppliers and less frequently for long term suppliers. Contracts with suppliers form an integral part of legality and ownership right to raw material. **Other**

The World Bank awarded the U.S. a Global Governance Index rating that exceeds 90% for Regulatory Quality:



https://info.worldbank.org/governance/wgi/Home/Reports

The illegal logging portal has scored the US in a high percentile according to three indicators of legality:



https://forestgovernance.chathamhouse.org/countries/united-states-of-america

In conclusion, wood procured in the study area can be considered Low Risk to threat to legality. Based on the determination that there is no reported systematic illegal logging in

	the supply area, there is robust legal authority and rule of law and land records are tracked and available, there is sufficient evidence to conclude “low risk” for this indicator.
Means of Verification	• FSC NRA • Scale receipt records • Severance tax payment records • Contracts • Supplier Questionnaire • Chain of Custody Claims
Evidence Reviewed	• FSC NRA • Scale receipt records • Severance tax payment records • Contracts • Supplier Questionnaire • Chain of Custody Claims
Risk Rating	**X 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 findings for indicator 1.2.1 are also applicable to this indicator. In addition to those findings and relevant to EUTR legality requirements the BP can confirm the following: • The BP maintains a PEFC due diligence system risk assessment that covers the supply area. The risk assessment is written into procedure, contains responsibilities and ensures competence. • The BP has access to sufficient information from both the publicly available sources (indicator 1.2.1 findings) and direct from suppliers (supplier questionnaires, supplier source counties, contracts) to ensure timber is legally sourced and provided to the BP in a legal manner. • The PEFC risk assessment concludes negligible risk for the supply base area • The BP has a management system in place that include performance evaluation and continual improvement. • The management system and risk assessment is audited by verified third-party auditors for compliance and the BP holds Chain of Custody certification in good standing. In conclusion, based on the findings from indicator 1.2.1 related to legality of ownership and legal harvesting and based on the information provided above for EUTR requirements, there is sufficient evidence to conclude “low risk” for this indicator.
Means of Verification	• FSC NRA • Scale receipt records • Severance tax payment records • Contracts

	• Supplier Questionnaire • Chain of Custody Claims • Chain of Custody Procedures
Evidence Reviewed	• FSC NRA • Scale receipt records • Severance tax payment records • Contracts • Supplier Questionnaire • Chain of Custody Claims • Chain of Custody Procedures
Risk Rating	**X 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	Royalties and taxes for timber in the US are contained in laws administered at the state level. These laws have been enacted primarily to encourage better forest management and to provide revenues for a variety of forestry initiatives. In most States, either the severer or the primary processor of forest products is designated as the taxpayer. Severance tax rates are established as either: 1) a fixed amount per unit of measurement or 2) a percentage of the value of timber harvested. It is a legislative requirement in the supply base that taxes on the harvest of timber are paid to the state. There is no known evidence of severance tax failures in the supply base. The BP tracks all severance payments required for primary feedstock. Wood receipts and/or payment records demonstrate payment of fees and taxes. These documents are confidential and proprietary but are available to the CB upon request. Each wood consuming facility is required to collect severance tax for each delivery. These severance taxes are accounted for by county and are submitted to the state collection agency quarterly. The BP requires a formal Wood Purchase Agreement with all suppliers containing all legal and contractual requirements. In conclusion, there is sufficient evidence to conclude low risk for this indicator.
Means of Verification	• Severance tax payment records • Supplier Contracts • Scale receipt records
Evidence Reviewed	• Severance tax payment records • Supplier Contracts • Scale receipt records

Risk Rating	**X 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	**CITES in the United States** Under the Endangered Species Act (ESA), the U.S. Fish & Wildlife Service has been designated to carry out the provisions of CITES through the Division of Management Authority and the Division of Scientific Authority. The US works with numerous partners including federal and state agencies, industry groups, and conservation organizations. **U.S. CITES Implementation and Biennial Reports** CITES requires each Party to regularly submit reports on how they are implementing the Convention. These reports may contain information on legislative and regulatory changes, as well as law enforcement, permitting, communications, and administrative matters. The reporting process is a valuable assessment of the US CITES program, identifying successes as well as areas for improvement. CITES has three categories of species differentiated by their level of threat and endangerment – Appendix I, II and III. In the three appendices combined there are 2401 plant and animal species native to the United States. No CITES Listed Tree Species are found within the BP's supply area. The control measures established by the CITES working groups to protect animal species fall under Federal legislation under the US Fish and Wildlife Service. All suppliers of feedstock are required to abide by these laws which ensures there is limited risk of any harvesting operations not meeting the compliance requirements of CITES. In conclusion, there is sufficient evidence to conclude low risk for this indicator.
Means of Verification	• Species List • CITES plant list • Scale receipt records • Strong legal framework in supply area
Evidence Reviewed	• Species List • CITES plant list • Scale receipt records • Strong legal framework in supply area
Risk Rating	**X 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 FSC NRA has concluded Low Risk for "violations of traditional and civil rights" based on the following: **Traditional Rights** " According to the United States Census Bureau, approximately 5.2 million people in the U.S., or 1.7% of the total population, identified as Native American or Alaska Native alone or in combination with another ethnic identity in 2010. In addition, there are roughly half a million persons that identify entirely or partly as Native Hawaiians. There are 567 federally recognized tribal entities in the United States, and many of these have federally recognized national homelands or 'reserves'. Between 200-300 additional groups identify as historical Indigenous nations but have not been federally recognized, although some are in the recognition process and some have achieved recognition at the state level . Indigenous peoples are present in all regions of the US." "There are a number of pieces of legislation at the core of federal policy protecting Native American rights, including: the Indian Self-Determination and Education Assistance Act of 1975, by which tribes are able to assume the planning and administration of federal programs that are devised for their benefit; the American Indian Religious Freedom Act of 1978, which directs federal officials to consult with tribes about actions that may affect religious practices; and the Native American Graves Protection and Repatriation Act of 1990, which directs federal agencies and museums to return indigenous remains and sacred objects to appropriate indigenous groups. A combination of other laws, policies, executive orders and programs fill out the suite of protections by providing additional protections for indigenous religion and culture, and addressing Indian economic and natural resource development, education and civil rights." **General Social Rights** The Declaration on Fundamental Principles and Rights at Work reads as follows: "All ILO Members, even if they have not ratified the Conventions in question, have an obligation arising from the very fact of membership in the Organization to respect, to promote and to realize, in good faith and in accordance with the Constitution, the principles concerning the fundamental rights which are the subject of those Conventions, namely: a) freedom of association and the effective recognition of the right to collective bargaining; b) the elimination of all forms of forced or compulsory labour; c) the effective abolition of child labour; and d) the elimination of discrimination in respect of employment and occupation." **Legislation** The United States has extensive legislation protecting the social rights of individuals and workers. The following pieces of the US legal framework uphold the ILO Fundamental Principles and Rights of Work in the United States: • The First Amendment to the United States Constitution, adopted in 1791, provides that "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press, or the right of the people peaceably to assemble, and to petition the

	Government for a redress of grievances". In practice, this means that the Constitution protects employees' rights of association, thereby prohibiting their discharge for union activity. • Freedom of association in the US is protected by the 1935 National Labor Relations Act (NLRA; 29 USC §151-169), with primary responsibility for enforcement by the National Labor Relations Board (NLRB). Additionally, the US Code (29 USC §171(a)) states that, "it is the policy of the United States that, "sound and stable industrial peace and the advancement of the general welfare, health, and safety of the Nation and of the best interests of employers and employees can most satisfactorily be secured by the settlement of issues between employers and employees through the processes of conference and collective bargaining between employers and the representatives of their employees" • Forced and compulsory labor is prohibited by the 13th Amendment to the United States Constitution, and is codified in 18 USC § 1589. The amendment specifically outlaws slavery and involuntary servitude, except as punishment for a person duly convicted of a crime • The Trafficking Victims Protection Act (most recently reauthorized in 2013) authorizes measures to combat human trafficking. Additionally, federal legislation requires every employer to pay each employee a minimum wage (29 U.S.C.§ 206) and overtime pay (29 U.S.C.§ 207). • The Fair Labor Standards Act of 1938 (29 USC § 201-262) restricts the employment of children under the age of 16 with the exception of children working on farms owned by their parents, and forbids the employment of people younger than 18 in jobs deemed too dangerous (including logging). • Discrimination with respect to employment is prohibited in the United States by Section VII of the Civil Rights Act of 1964 (Public Law 88-352), and is overseen by the U.S. Equal Employment Opportunity Commission. There are several additional and complementary pieces of legislation, such as: the Equal Pay Act of 1963 (EPA), which protects men and women who perform substantially equal work in the same establishment from sex-based wage discrimination; the Age Discrimination in Employment Act of 1967 (ADEA), which protects individuals who are 40 years of age or older; Title I and Title V of the Americans with Disabilities Act of 1990, as amended (ADA), which prohibit employment discrimination against qualified individuals with disabilities in the private sector, and in state and local governments; Sections 501 and 505 of the Rehabilitation Act of 1973, which prohibit discrimination against qualified individuals with disabilities who work in the federal government; The BP operates in an area where there is a strong legal framework in place and the rule of law is enforced. Based on the risk analysis of the FSC NRA and the evidence supporting their low risk designation, there is there is sufficient evidence to conclude low risk for this indicator.
Means of Verification	• FSC NRA • Federal and State laws
Evidence Reviewed	• FSC NRA • Federal and State laws
Risk Rating	**X Low Risk** ☐ **Specified Risk RA** ☐ **Unspecified Risk at**
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	**US Protected Area Database** (PADUS) contains information about protected lands. This database contains state and federally protected parks, reserves, refuges, wilderness areas among other designations. These protected areas are also referenced by the IUCN* classification. http://www.protectedlands.net/map/ **IUCN protected area** management categories classify protected areas according to their management objectives. The categories are recognised by international bodies such as the United Nations and by many national governments as the global standard for defining and recording protected areas and as such are increasingly being incorporated into government legislation. The IUCN Categories are as follows: *Ia Strict Nature Reserve:* Category **Ia** are strictly protected areas set aside to protect biodiversity and also possibly geological/geomorphical features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values. Such protected areas can serve as indispensable reference areas for scientific research and monitoring *Ib Wilderness Area:* Category **Ib** protected areas are usually large unmodified or slightly modified areas, retaining their natural character and influence without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition. *II National Park:* Category **II** protected areas are large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible, spiritual, scientific, educational, recreational, and visitor opportunities. *III Natural Monument or Feature:* Category **III** protected areas are set aside to protect a specific natural monument, which can be a landform, sea mount, submarine cavern, geological feature such as a cave or even a living feature such as an ancient grove. They are generally quite small protected areas and often have high visitor value. *IV Habitat/Species Management Area:* Category **IV** protected areas aim to protect particular species or habitats and management reflects this priority. Many Category IV protected areas will need regular, active interventions to address the requirements of particular species or to maintain habitats, but this is not a requirement of the category. *V Protected Landscape/ Seascape:* A protected area where the interaction of people and nature over time has produced an area of distinct character with significant, ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values. *VI Protected area with sustainable use of natural resources:* Category **VI** protected areas conserve ecosystems and habitats together with associated cultural values and traditional natural resource management systems. They are generally large, with most of the area in a natural condition, where a proportion is under sustainable natural resource management and where low-level non-industrial use of natural resources compatible with nature conservation is seen as one of the main aims of the area

https://www.iucn.org/theme/protected-areas/about/protected-area-categories

WWF's Global 200 project analyzed global patterns of biodiversity to identify a set of the Earth's terrestrial, freshwater, and marine ecoregions that harbor exceptional biodiversity and are representative of its ecosystems.

Biodiversity features were compared among ecoregions to assess their irreplaceability or distinctiveness. These features included species richness, endemic species, unusual higher taxa, unusual ecological or evolutionary phenomena, and the global rarity of habitats.

This process yielded 238 ecoregions--the Global 200--comprised of 142 terrestrial, 53 freshwater, and 43 marine priority ecoregions.

Effective conservation in these ecoregions would help conserve the most outstanding and representative habitats for biodiversity on this planet.

https://www.worldwildlife.org/publications/global-200

The Critical Ecosystem Partnership Fund (CEPF) was founded in 2000 to address the threat of biodiversity by empowering civil society in developing countries and transitional economies to protect the world's biodiversity hotspots, which are some of Earth's most biologically rich yet threatened terrestrial ecosystems.

Through grants totalling more than US$232 million and technical assistance to over 2,400 civil society organizations and individuals, we have taken action to conserve more than 882 species in the IUCN Red List of Threatened Species, and strengthened the management and protection of 46.5 million hectares of Key Biodiversity Areas. Our grantees have also contributed to the establishment of 14.8 million hectares of new protected areas, and the improved management of 8 million hectares of production landscape—areas where agriculture, forestry or natural product harvesting occur.
And more than 3,000 communities in the biodiversity hotspots have benefited directly from CEPF-funded projects through improved access to clean water, improved land tenure and increased representation in decision-making processes.

By supporting development of conservation strategies for the biodiversity hotspots that are driven by local input, and providing grants to civil society—nongovernmental, private sector and academic organizations—to implement those strategies, CEPF seeks to protect biodiversity, build long-term local conservation leadership and nurture sustainable development.

https://www.cepf.net/about

FSC High Conservation Value (HCV) areas are areas of outstanding and critical importance. This could be due to the presence of endangered wildlife, or an unusually high number of rare plant species. Or it could be because the forest is of critical importance to local people because it provides them with food, water, income or sites of cultural significance.

- 'HCV 1': Concentrations of biological diversity including endemic species, and rare, threatened or endangered species, that are significant at global, regional or national levels.
- 'HCV 2': 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 patterns of distribution and abundance.
- 'HCV 3': Rare, threatened, or endangered ecosystems, habitats or refugia.
- 'HCV 4': Basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes.
- 'HCV 5': Sites and resources fundamental for satisfying the basic necessities of local communities or indigenous peoples (for livelihoods, health, nutrition, water,

	etc...), identified through engagement with these communities or indigenous peoples. • 'HCV 6': Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or of critical cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities or indigenous peoples, identified through engagement with these local communities or indigenous peoples. https://fsc.org/en/news/high-conservation-value-hcv-guidance-documents-published The BP utilizes these resources to understand how the sourcing area overlaps with the various HCV areas. The produces maps for suppliers to educate actors in the supply area about the various HCV areas. The BP has an extensive database of HCV maps available using them to monitor how the supply area changes over time. The BP procures county level information from suppliers annually, through the use of a secondary supplier questionnaire, to ensure that the mapped HCV areas are up to date with the latest HCV information. Based on the extensive publicly available information on HCV areas and the BP's ability to produce these maps for actors in the supply area there is there is sufficient evidence to conclude low risk for this indicator.
Means of Verification	• GIS maps • FSC HCV Maps • IUCN Maps • WWF Global 200 Maps • Secondary Supplier Questionnaire
Evidence Reviewed	• GIS maps • FSC HCV Maps • IUCN Maps • WWF Global 200 Maps • Secondary Supplier Questionnaire
Risk Rating	**X 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	The findings use data from the FSC NRA to draw conclusions on the ability for the supply base area to effectively identify and address threats to forests and other areas with high conservation values. Where gaps exist, the BP has developed procedures in line with the recommended mitigation measures provided in the FSC NRA to ensure the intent of the indicator is appropriately managed in the supply base. *Protective Designations* FSC US used the Protected Areas Database of the United States (PAD-US) to assess whether or not land was under protection for Category 3 HCVs. This database is the official inventory of protected areas in the United States, published by the U.S. Geological

Survey Gap Analysis Program (GAP). The database compiles public parks, designated areas, conservation easements, and Marine Protected Areas, and is continuously updated. The database includes conservation rankings for both GAP Status Codes 1-4 and International Union for the Conservation of Nature (IUCN) categories. As is common practice, the following assessment considers an area as permanently protected if it has a GAP Status of 1 or 2 :

- Status 1: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management. Example: Federal Wilderness Area
- Status 2: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance. Examples: National Park, National Wildlife Refuge, National Natural Landmark

The protective designations in the US are generally viewed as effective at identifying areas with high conservation values. There have been few studies on the effectiveness of the protected areas at achieving HCV protections.

The majority of forest in the supply area are privately owned. Therefore, there are a number of unknowns in determining how HCV's are managed collectively across the supply area. Many of the HCV's identified in Indicator (2.1.1) are outside of federal or state protected areas.

The following sites/areas/ranges are located in the supply area and are identified by FSC NRA as Specified Risk prior to implementation of any mitigation measures.

Mesophytic Cove Sites
Applicable to Mississippi, Alabama, Tennessee, Georgia, South Carolina, and North Carolina. Mesophytic cove sites are diverse, closed-canopy hardwood forests occurring on mesic, sheltered sites (coves). These sites provide habitat for rare animal species with limited ranges like the cerulean warbler and crevice salamander. The major threat to mesophytic coves is conversion to non-forest uses or other forest types (e.g. white pine).

Central Appalachians Critical Biodiversity Area
Applicable to Tennessee and North Carolina. Central Appalachians landscape is home to important plant and animal species, it purifies drinking water for millions of Americans, and filters air for the people that live around the HCV Area. The forests, wild rivers and mountains support natural diversity that few temperate places on Earth can rival. The issues that threaten this the most are energy development, urban sprawl, invasive species, and climate change. The Central Appalachians are home to abundant energy resources including coal, natural gas, wind and other renewables. The US Forest Service is the single largest forest manager in the Central Appalachians; and state lands make up large portions of high priority areas. The Nature Conservancy is working in partnership with state and federal entities to restore America's forests across the region and protect these open spaces for future generations. The Nature Conservancy is focusing its efforts on policy initiatives that will reduce the spread of invasive species.

Ouachita River Valley Critical Biodiversity Area
Applicable to Arkansas. The Ouachita River headwater is a hot spot for biodiversity. Poorly implemented BMP's and Forest Management Practices could jeopardize the integrity of the biodiversity.

Cape Fear Arch Critical Biodiversity Area
Applicable to North Carolina and South Carolina. The Cape Fear Arch is a region of particularly high biological diversity and supports nationally significant occurrences of animal and plant communities. the Arch is recognized as having the greatest biological diversity along the Atlantic Coast north of Florida. Red-cockaded woodpeckers are known

to utilize the arch and nest in cavities of living pine trees. They are dependent on pine woodlands and savannas that have pine trees large enough to provide nesting habitat. They require mature open woodlands usually greater than 60 years old, with abundant herbaceous ground cover. Native Longleaf Pine Savannas, once one of the most widespread forest types in the US, has been reduced to 3% of its original range. Associated with particularly high animal and plant diversity, including RTE species, longleaf pine savanna is responsible in part for the high biodiversity associated with Central Alabama, Florida Panhandle, and Cape Fear Arch critical biodiversity areas. Longleaf pine savanna is also directly associated with the Red Cockaded Woodpecker and Gopher Tortoise species. "Native" in this instance refers to longleaf pine stands that have been restored in areas that have not been historically maintained in longleaf pine. Stands such as this do not apply under this section. Native does not imply a particular regeneration method; these stands may be either planted or naturally regenerated. Biodiversity values are driven in part by the understory plant community. Biodiversity values are potentially harmed via conversion of longleaf to other pine types, and the use of herbicides or other management techniques that inhibit native understory communities.

Southern Appalachians Critical Biodiversity Area
Applicable to Alabama, Tennessee, and Georgia. Fish, mussels, snails, crayfish, and amphibians are abundant in this area. The Cahaba River Watershed is one of the focal points of the area. Sedimentation from forestry is a threat to biodiversity in this area.

- **Cahaba River Watershed**: Biodiversity areas in the southern Appalachians are largely driven by exceptional aquatic biodiversity. The Cahaba River Watershed is the center of the biodiversity hotspot, which includes, fish, mussels, snails, crayfish, and amphibians. The biodiversity area includes other smaller watercourses as well. This biodiversity is potentially threatened by sedimentation from roads. When operating near the Cahaba River Watershed logging crews are advised to use extra caution when constructing logging roads, loading areas and skid trails, and operating near stream side management zones.

- **Bibb County Glades**: (i.e. rock outcrops), exposed limestone glades, and sandstone glades in Central Alabama have high density of rare plants. Loggers are required to use extra caution when constructing logging roads, loading areas and skid trails, and loading areas. These biodiversity areas are potentially harmed by logging and other management activities that may not recognize the value associated with these glades. A rock outcrop may look like an easy area to set up a skid trail or loading area because there are no trees in this area, but it could be a glade with rare, threatened, and endangered species living within it.

- **Montane Longleaf Pine:** This habitat occurs in steep rolling topography, historically maintained by fire, mostly outside of, or on the edge of the Coastal Plain. Biodiversity values are driven in part by the understory plant community. Biodiversity values are potentially harmed via conversion of longleaf to other pine types, and the use of herbicides or other management techniques that inhibit native understory communities.

Patch-nosed Salamander Range
Applicable to Georgia and South Carolina. This species is endemic to the US and is its second-smallest salamander. It is protected under federal law and it is illegal to disturb its habitat. This species can be found in small streams associated with steep-walled ravines (C. Camp pers. comm. January 2011), either within or along the banks of the non-flooded part of the streambed (Camp *et al.* 2009). Individuals were found under rocks and in loose leaf litter; however, it is thought that they might occupy more terrestrial microhabitats under suitably moist conditions. The clutch size appears to vary between 6-14 eggs (Camp *et al.* 2009), and the species has a multi-year aquatic larval development (C. Camp pers. comm. January 2011).

Dusky Gopher Frog Range
Applicable to Mississippi. Also known as the Mississippi Gopher Frog, this species is one of the top 100 most endangered species and is protected under federal law and it is illegal

to disturb its habitat. By 2003 it was only known from Glen's Pond in Desoto National Forest in Harrison County, Mississippi (USFWS 2000h; Young and Crother 2001). However, very recently individuals have been seen at two other sites: one calling male was seen at McCoy's Pond 50 miles east of Glen's Pond, and 50 tadpoles were collected from Mike's Pond, 20 miles west of Glen's Pond (Zippel 2005). The range has been significantly reduced as a result of habitat destruction, fragmentation, and modification. Pre-settlement longleaf pine forests were the dominant forest type of the south-eastern coastal plain. Through the Long Leaf Alliance initiative to reestablish Longleaf pine stands, habitat loss is decreased and Long leaf pine forested acres is on the rise. A majority of the habitat is in the Desoto National Forest which protects the habitat of the frog.

Cheoah Bald Salamander Range
Applicable to North Carolina. This species only occurs in high elevations on a single mountain in North Carolina. Clear cutting strongly depletes local populations of other members of the *Plethodon jordani* complex (Petranka, Eldridge and Haley 1993); the time required for recovery is debatable, but is at least a few decades (Ash 1997; Petranka 1999; Ash and Pollock 1999). Conservation actions taken to protect this species help mitigate risk to its habitat. Part of the range of this species is within the Nantahala Game Lands, which offer some measure of protection because the forest is typically left intact. There is also an effort to declare much of the range as Wilderness, which, if successful, would further protect the species. The species does not appear on any state or federal list of endangered species and education and conservation efforts have kept the population of this Salamander in a stable condition according to the IUCN.

Areas for Specified Risk for Conversion
Applicable to Texas, Louisiana, Mississippi, Alabama, Florida, Georgia, South Carolina, and North Carolina. Urbanization, not forests, is the single biggest threat to forests. Furthermore, healthy demand for forest products mitigates forest loss. (Historical Perspective on the Demand and Relationship between Demand and Forest Productivity in the US South. Forest2Market. July 26, 2017).

Native Longleaf Pine Systems
Applicable to Texas, Louisiana, Mississippi, Alabama, Georgia, Florida, South Carolina, and North Carolina. This species is far less common than it once was, and efforts are underway to promote longleaf pine coverage in its native habitat. The intent of listing species to the Red List is not to promote prohibition of their use but rather to heighten priority setting for conservation of the species' (IUCN Standards and Petitions Subcommittee. 2014. Guidelines for Using the IUCN Red List Categories and Criteria. Version 11. Prepared by the Standards and Petitions Subcommittee.)

Late Successional Bottomland Hardwood Areas
Applicable to Texas, Louisiana, Missouri, Mississippi, Alabama, Georgia, Florida, South Carolina, and North Carolina. Stand conditions of late successional bottomland hardwoods are extremely diverse and variable, and can be affected by minor changes in hydrology. Woody species diversity is comparable to the most diverse upland forests in the US. Several species groupings are considered bottomland hardwoods including mixed hardwoods and cypress-tupelo. Much of the original bottomland hardwood in the US has been cleared for agriculture, particularly so in the Mississippi valley. Late successional in this instance refers to bottomland hardwoods that are at least 80 years old and have the complex structural characteristics and species composition associated with late successional stands.

Florida Panhandle Critical Biodiversity Area
Applicable to Florida. This area includes Longleaf Pine habitats, Steephead Ravines, and the Apalachicola Bay & River System.

- ***Longleaf Pine*:** In addition to being a threatened species, Longleaf Pine provides optimal habitat for a number of species including the Gopher Tortoise which is protected by the Forestry Wildlife Best Management Practices for State Imperiled Species and the Red-Cockaded Woodpecker which is protected under the U.S. Endangered Species Act. Longleaf Pine Systems, are described in more detail

	above. This ecosystem is only a portion of its original range due to urbanization and the withholding of fire from the area. Further loss of this habitat could harm the species which depend on this ecosystem. • ***Steephead Ravines***: Unique to Florida, this area is home to a disproportionate number of imperiled species. This area includes the 6,000 acre Apalachicola Bluffs and Ravines Preserve which is considered to be one of the rarest habitats and is protected by the Nature Conservancy. BMPs are the primary source of protection and because of the extreme slope of the ravines SMZs are typically measured from the break rather than the edge of the ravines and harvesting in these areas is impractical. • ***Apalachicola Bay/River System***: Reptiles, amphibians and mussels are typical of the species found in this area. Sedimentation from forest activities is a potential threat and is mitigated through implementation of BMPs. **<u>Central Florida Critical Biodiversity Area</u>** Applicable to Florida. Central Florida is a biodiversity hotspot and has suffered a great loss of habitat. This habitat can be mainly attributed to the highest rate of human population growth within the Southern coastal plain. The Florida Forever conservation fund focuses on the conservation of habitat in Central Florida. Urban Sprawl is the greatest contributor to habitat loss. Due to the lack of a collective management plan addressing the aforementioned HCV's areas outside of protected areas, it is justifiable that the indicator receive a specified risk designation. The BP has implemented mitigation measures to ensure threats to HCV's are identified and addressed for the supply area. The mitigation measures are detailed below in the mitigation measures section.
Means of Verification	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • Supplier HCV information packages
Evidence Reviewed	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • Supplier HCV information packages
Risk Rating	☐ **Low Risk** **X Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	The BP implements a supplier mapping and communication program to monitor the activities of its suppliers across the supply area. The supplier mapping and communication program is applicable to secondary feedstocks as primary feedstocks are tracked by location prior to purchasing. The BP collects the following information using the secondary supplier questionnaire: • General supplier information including location of mill • Certification status • How they collect and track their timber procurement activities – scale tickets, severance taxes • BMP monitoring of procurement activities • BMP violations in the review period • Awareness of land conversion in their sourcing area • Awareness of HCV's in their sourcing area

	• General procurement practices – timber types, species, quality • Complete counties where timber was sourced for the review period The BP uses this information, particularly the county list, it collects from suppliers to determine the extent of the supply base area. If the supply base area exceeds the previous years area, the BP will include the new area during the next assessment period. The BP checks for overlaps with HCV areas to determine where there is overlap. A detailed package is compiled for each supplier to inform them of the findings. The educational packages provided to each supplier allows them to make better informed procurement decisions. Through sharing of this data, the information becomes more widely known to all actors in the supply chain, effectively increasing the awareness of sensitive areas in the supply base. Over time, the BP can use the information received from its suppliers to develop a risk matrix of their suppliers to determine if any suppliers or sourcing areas require any additional mitigations or interventions. The information provided by the secondary suppliers are reviewed annually and verified by third party auditors to ensure they are complete and correct. The annual information collection and verification exercise reviews the mitigations effectiveness. Any deficiencies are uncovered and new methodologies are developed to close any uncovered gaps. This system is robust, replicable and reviewed annually and revised if necessary. It requires concerted effort by both the BP and its suppliers and will strengthen over time. In conclusion, the mitigation measure is effective at identifying where all feedstock is sourced back to the concession of harvest. It is also effective at identifying which suppliers are at risk of non-compliance with an HCV area management strategy. The mitigation process identifies which forest management practices are effective at addressing the HCV concern and is communicated to the suppliers. The information provided by the supplier is verified for correctness and completeness during annual review audits.

	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 FSC NRA Concluded specified risk for some counties that fall within the BP's sourcing area. The FSC NRA concluded the following from their risk assessment: Federal Lands: • Federal law requires the maintenance of forest within legislation for harvesting timber. National Forests • The National Forest Management Act (NFMA) of 1976 § 6(g), directs the US Forest Service to develop planning regulations that provide for preservation of biodiversity and restocking after harvest for lands that they administer (i.e., National Forests). • The key law for Bureau of Land Management (BLM) timberlands, the O & C Lands Act, calls for management for permanent forest production, 43 USC §. Each state likely has similar requirements for the forested lands that they administer, but each state will be unique. For private lands, the key laws will usually be state and local land use laws. These will vary greatly from state to state, and from municipality to municipality. Even in states that

	do not require local zoning ordinances, it is a planning tool that is used by essentially all major urban areas. Forested wetlands on all ownership types are subject to Clean Water Act § 404 regulation, which is administered by state government in most states. While silvicultural activities must comply with the requirements of this legislation, they are exempt from the requirement to acquire a permit prior to implementation of activities. However, conversion of forests is not considered normal silvicultural activity and so is not exempt from § 404 permit requirements. Subsequently, in the United States, there is no legal framework that consistently or comprehensively governs conversion of forestland to non-forestland or from forestland to plantation. Overall, the rate of deforestation in the US is very low. Urban development has been found to be a primary driver of conversion from forest to non-forest land uses. Rates of urban development vary throughout the United States with higher rates in the Pacific Coast Region and portions of the Southeast Region. These two regions are also the regions identified as experiencing more recent forestland loss. Therefore, the greatest risk of materials entering the supply chain from conversions will most likely be in these two regions; however, the risk is not consistent across the regions. Conversion is driven by population growth and the associated urban development. Therefore, population growth by county between 2015 and 2016 and residential building permits issued by Core Based Statistical Areas (CBSAs) over the same time period were used together as a proxy to identify counites where there is likely a greater risk of materials from conversions entering the supply chain. CBSAs consist of the county or counties associated with a core urbanized or urban area with a population of at least 10,000. These data were analyzed using a population growth threshold of 2% and a building permits issued threshold of 1500. These thresholds were selected based on analyses done by the US Census Bureau and the US Department of Housing and Urban Development. Additionally, non-forested portions of counties were removed (based upon the forest cover data layer available from the IFL Mapping Team2). Conclusion: Data indicate that conversion to agricultural lands is likely no longer a driver for conversion of forested lands. Additionally, while tree plantations are expected to continue to increase in extent in the US, this will most likely occur through afforestation (from agricultural lands), not conversion of existing forests. However, conversion resulting from urban development continues to be a threat to US forests. Within the forested portions of the counties identified, there is a risk greater than ‘low’ of forest materials being sourced from forests that are being converted to non-forest use. In non-forested regions of these counties, and the remainder of the assessment area, the risk is low. The BP has implemented mitigation measures to ensure feedstock is not sourced from forests converted to production plantation forest or non-forest lands after January 2008. The mitigation measures are detailed below in the mitigation measures section.
Means of Verification	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • Supplier HCV information packages
Evidence Reviewed	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • Supplier HCV information packages

Risk Rating	☐ **Low Risk** **X Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	The BP implements a supplier mapping and communication program to monitor the activities of its suppliers across the supply area. The supplier mapping and communication program is applicable to secondary feedstocks as primary feedstocks are tracked by location prior to purchasing. The BP collects the following information using the secondary supplier questionnaire: • General supplier information including location of mill • Certification status • How they collect and track their timber procurement activities – scale tickets, severance taxes • BMP monitoring of procurement activities • BMP violations in the review period • Awareness of land conversion in their sourcing area • Awareness of HCV's in their sourcing area • General procurement practices – timber types, species, quality • Complete counties where timber was sourced for the review period The BP uses this information, particularly the county list, it collects from suppliers to determine the extent of the supply base area. If the supply base area exceeds the previous years area, the BP will include the new area during the next assessment period. The BP checks for overlaps with HCV areas to determine where there is overlap. A detailed package is compiled for each supplier to inform them of the findings. The educational packages provided to each supplier allows them to make better informed procurement decisions. Through sharing of this data, the information becomes more widely known to all actors in the supply chain, effectively increasing the awareness of sensitive areas in the supply base. Over time, the BP can use the information received from its suppliers to develop a risk matrix of their suppliers to determine if any suppliers or sourcing areas require any additional mitigations or interventions. The information provided by the secondary suppliers are reviewed annually and verified by third party auditors to ensure they are complete and correct. The annual information collection and verification exercise reviews the mitigations effectiveness. Any deficiencies are uncovered and new methodologies are developed to close any uncovered gaps. This system is robust, replicable and reviewed annually and revised if necessary. It requires concerted effort by both the BP and its suppliers and will strengthen over time. In conclusion, the mitigation measure is effective at identifying where all feedstock is sourced back to the concession of harvest. It is also effective at identifying which suppliers are at risk of non-compliance with an HCV area management strategy. The mitigation process identifies which forest management practices are effective at addressing the HCV concern and is communicated to the suppliers. The information provided by the supplier is verified for correctness and completeness during annual review audits.

	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	Federal Lands:

	• Federal law requires the maintenance of forest within legislation for harvesting timber. National Forests (16 USC §§ 475) • The National Forest Management Act (NFMA) of 1976 § 6(g), directs the US Forest Service to develop planning regulations that provide for preservation of biodiversity and restocking after harvest for lands that they administer (i.e., National Forests). • The key law for Bureau of Land Management (BLM) timberlands, the O & C Lands Act, calls for management for permanent forest production, 43 USC §. The USDA Forest Service has launched a forest management program called “shared stewardship”. This program works closely with States to set landscape-scale priorities for targeted forest level treatments in areas with the highest payoffs. The 2014 Farm Bill gave the Forest Service tools to get more work done on the ground, for example, providing for cross-boundary work with States through the Good Neighbor Authority (GNA). As of June 2018, we have signed 163 GNA agreements on 59 national forests in 25 States to complete a variety of restoration activities. The 2018 omnibus bill further expanded the GNA and other authorities, enabling us to do more work across boundaries. A steady increase in collaboration capacity and recent breakthroughs in Forest Service science, mapping, and technology are providing new tools for planning investments to reduce fire risk and improve forest conditions. The shared stewardship program will implement these new authorities and advances in technology by: • Determining management needs on a State level • Doing the right work in the right places at the right scale • Using all available tools for active management https://www.fs.usda.gov/managing-land/shared-stewardship State land and Private Lands: With the 2008 Farm Bill, Congress tasked the states and territories with assessing the condition of trees and forests within their boundaries, regardless of ownership, and developing strategies to: conserve working forest landscapes, protect forests from harm, and enhance public benefits from trees and forests. The resulting state Forest Action Plans—completed in 2010 and reviewed in 2015 by all 59 states and territories—offer practical and comprehensive roadmaps for investing federal, state, local, and private resources where they can be most effective in achieving national conservation goals. All states have a state forest action plan that sets outs collaborative goals for managing impacts and planning, implementation and monitoring to minimise them. https://www.stateforesters.org/forest-action-plans/ The Forest Stewardship Program (FSP) provides assistance to owners of forest land where good stewardship, including agroforestry practices, will enhance and sustain multiple forest resources and contribute to healthy and resilient landscapes. The program also helps create jobs in rural communities by sustaining local markets for forest products and increasing demand for qualified private forestry consultants and state field foresters. The Forest Stewardship Program focuses on three main areas: • Assisting landowners to actively manage their land and related resources • Keeping land in a productive and healthy condition for present and future owners • Increasing the economic benefits of land (timber harvesting, for example) while conserving the natural environment There are currently more than 25 million acres being managed under Forest Stewardship Plans.

https://www.fs.usda.gov/managing-land/private-land/forest-stewardship

State Forest Action Plans provide a set of Best Management Practices (BMP's) that vary by state and are tailored to the states current priorities with regard to forest management objectives. State BMP's are a tool used by the BP to demonstrate that suppliers investigate the implementation rates of the BMP's and whether any BMP's non-conformities have been issued against the supplier. The state also conducts BMP inspections to monitor the effectiveness of BMP's at achieving land management objectives.

The latest data on BMP implementation and BMP categories are as follows:

Table 1—Southeastern survey results for forestry BMP regulation, BMP manual year, implementation rate (%), and implementation year

State	State regulation	BMP manual	Implementation rate (%)	Implementation year
Alabama	Quasi-regulatory	2007	97	2010
Arkansas	Non-regulatory	2002	87	2011
Florida	Quasi-regulatory	2008	99	2011
Georgia	Non-regulatory	2009	97	2011
Kentucky	Regulatory	2008	94	2012
Louisiana	Non-regulatory	2000	96	2012
Mississippi	Non-regulatory	2008	91	2010
North Carolina	Quasi-regulatory	2006	85	2011
Oklahoma	Non-regulatory	1991	95	2010
South Carolina	Quasi-regulatory	2012	91	2012
Tennessee	Non-regulatory	2003	84	2010
Texas	Non-regulatory	2010	95	2011
Virginia	Quasi-regulatory	2011	90	2012

Table 2—Forestry BMP implementation rate results by individual BMP categories. Minimum, maximum, average, and number of states that reported data for that specific BMP category

BMP category	Minimum (%)	Maximum (%)	Average (%)	Number of states
Timber harvest	88	99	95.0	8
Forest roads	84	99	91.3	13
Skid trails	75	100	89.7	10
Log landings	92	100	95.8	9
Stream crossings	72	98	89.2	13
SMZs	86	98	93.2	13
Wetlands	70	100	94.1	9
Reforestation	95	100	97.6	7
Mechanical site preparation	74	99	91.6	9
Chemical site preparation	93	100	98.6	8
Pesticide	98	100	99.6	5
Fertilizer	100	100	100.0	2
Prescribed burning	60	100	87.4	8
Wildfire suppression	100	100	100.0	2
Wildfire rehabilitation	100	100	100.0	1
Public lands	94	100	97.8	5

Whether they are regulatory, quasi-regulatory, or non-regulatory, BMPs are utilized in all states in the supply area and their use is effective as an impact planning tool. Monitoring of BMP implementation is a core function of the BMP process and implementation rates are

	above 90% as concluded from the audits conducted. This is a high degree of compliance and add to the effectiveness of BMP's as a mitigation measure. Supply Base BMP Manuals can be found at the following sites: Alabama: http://www.forestry.alabama.gov/Pages/Management/Forms/2007_BMP_Manual.pdf Mississippi: https://www.mfc.ms.gov/sites/default/files/Entire_bmp_2008-7-24_2.pdf Georgia: https://treeordzone.files.wordpress.com/2017/04/georgias-best-management-practices-for-forestry.pdf Louisiana: http://www.ldaf.state.la.us/wp-content/uploads/2014/04/BMP.pdf Florida: https://www.fdacs.gov/ezs3download/download/25527/516407/Media/Files/Florida-Forest-Service-Files/silvicultural_bmp_manual.pdf Texas: https://tfsweb.tamu.edu/uploadedFiles/Sustainable/bmp/Publications/BMP%20Manual_March2014-web.pdf South Carolina: https://www.scforestry.org/best-management-practices.htm North Carolina: https://www.ncforestservice.gov/water_quality/bmp_manual.htm Tennessee: https://www.tn.gov/content/dam/tn/agriculture/documents/forestry/AgForBMPs.pdf Arkansas: https://www.uaex.edu/environment-nature/water/quality/forest-bmps.aspx Kentucky: https://forestry.ca.uky.edu/files/for_130_bmp_guide_small.pdf Missouri: https://mdc.mo.gov/sites/default/files/downloads/woody_biomass_harvesting_bmp_book.pdf Based on the programs at the Federal, State and Local level with regard to collaborative forest management implementation Through the various collaborative forest management programs offered at the federal, state and local level with the aim at ensuring consistent management approaches at the landscape level, it is justifiable to suggest that the supply area has rigorous requirements in place to ensure appropriate assessment of impacts, and planning, implementation and monitoring to minimise them. Based on the findings reviewed and presented in this indicator, there is there is sufficient evidence to conclude low risk for this indicator.
Means of Verification	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • State Forest Action Plans • BMP's and implementation audits
Evidence Reviewed	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • State Forest Action Plans • BMP's and implementation audits

Risk Rating	**X Low Risk** ☐ **Specified Risk RA** ☐ **Unspecified Risk at**
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	Much of the supply base area is found in forestry dominant communities. The maintenance of forests in these communities is a key metric in maintaining or improving soil quality. The land owners are incentivized to keep soil conditions optimal for tree growth in order to maintain a steady flow of revenue from timber products. With the 2008 Farm Bill, Congress tasked the states and territories with assessing the condition of trees and forests within their boundaries, regardless of ownership, and developing strategies to: conserve working forest landscapes, protect forests from harm, and enhance public benefits from trees and forests. The resulting state Forest Action Plans—completed in 2010 and reviewed in 2015 by all 59 states and territories—offer practical and comprehensive roadmaps for investing federal, state, local, and private resources where they can be most effective in achieving national conservation goals. All states have a state forest action plan that sets outs collaborative goals for managing impacts on water quality, however many BMP's also set targets and management strategies for soil and soil erosion. https://www.stateforesters.org/forest-action-plans/ The Forest Stewardship Program (FSP) provides assistance to owners of forest land where good stewardship, including agroforestry practices, will enhance and sustain multiple forest resources and contribute to healthy and resilient landscapes. The program also helps create jobs in rural communities by sustaining local markets for forest products and increasing demand for qualified private forestry consultants and state field foresters. The Forest Stewardship Program focuses on three main areas: • Assisting landowners to actively manage their land and related resources • Keeping land in a productive and healthy condition for present and future owners • Increasing the economic benefits of land (timber harvesting, for example) while conserving the natural environment There are currently more than 25 million acres being managed under Forest Stewardship Plans. https://www.fs.usda.gov/managing-land/private-land/forest-stewardship State Forest Action Plans provide a set of Best Management Practices (BMP's) that vary by state and are tailored to the states current priorities with regard to forest management objectives. State BMP's are a tool used by the BP to demonstrate that suppliers investigate the implementation rates of the BMP's and whether any BMP's non-conformities have been issued against the supplier. The state also conducts BMP inspections to monitor the effectiveness of BMP's at achieving land management objectives. The latest data on BMP implementation and BMP categories are as follows:

Table 1—Southeastern survey results for forestry BMP regulation, BMP manual year, implementation rate (%), and implementation year

State	State regulation	BMP manual	Implementation rate (%)	Implementation year
Alabama	Quasi-regulatory	2007	97	2010
Arkansas	Non-regulatory	2002	87	2011
Florida	Quasi-regulatory	2008	99	2011
Georgia	Non-regulatory	2009	97	2011
Kentucky	Regulatory	2008	94	2012
Louisiana	Non-regulatory	2000	96	2012
Mississippi	Non-regulatory	2008	91	2010
North Carolina	Quasi-regulatory	2006	85	2011
Oklahoma	Non-regulatory	1991	95	2010
South Carolina	Quasi-regulatory	2012	91	2012
Tennessee	Non-regulatory	2003	84	2010
Texas	Non-regulatory	2010	95	2011
Virginia	Quasi-regulatory	2011	90	2012

Table 2—Forestry BMP implementation rate results by individual BMP categories. Minimum, maximum, average, and number of states that reported data for that specific BMP category

BMP category	Minimum (%)	Maximum (%)	Average (%)	Number of states
Timber harvest	88	99	95.0	8
Forest roads	84	99	91.3	13
Skid trails	75	100	89.7	10
Log landings	92	100	95.8	9
Stream crossings	72	98	89.2	13
SMZs	86	98	93.2	13
Wetlands	70	100	94.1	9
Reforestation	95	100	97.6	7
Mechanical site preparation	74	99	91.6	9
Chemical site preparation	93	100	98.6	8
Pesticide	98	100	99.6	5
Fertilizer	100	100	100.0	2
Prescribed burning	60	100	87.4	8
Wildfire suppression	100	100	100.0	2
Wildfire rehabilitation	100	100	100.0	1
Public lands	94	100	97.8	5

Whether they are regulatory, quasi-regulatory, or non-regulatory, BMPs are utilized in all states in the supply area and their use is effective as a tool to monitor soils quality and recommend best soil management practices. Monitoring of BMP implementation is a core function of the BMP process and implementation rates are above 90% as concluded from the audits conducted. This is a high degree of compliance and add to the effectiveness of BMP's as a mitigation measure.

Supply Base BMP Manuals can be found at the following sites:

Alabama:
http://www.forestry.alabama.gov/Pages/Management/Forms/2007_BMP_Manual.pdf
Mississippi:
https://www.mfc.ms.gov/sites/default/files/Entire_bmp_2008-7-24_2.pdf
Georgia:

	https://treeordzone.files.wordpress.com/2017/04/georgias-best-management-practices-for-forestry.pdf Louisiana: http://www.ldaf.state.la.us/wp-content/uploads/2014/04/BMP.pdf Florida: https://www.fdacs.gov/ezs3download/download/25527/516407/Media/Files/Florida-Forest-Service-Files/silvicultural_bmp_manual.pdf Texas: https://tfsweb.tamu.edu/uploadedFiles/Sustainable/bmp/Publications/BMP%20Manual_March2014-web.pdf South Carolina: https://www.scforestry.org/best-management-practices.htm North Carolina: https://www.ncforestservice.gov/water_quality/bmp_manual.htm Tennessee: https://www.tn.gov/content/dam/tn/agriculture/documents/forestry/AgForBMPs.pdf Arkansas: https://www.uaex.edu/environment-nature/water/quality/forest-bmps.aspx Kentucky: https://forestry.ca.uky.edu/files/for_130_bmp_guide_small.pdf Missouri: https://mdc.mo.gov/sites/default/files/downloads/woody_biomass_harvesting_bmp_book.pdf Based on the programs at the Federal, State and Local level with regard to collaborative forest management implementation Through the various collaborative forest management programs offered at the federal, state and local level with the aim at ensuring consistent management approaches at the landscape level, it is justifiable to suggest that the supply area has rigorous requirements in place to ensure that forest management practice maintain or improve soil quality. Based on the findings reviewed and presented in this indicator, there is there is sufficient evidence to conclude low risk for this indicator.
Means of Verification	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • State Forest Action Plans • BMP's and implementation audits
Evidence Reviewed	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • State Forest Action Plans • BMP's and implementation audits
Risk Rating	**X 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 findings use data from the FSC NRA to draw conclusions on the ability for the supply base area to effectively identify and conserve key ecosystems and habitats in their natural state. There is significant overlap with Indicator 2.1.2 (HCV's) as key ecosystems and habitat would fall under not only the FSC HCV definitions but the various other sources for HCV's used by the BP, detailed in indicator 2.1.1. Where gaps exist, the BP has developed procedures in line with the recommended mitigation measures provided in the FSC NRA to ensure the intent of the indicator is appropriately managed in the supply base. *Protective Designations* FSC US used the Protected Areas Database of the United States (PAD-US) to assess whether or not land was under protection for Category 3 HCVs. This database is the official inventory of protected areas in the United States, published by the U.S. Geological Survey Gap Analysis Program (GAP). The database compiles public parks, designated areas, conservation easements, and Marine Protected Areas, and is continuously updated. The database includes conservation rankings for both GAP Status Codes 1-4 and International Union for the Conservation of Nature (IUCN) categories. As is common practice, the following assessment considers an area as permanently protected if it has a GAP Status of 1 or 2: • Status 1: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management. Example: Federal Wilderness Area • Status 2: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance. Examples: National Park, National Wildlife Refuge, National Natural Landmark The protective designations in the US are generally viewed as effective at identifying areas with high conservation values. There have been few studies on the effectiveness of the protected areas at achieving HCV protections. The majority of forest in the supply area are privately owned. Therefore, there are a number of unknowns in determining how HCV's are managed collectively across the supply area. Many of the HCV's identified in Indicator (2.1.1) are outside of federal or state protected areas. The following sites/areas/ranges are located in the supply area and are identified by FSC NRA as Specified Risk prior to implementation of any mitigation measures. **Mesophytic Cove Sites** Applicable to Mississippi, Alabama, Tennessee, Georgia, South Carolina, and North Carolina. Mesophytic cove sites are diverse, closed-canopy hardwood forests occurring on mesic, sheltered sites (coves). These sites provide habitat for rare animal species with limited ranges like the cerulean warbler and crevice salamander. The major threat to mesophytic coves is conversion to non-forest uses or other forest types (e.g. white pine). **Central Appalachians Critical Biodiversity Area** Applicable to Tennessee and North Carolina. Central Appalachians landscape is home to important plant and animal species, it purifies drinking water for millions of Americans, and

filters air for the people that live around the HCV Area. The forests, wild rivers and mountains support natural diversity that few temperate places on Earth can rival. The issues that threaten this the most are energy development, urban sprawl, invasive species, and climate change. The Central Appalachians are home to abundant energy resources including coal, natural gas, wind and other renewables. The US Forest Service is the single largest forest manager in the Central Appalachians; and state lands make up large portions of high priority areas. The Nature Conservancy is working in partnership with state and federal entities to restore America's forests across the region and protect these open spaces for future generations. The Nature Conservancy is focusing its efforts on policy initiatives that will reduce the spread of invasive species.

Ouachita River Valley Critical Biodiversity Area
Applicable to Arkansas. The Ouachita River headwater is a hot spot for biodiversity. Poorly implemented BMP's and Forest Management Practices could jeopardize the integrity of the biodiversity.

Cape Fear Arch Critical Biodiversity Area
Applicable to North Carolina and South Carolina. The Cape Fear Arch is a region of particularly high biological diversity and supports nationally significant occurrences of animal and plant communities. the Arch is recognized as having the greatest biological diversity along the Atlantic Coast north of Florida. Red-cockaded woodpeckers are known to utilize the arch and nest in cavities of living pine trees. They are dependent on pine woodlands and savannas that have pine trees large enough to provide nesting habitat. They require mature open woodlands usually greater than 60 years old, with abundant herbaceous ground cover. Native Longleaf Pine Savannas, once one of the most widespread forest types in the US, has been reduced to 3% of its original range. Associated with particularly high animal and plant diversity, including RTE species, longleaf pine savanna is responsible in part for the high biodiversity associated with Central Alabama, Florida Panhandle, and Cape Fear Arch critical biodiversity areas. Longleaf pine savanna is also directly associated with the Red Cockaded Woodpecker and Gopher Tortoise species. "Native" in this instance refers to longleaf pine stands that have been restored in areas that have not been historically maintained in longleaf pine. Stands such as this do not apply under this section. Native does not imply a particular regeneration method; these stands may be either planted or naturally regenerated. Biodiversity values are driven in part by the understory plant community. Biodiversity values are potentially harmed via conversion of longleaf to other pine types, and the use of herbicides or other management techniques that inhibit native understory communities.

Southern Appalachians Critical Biodiversity Area
Applicable to Alabama, Tennessee, and Georgia. Fish, mussels, snails, crayfish, and amphibians are abundant in this area. The Cahaba River Watershed is one of the focal points of the area. Sedimentation from forestry is a threat to biodiversity in this area.

- **Cahaba River Watershed**: Biodiversity areas in the southern Appalachians are largely driven by exceptional aquatic biodiversity. The Cahaba River Watershed is the center of the biodiversity hotspot, which includes, fish, mussels, snails, crayfish, and amphibians. The biodiversity area includes other smaller watercourses as well. This biodiversity is potentially threatened by sedimentation from roads. When operating near the Cahaba River Watershed logging crews are advised to use extra caution when constructing logging roads, loading areas and skid trails, and operating near stream side management zones.

- **Bibb County Glades**: (i.e. rock outcrops), exposed limestone glades, and sandstone glades in Central Alabama have high density of rare plants. Loggers are required to use extra caution when constructing logging roads, loading areas and skid trails, and loading areas. These biodiversity areas are potentially harmed by logging and other management activities that may not recognize the value associated with these glades. A rock outcrop may look like an easy area to set up a skid trail or loading area because there are no trees in this area, but it could be a glade with rare, threatened, and endangered species living within it.

- **Montane Longleaf Pine:** This habitat occurs in steep rolling topography, historically maintained by fire, mostly outside of, or on the edge of the Coastal Plain. Biodiversity values are driven in part by the understory plant community. Biodiversity values are potentially harmed via conversion of longleaf to other pine types, and the use of herbicides or other management techniques that inhibit native understory communities.

Patch-nosed Salamander Range
Applicable to Georgia and South Carolina. This species is endemic to the US and is its second-smallest salamander. It is protected under federal law and it is illegal to disturb its habitat. This species can be found in small streams associated with steep-walled ravines (C. Camp pers. comm. January 2011), either within or along the banks of the non-flooded part of the streambed (Camp *et al.* 2009). Individuals were found under rocks and in loose leaf litter; however, it is thought that they might occupy more terrestrial microhabitats under suitably moist conditions. The clutch size appears to vary between 6-14 eggs (Camp *et al.* 2009), and the species has a multi-year aquatic larval development (C. Camp pers. comm. January 2011).

Dusky Gopher Frog Range
Applicable to Mississippi. Also known as the Mississippi Gopher Frog, this species is one of the top 100 most endangered species and is protected under federal law and it is illegal to disturb its habitat. By 2003 it was only known from Glen's Pond in Desoto National Forest in Harrison County, Mississippi (USFWS 2000h; Young and Crother 2001). However, very recently individuals have been seen at two other sites: one calling male was seen at McCoy's Pond 50 miles east of Glen's Pond, and 50 tadpoles were collected from Mike's Pond, 20 miles west of Glen's Pond (Zippel 2005). The range has been significantly reduced as a result of habitat destruction, fragmentation, and modification. Pre-settlement longleaf pine forests were the dominant forest type of the south-eastern coastal plain. Through the Long Leaf Alliance initiative to reestablish Longleaf pine stands, habitat loss is decreased and Long leaf pine forested acres is on the rise. A majority of the habitat is in the Desoto National Forest which protects the habitat of the frog.

Cheoah Bald Salamander Range
Applicable to North Carolina. This species only occurs in high elevations on a single mountain in North Carolina. Clear cutting strongly depletes local populations of other members of the *Plethodon jordani* complex (Petranka, Eldridge and Haley 1993); the time required for recovery is debatable, but is at least a few decades (Ash 1997; Petranka 1999; Ash and Pollock 1999). Conservation actions taken to protect this species help mitigate risk to its habitat. Part of the range of this species is within the Nantahala Game Lands, which offer some measure of protection because the forest is typically left intact. There is also an effort to declare much of the range as Wilderness, which, if successful, would further protect the species. The species does not appear on any state or federal list of endangered species and education and conservation efforts have kept the population of this Salamander in a stable condition according to the IUCN.

Areas for Specified Risk for Conversion
Applicable to Texas, Louisiana, Mississippi, Alabama, Florida, Georgia, South Carolina, and North Carolina. Urbanization, not forests, is the single biggest threat to forests. Furthermore, healthy demand for forest products mitigates forest loss. (Historical Perspective on the Demand and Relationship between Demand and Forest Productivity in the US South. Forest2Market. July 26, 2017).

Native Longleaf Pine Systems
Applicable to Texas, Louisiana, Mississippi, Alabama, Georgia, Florida, South Carolina, and North Carolina. This species is far less common than it once was, and efforts are underway to promote longleaf pine coverage in its native habitat. The intent of listing species to the Red List is not to promote prohibition of their use but rather to heighten priority setting for conservation of the species' (IUCN Standards and Petitions Subcommittee. 2014. Guidelines for Using the IUCN Red List Categories and Criteria. Version 11. Prepared by the Standards and Petitions Subcommittee.)

	Late Successional Bottomland Hardwood Areas Applicable to Texas, Louisiana, Missouri, Mississippi, Alabama, Georgia, Florida, South Carolina, and North Carolina. Stand conditions of late successional bottomland hardwoods are extremely diverse and variable, and can be affected by minor changes in hydrology. Woody species diversity is comparable to the most diverse upland forests in the US. Several species groupings are considered bottomland hardwoods including mixed hardwoods and cypress-tupelo. Much of the original bottomland hardwood in the US has been cleared for agriculture, particularly so in the Mississippi valley. Late successional in this instance refers to bottomland hardwoods that are at least 80 years old and have the complex structural characteristics and species composition associated with late successional stands. **Florida Panhandle Critical Biodiversity Area** Applicable to Florida. This area includes Longleaf Pine habitats, Steephead Ravines, and the Apalachicola Bay & River System. • ***Longleaf Pine*****:** In addition to being a threatened species, Longleaf Pine provides optimal habitat for a number of species including the Gopher Tortoise which is protected by the Forestry Wildlife Best Management Practices for State Imperiled Species and the Red-Cockaded Woodpecker which is protected under the U.S. Endangered Species Act. Longleaf Pine Systems, are described in more detail above. This ecosystem is only a portion of its original range due to urbanization and the withholding of fire from the area. Further loss of this habitat could harm the species which depend on this ecosystem. • ***Steephead Ravines***: Unique to Florida, this area is home to a disproportionate number of imperiled species. This area includes the 6,000 acre Apalachicola Bluffs and Ravines Preserve which is considered to be one of the rarest habitats and is protected by the Nature Conservancy. BMPs are the primary source of protection and because of the extreme slope of the ravines SMZs are typically measured from the break rather than the edge of the ravines and harvesting in these areas is impractical. • ***Apalachicola Bay/River System***: Reptiles, amphibians and mussels are typical of the species found in this area. Sedimentation from forest activities is a potential threat and is mitigated through implementation of BMPs **Central Florida Critical Biodiversity Area** Applicable to Florida. Central Florida is a biodiversity hotspot and has suffered a great loss of habitat. This habitat can be mainly attributed to the highest rate of human population growth within the Southern coastal plain. The Florida Forever conservation fund focuses on the conservation of habitat in Central Florida. Urban Sprawl is the greatest contributor to habitat loss. Due to the lack of a collective management plan addressing the aforementioned HCV's areas outside of protected areas, and the correlation between HCV's and key ecosystems and habitat, it is justifiable that the indicator receive a specified risk designation. The BP has implemented mitigation measures to ensure key ecosystems and habitat are appropriately conserved for the supply area. The mitigation measures are detailed below in the mitigation measures section.
Means of Verification	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • Supplier HCV information packages
Evidence Reviewed	• Supplier Questionnaires • Maps

	• FSC NRA • Company procedures • Supplier HCV information packages
Risk Rating	☐ **Low Risk** **X Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	The BP implements a supplier mapping and communication program to monitor the activities of its suppliers across the supply area. The supplier mapping and communication program is applicable to secondary feedstocks as primary feedstocks are tracked by location prior to purchasing. The BP collects the following information using the secondary supplier questionnaire: • General supplier information including location of mill • Certification status • How they collect and track their timber procurement activities – scale tickets, severance taxes • BMP monitoring of procurement activities • BMP violations in the review period • Awareness of land conversion in their sourcing area • Awareness of HCV's in their sourcing area • General procurement practices – timber types, species, quality • Complete counties where timber was sourced for the review period The BP uses this information, particularly the county list, it collects from suppliers to determine the extent of the supply base area. If the supply base area exceeds the previous years area, the BP will include the new area during the next assessment period. The BP checks for overlaps with HCV areas to determine where there is overlap. A detailed package is compiled for each supplier to inform them of the findings. The educational packages provided to each supplier allows them to make better informed procurement decisions. Through sharing of this data, the information becomes more widely known to all actors in the supply chain, effectively increasing the awareness of sensitive areas in the supply base. Over time, the BP can use the information received from its suppliers to develop a risk matrix of their suppliers to determine if any suppliers or sourcing areas require any additional mitigations or interventions. The information provided by the secondary suppliers are reviewed annually and verified by third party auditors to ensure they are complete and correct. The annual information collection and verification exercise reviews the mitigations effectiveness. Any deficiencies are uncovered and new methodologies are developed to close any uncovered gaps. This system is robust, replicable and reviewed annually and revised if necessary. It requires concerted effort by both the BP and its suppliers and will strengthen over time. In conclusion, the mitigation measure is effective at identifying where all feedstock is sourced back to the concession of harvest. It is also effective at identifying which suppliers are at risk of non-compliance with an HCV area management strategy. The mitigation process identifies which forest management practices are effective at addressing the HCV concern and is communicated to the suppliers. The information provided by the supplier is verified for correctness and completeness during annual review audits.

	Indicator
2.2.4	The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b).

Finding	The findings use data from the FSC NRA to draw conclusions on the ability for the supply base area to effectively identify and conserve key ecosystems and habitats in their natural state. There is significant overlap with Indicator 2.1.2 (HCV's) as key ecosystems and habitat would fall under not only the FSC HCV definitions but the various other sources for HCV's used by the BP, detailed in indicator 2.1.1. Where gaps exist, the BP has developed procedures in line with the recommended mitigation measures provided in the FSC NRA to ensure the intent of the indicator is appropriately managed in the supply base. *Protective Designations* FSC US used the Protected Areas Database of the United States (PAD-US) to assess whether or not land was under protection for Category 3 HCVs. This database is the official inventory of protected areas in the United States, published by the U.S. Geological Survey Gap Analysis Program (GAP). The database compiles public parks, designated areas, conservation easements, and Marine Protected Areas, and is continuously updated. The database includes conservation rankings for both GAP Status Codes 1-4 and International Union for the Conservation of Nature (IUCN) categories. As is common practice, the following assessment considers an area as permanently protected if it has a GAP Status of 1 or 2: • Status 1: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management. Example: Federal Wilderness Area • Status 2: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance. Examples: National Park, National Wildlife Refuge, National Natural Landmark The protective designations in the US are generally viewed as effective at identifying areas with high conservation values. There have been few studies on the effectiveness of the protected areas at achieving HCV protections. The majority of forest in the supply area are privately owned. Therefore, there are a number of unknowns in determining how HCV's are managed collectively across the supply area. Many of the HCV's identified in Indicator (2.1.1) are outside of federal or state protected areas. The following sites/areas/ranges are located in the supply area and are identified by FSC NRA as Specified Risk prior to implementation of any mitigation measures. **Mesophytic Cove Sites** Applicable to Mississippi, Alabama, Tennessee, Georgia, South Carolina, and North Carolina. Mesophytic cove sites are diverse, closed-canopy hardwood forests occurring on mesic, sheltered sites (coves). These sites provide habitat for rare animal species with limited ranges like the cerulean warbler and crevice salamander. The major threat to mesophytic coves is conversion to non-forest uses or other forest types (e.g. white pine). **Central Appalachians Critical Biodiversity Area** Applicable to Tennessee and North Carolina. Central Appalachians landscape is home to important plant and animal species, it purifies drinking water for millions of Americans, and filters air for the people that live around the HCV Area. The forests, wild rivers and mountains support natural diversity that few temperate places on Earth can rival. The issues that threaten this the most are energy development, urban sprawl, invasive species, and climate change. The Central Appalachians are home to abundant energy resources including coal, natural gas, wind and other renewables. The US Forest Service is the single largest forest manager in the Central Appalachians; and state lands make up large portions of high priority areas. The Nature Conservancy is working in partnership

with state and federal entities to restore America's forests across the region and protect these open spaces for future generations. The Nature Conservancy is focusing its efforts on policy initiatives that will reduce the spread of invasive species.

Ouachita River Valley Critical Biodiversity Area
Applicable to Arkansas. The Ouachita River headwater is a hot spot for biodiversity. Poorly implemented BMP's and Forest Management Practices could jeopardize the integrity of the biodiversity.

Cape Fear Arch Critical Biodiversity Area
Applicable to North Carolina and South Carolina. The Cape Fear Arch is a region of particularly high biological diversity and supports nationally significant occurrences of animal and plant communities. the Arch is recognized as having the greatest biological diversity along the Atlantic Coast north of Florida. Red-cockaded woodpeckers are known to utilize the arch and nest in cavities of living pine trees. They are dependent on pine woodlands and savannas that have pine trees large enough to provide nesting habitat. They require mature open woodlands usually greater than 60 years old, with abundant herbaceous ground cover. Native Longleaf Pine Savannas, once one of the most widespread forest types in the US, has been reduced to 3% of its original range. Associated with particularly high animal and plant diversity, including RTE species, longleaf pine savanna is responsible in part for the high biodiversity associated with Central Alabama, Florida Panhandle, and Cape Fear Arch critical biodiversity areas. Longleaf pine savanna is also directly associated with the Red Cockaded Woodpecker and Gopher Tortoise species. "Native" in this instance refers to longleaf pine stands that have been restored in areas that have not been historically maintained in longleaf pine. Stands such as this do not apply under this section. Native does not imply a particular regeneration method; these stands may be either planted or naturally regenerated. Biodiversity values are driven in part by the understory plant community. Biodiversity values are potentially harmed via conversion of longleaf to other pine types, and the use of herbicides or other management techniques that inhibit native understory communities.

Southern Appalachians Critical Biodiversity Area
Applicable to Alabama, Tennessee, and Georgia. Fish, mussels, snails, crayfish, and amphibians are abundant in this area. The Cahaba River Watershed is one of the focal points of the area. Sedimentation from forestry is a threat to biodiversity in this area.

- **Cahaba River Watershed**: Biodiversity areas in the southern Appalachians are largely driven by exceptional aquatic biodiversity. The Cahaba River Watershed is the center of the biodiversity hotspot, which includes, fish, mussels, snails, crayfish, and amphibians. The biodiversity area includes other smaller watercourses as well. This biodiversity is potentially threatened by sedimentation from roads. When operating near the Cahaba River Watershed logging crews are advised to use extra caution when constructing logging roads, loading areas and skid trails, and operating near stream side management zones.

- **Bibb County Glades**: (i.e. rock outcrops), exposed limestone glades, and sandstone glades in Central Alabama have high density of rare plants. Loggers are required to use extra caution when constructing logging roads, loading areas and skid trails, and loading areas. These biodiversity areas are potentially harmed by logging and other management activities that may not recognize the value associated with these glades. A rock outcrop may look like an easy area to set up a skid trail or loading area because there are no trees in this area, but it could be a glade with rare, threatened, and endangered species living within it.

- **Montane Longleaf Pine:** This habitat occurs in steep rolling topography, historically maintained by fire, mostly outside of, or on the edge of the Coastal Plain. Biodiversity values are driven in part by the understory plant community. Biodiversity values are potentially harmed via conversion of longleaf to other pine types, and the use of herbicides or other management techniques that inhibit native understory communities.

Patch-nosed Salamander Range
Applicable to Georgia and South Carolina. This species is endemic to the US and is its second-smallest salamander. It is protected under federal law and it is illegal to disturb its habitat. This species can be found in small streams associated with steep-walled ravines (C. Camp pers. comm. January 2011), either within or along the banks of the non-flooded part of the streambed (Camp *et al.* 2009). Individuals were found under rocks and in loose leaf litter; however, it is thought that they might occupy more terrestrial microhabitats under suitably moist conditions. The clutch size appears to vary between 6-14 eggs (Camp *et al.* 2009), and the species has a multi-year aquatic larval development (C. Camp pers. comm. January 2011).

Dusky Gopher Frog Range
Applicable to Mississippi. Also known as the Mississippi Gopher Frog, this species is one of the top 100 most endangered species and is protected under federal law and it is illegal to disturb its habitat. By 2003 it was only known from Glen's Pond in Desoto National Forest in Harrison County, Mississippi (USFWS 2000h; Young and Crother 2001). However, very recently individuals have been seen at two other sites: one calling male was seen at McCoy's Pond 50 miles east of Glen's Pond, and 50 tadpoles were collected from Mike's Pond, 20 miles west of Glen's Pond (Zippel 2005). The range has been significantly reduced as a result of habitat destruction, fragmentation, and modification. Pre-settlement longleaf pine forests were the dominant forest type of the south-eastern coastal plain. Through the Long Leaf Alliance initiative to reestablish Longleaf pine stands, habitat loss is decreased and Long leaf pine forested acres is on the rise. A majority of the habitat is in the Desoto National Forest which protects the habitat of the frog.

Cheoah Bald Salamander Range
Applicable to North Carolina. This species only occurs in high elevations on a single mountain in North Carolina. Clear cutting strongly depletes local populations of other members of the *Plethodon jordani* complex (Petranka, Eldridge and Haley 1993); the time required for recovery is debatable, but is at least a few decades (Ash 1997; Petranka 1999; Ash and Pollock 1999). Conservation actions taken to protect this species help mitigate risk to its habitat. Part of the range of this species is within the Nantahala Game Lands, which offer some measure of protection because the forest is typically left intact. There is also an effort to declare much of the range as Wilderness, which, if successful, would further protect the species. The species does not appear on any state or federal list of endangered species and education and conservation efforts have kept the population of this Salamander in a stable condition according to the IUCN.

Areas for Specified Risk for Conversion
Applicable to Texas, Louisiana, Mississippi, Alabama, Florida, Georgia, South Carolina, and North Carolina. Urbanization, not forests, is the single biggest threat to forests. Furthermore, healthy demand for forest products mitigates forest loss. (Historical Perspective on the Demand and Relationship between Demand and Forest Productivity in the US South. Forest2Market. July 26, 2017).

Native Longleaf Pine Systems
Applicable to Texas, Louisiana, Mississippi, Alabama, Georgia, Florida, South Carolina, and North Carolina. This species is far less common than it once was, and efforts are underway to promote longleaf pine coverage in its native habitat. The intent of listing species to the Red List is not to promote prohibition of their use but rather to heighten priority setting for conservation of the species' (IUCN Standards and Petitions Subcommittee. 2014. Guidelines for Using the IUCN Red List Categories and Criteria. Version 11. Prepared by the Standards and Petitions Subcommittee.)

Late Successional Bottomland Hardwood Areas
Applicable to Texas, Louisiana, Missouri, Mississippi, Alabama, Georgia, Florida, South Carolina, and North Carolina. Stand conditions of late successional bottomland hardwoods are extremely diverse and variable, and can be affected by minor changes in hydrology. Woody species diversity is comparable to the most diverse upland forests in the US. Several species groupings are considered bottomland hardwoods including mixed hardwoods and cypress-tupelo. Much of the original bottomland hardwood in the

	US has been cleared for agriculture, particularly so in the Mississippi valley. Late successional in this instance refers to bottomland hardwoods that are at least 80 years old and have the complex structural characteristics and species composition associated with late successional stands. **Florida Panhandle Critical Biodiversity Area** Applicable to Florida. This area includes Longleaf Pine habitats, Steephead Ravines, and the Apalachicola Bay & River System. • ***Longleaf Pine*****:** In addition to being a threatened species, Longleaf Pine provides optimal habitat for a number of species including the Gopher Tortoise which is protected by the Forestry Wildlife Best Management Practices for State Imperiled Species and the Red-Cockaded Woodpecker which is protected under the U.S. Endangered Species Act. Longleaf Pine Systems, are described in more detail above. This ecosystem is only a portion of its original range due to urbanization and the withholding of fire from the area. Further loss of this habitat could harm the species which depend on this ecosystem. • ***Steephead Ravines***: Unique to Florida, this area is home to a disproportionate number of imperiled species. This area includes the 6,000 acre Apalachicola Bluffs and Ravines Preserve which is considered to be one of the rarest habitats and is protected by the Nature Conservancy. BMPs are the primary source of protection and because of the extreme slope of the ravines SMZs are typically measured from the break rather than the edge of the ravines and harvesting in these areas is impractical. • ***Apalachicola Bay/River System***: Reptiles, amphibians and mussels are typical of the species found in this area. Sedimentation from forest activities is a potential threat and is mitigated through implementation of BMPs. **Central Florida Critical Biodiversity Area** Applicable to Florida. Central Florida is a biodiversity hotspot and has suffered a great loss of habitat. This habitat can be mainly attributed to the highest rate of human population growth within the Southern coastal plain. The Florida Forever conservation fund focuses on the conservation of habitat in Central Florida. Urban Sprawl is the greatest contributor to habitat loss. Due to the lack of a collective management plan addressing the aforementioned HCV's areas outside of protected areas, and the correlation between HCV's and biodiversity, it is justifiable that the indicator receive a specified risk designation. The BP has implemented mitigation measures to ensure biodiversity is protected. The mitigation measures are detailed below in the mitigation measures section.
Means of Verification	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • Supplier HCV information packages
Evidence Reviewed	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • Supplier HCV information packages
Risk Rating	☐ **Low Risk** **X Specified Risk** ☐ **Unspecified Risk at RA**

Comment or Mitigation Measure	The BP implements a supplier mapping and communication program to monitor the activities of its suppliers across the supply area. The supplier mapping and communication program is applicable to secondary feedstocks as primary feedstocks are tracked by location prior to purchasing. The BP collects the following information using the secondary supplier questionnaire: • General supplier information including location of mill • Certification status • How they collect and track their timber procurement activities – scale tickets, severance taxes • BMP monitoring of procurement activities • BMP violations in the review period • Awareness of land conversion in their sourcing area • Awareness of HCV's in their sourcing area • General procurement practices – timber types, species, quality • Complete counties where timber was sourced for the review period The BP uses this information, particularly the county list, it collects from suppliers to determine the extent of the supply base area. If the supply base area exceeds the previous years area, the BP will include the new area during the next assessment period. The BP checks for overlaps with HCV areas to determine where there is overlap. A detailed package is compiled for each supplier to inform them of the findings. The educational packages provided to each supplier allows them to make better informed procurement decisions. Through sharing of this data, the information becomes more widely known to all actors in the supply chain, effectively increasing the awareness of sensitive areas in the supply base and the threats that pose risks to these sensitive areas. Over time, the BP can use the information received from its suppliers to develop a risk matrix to determine if any suppliers or sourcing areas require additional mitigations or interventions. The information provided by the secondary suppliers are reviewed annually and verified by third party auditors to ensure they are complete and correct. The annual information collection and verification exercise reviews the mitigations effectiveness. Any deficiencies are uncovered and new methodologies are developed to close any uncovered gaps. This system is robust, replicable, reviewed annually and revised if necessary. It requires concerted effort by both the BP and its suppliers and will strengthen over time. In conclusion, the mitigation measure is effective at identifying where all feedstock is sourced back to the concession of harvest. It is also effective at identifying which suppliers are at risk of non-compliance with an HCV area management strategy. The mitigation process identifies which forest management practices are effective at addressing the HCV concern and is communicated to the suppliers. The information provided by the supplier is verified for correctness and completeness during annual review audits.

	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	For the purpose of the risk assessment of this indicator residue removal refers to primary harvesting, thinnings and roadside debris removal. Much of the supply base area is found in forestry dominant communities. The maintenance of forests in these communities is a key metric in ensuring harvest and residue removal

	minimises environmental impact. The land owners are incentivized to maintain ecosystem function and minimise environmental impacts to optimize stand health and maintain a steady flow of revenue from timber products. With the 2008 Farm Bill, Congress tasked the states and territories with assessing the condition of trees and forests within their boundaries, regardless of ownership, and developing strategies to: conserve working forest landscapes, protect forests from harm, and enhance public benefits from trees and forests. The resulting state Forest Action Plans—completed in 2010 and reviewed in 2015 by all 59 states and territories—offer practical and comprehensive roadmaps for investing federal, state, local, and private resources where they can be most effective in achieving national conservation goals. All states have a state forest action plan that sets outs collaborative goals for managing impacts on water quality, however many BMP's also set targets and management strategies for harvest planning, equipment impacts, handling of dangerous goods (fuels, oils) and other strategies that ensure a collective landscape level approach is brought to forest and harvesting practices in the supply base. https://www.stateforesters.org/forest-action-plans/ The Forest Stewardship Program (FSP) provides assistance to owners of forest land where good stewardship, including agroforestry practices, will enhance and sustain multiple forest resources and contribute to healthy and resilient landscapes. The program also helps create jobs in rural communities by sustaining local markets for forest products and increasing demand for qualified private forestry consultants and state field foresters. The Forest Stewardship Program focuses on three main areas: • Assisting landowners to actively manage their land and related resources • Keeping land in a productive and healthy condition for present and future owners • Increasing the economic benefits of land (timber harvesting, for example) while conserving the natural environment There are currently more than 25 million acres being managed under Forest Stewardship Plans. https://www.fs.usda.gov/managing-land/private-land/forest-stewardship State Forest Action Plans provide a set of Best Management Practices (BMP's) that vary by state and are tailored to the states current priorities with regard to forest management objectives. State BMP's are a tool used by the BP to demonstrate that suppliers investigate the implementation rates of the BMP's and whether any BMP's non-conformities have been issued against the supplier. The state also conducts BMP inspections to monitor the effectiveness of BMP's at achieving land management objectives. The latest data on BMP implementation and BMP categories are as follows:

Table 1—Southeastern survey results for forestry BMP regulation, BMP manual year, implementation rate (%), and implementation year

State	State regulation	BMP manual	Implementation rate (%)	Implementation year
Alabama	Quasi-regulatory	2007	97	2010
Arkansas	Non-regulatory	2002	87	2011
Florida	Quasi-regulatory	2008	99	2011
Georgia	Non-regulatory	2009	97	2011
Kentucky	Regulatory	2008	94	2012
Louisiana	Non-regulatory	2000	96	2012
Mississippi	Non-regulatory	2008	91	2010
North Carolina	Quasi-regulatory	2006	85	2011
Oklahoma	Non-regulatory	1991	95	2010
South Carolina	Quasi-regulatory	2012	91	2012
Tennessee	Non-regulatory	2003	84	2010
Texas	Non-regulatory	2010	95	2011
Virginia	Quasi-regulatory	2011	90	2012

Table 2—Forestry BMP implementation rate results by individual BMP categories. Minimum, maximum, average, and number of states that reported data for that specific BMP category

BMP category	Minimum (%)	Maximum (%)	Average (%)	Number of states
Timber harvest	88	99	95.0	8
Forest roads	84	99	91.3	13
Skid trails	75	100	89.7	10
Log landings	92	100	95.8	9
Stream crossings	72	98	89.2	13
SMZs	86	98	93.2	13
Wetlands	70	100	94.1	9
Reforestation	95	100	97.6	7
Mechanical site preparation	74	99	91.6	9
Chemical site preparation	93	100	98.6	8
Pesticide	98	100	99.6	5
Fertilizer	100	100	100.0	2
Prescribed burning	60	100	87.4	8
Wildfire suppression	100	100	100.0	2
Wildfire rehabilitation	100	100	100.0	1
Public lands	94	100	97.8	5

Whether they are regulatory, quasi-regulatory, or non-regulatory, BMPs are utilized in all states in the supply area and their use is effective as a tool to monitor harvesting practices including those that can cause harm to ecosystem function. Monitoring of BMP implementation is a core function of the BMP process and implementation rates are above 90% as concluded from the audits conducted. This is a high degree of compliance and add to the effectiveness of BMP's as a mitigation measure.

Supply Base BMP Manuals can be found at the following sites:

Alabama:
http://www.forestry.alabama.gov/Pages/Management/Forms/2007_BMP_Manual.pdf
Mississippi:
https://www.mfc.ms.gov/sites/default/files/Entire_bmp_2008-7-24_2.pdf
Georgia:

	https://treeordzone.files.wordpress.com/2017/04/georgias-best-management-practices-for-forestry.pdf Louisiana: http://www.ldaf.state.la.us/wp-content/uploads/2014/04/BMP.pdf Florida: https://www.fdacs.gov/ezs3download/download/25527/516407/Media/Files/Florida-Forest-Service-Files/silvicultural_bmp_manual.pdf Texas: https://tfsweb.tamu.edu/uploadedFiles/Sustainable/bmp/Publications/BMP%20Manual_March2014-web.pdf South Carolina: https://www.scforestry.org/best-management-practices.htm North Carolina: https://www.ncforestservice.gov/water_quality/bmp_manual.htm Tennessee: https://www.tn.gov/content/dam/tn/agriculture/documents/forestry/AgForBMPs.pdf Arkansas: https://www.uaex.edu/environment-nature/water/quality/forest-bmps.aspx Kentucky: https://forestry.ca.uky.edu/files/for_130_bmp_guide_small.pdf Missouri: https://mdc.mo.gov/sites/default/files/downloads/woody_biomass_harvesting_bmp_book.pdf Through the various collaborative forest management programs offered at the federal, state and local level with the aim at ensuring consistent management approaches at the landscape level, it is justifiable to suggest that the supply area has rigorous requirements in place to ensure that forest management practices including residue removal minimise harm to ecosystems. Based on the findings reviewed and presented in this indicator, there is there is sufficient evidence to conclude low risk for this indicator.
Means of Verification	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • State Forest Action Plans • BMP's and implementation audits
Evidence Reviewed	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • State Forest Action Plans • BMP's and implementation audits
Risk Rating	**X 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	Much of the supply base area is found in forestry dominant communities. The maintenance of forests in these communities is a key metric in ensuring negative impacts to ground water, surface water and water downstream from forest management activities are minimised. The land owners are incentivized and required by law to minimise impacts to water quality from forest management activities. Maintaining optimum water quality ensure longevity with timber resources, optimizes ecosystem and stand health and ensures a steady flow of revenue from timber products. The US has legislation for water management under the Clean Water Act. The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters EPA works with its federal, state and tribal regulatory partners to monitor and ensure compliance with clean water laws and regulations in order to protect human health and the environment. The Clean Water Act is the primary federal law governing water pollution. Section 404 of the CWA regulates the placement of dredged or fill material into wetlands, lakes, streams rivers, estuaries and certain other types of waters. The goal of Section 404 is to avoid and minimize losses to wetlands and other waters and to compensate for unavoidable loss through mitigation and restoration. The CWA prohibits the discharge of oil or hazardous substances to waters of the U.S. or their adjoining shorelines in quantities that may be harmful to the public health or welfare or the environment. EPA Oil Pollution Prevention regulations further require owners and operators of non-transportation-related oil facilities to make and implement plans to prevent oil discharges. EPA regional personnel periodically conduct inspections which may be either announced, or unannounced, to ensure compliance with these regulations. Facilities inspected are randomly chosen or: • based on risk factors such as facility proximity to drinking water intakes or environmentally sensitive areas, or the age of facility infrastructure (tanks, piping, etc.) • as a follow up to an oil spill, or • based on citizen complaints or tips With the 2008 Farm Bill, Congress tasked the states and territories with assessing the condition of trees and forests within their boundaries, regardless of ownership, and developing strategies to: conserve working forest landscapes, protect forests from harm, and enhance public benefits from trees and forests. The resulting state Forest Action Plans—completed in 2010 and reviewed in 2015 by all 59 states and territories—offer practical and comprehensive roadmaps for investing federal, state, local, and private resources where they can be most effective in achieving national conservation goals. All states have a state forest action plan that sets outs collaborative goals for managing impacts on water quality, however many BMP's also set targets and management strategies for harvest planning, equipment impacts, handling of dangerous goods (fuels, oils) and other strategies that ensure a collective landscape level approach is brought to forest and harvesting practices in the supply base. https://www.stateforesters.org/forest-action-plans/ The Forest Stewardship Program (FSP) provides assistance to owners of forest land where good stewardship, including agroforestry practices, will enhance and sustain multiple forest resources and contribute to healthy and resilient landscapes. The program also helps create jobs in rural communities by sustaining local markets for forest products and increasing demand for qualified private forestry consultants and state field foresters. The Forest Stewardship Program focuses on three main areas:

- Assisting landowners to actively manage their land and related resources
- Keeping land in a productive and healthy condition for present and future owners
- Increasing the economic benefits of land (timber harvesting, for example) while conserving the natural environment

There are currently more than 25 million acres being managed under Forest Stewardship Plans.

https://www.fs.usda.gov/managing-land/private-land/forest-stewardship

State Forest Action Plans provide a set of Best Management Practices (BMP's) that vary by state and are tailored to the states current priorities with regard to forest management objectives. State BMP's are a tool used by the BP to demonstrate that suppliers investigate the implementation rates of the BMP's and whether any BMP's non-conformities have been issued against the supplier. The state also conducts BMP inspections to monitor the effectiveness of BMP's at achieving land management objectives.

The latest data on BMP implementation and BMP categories are as follows:

Table 1—Southeastern survey results for forestry BMP regulation, BMP manual year, implementation rate (%), and implementation year

State	State regulation	BMP manual	Implementation rate (%)	Implementation year
Alabama	Quasi-regulatory	2007	97	2010
Arkansas	Non-regulatory	2002	87	2011
Florida	Quasi-regulatory	2008	99	2011
Georgia	Non-regulatory	2009	97	2011
Kentucky	Regulatory	2008	94	2012
Louisiana	Non-regulatory	2000	96	2012
Mississippi	Non-regulatory	2008	91	2010
North Carolina	Quasi-regulatory	2006	85	2011
Oklahoma	Non-regulatory	1991	95	2010
South Carolina	Quasi-regulatory	2012	91	2012
Tennessee	Non-regulatory	2003	84	2010
Texas	Non-regulatory	2010	95	2011
Virginia	Quasi-regulatory	2011	90	2012

Table 2—Forestry BMP implementation rate results by individual BMP categories. Minimum, maximum, average, and number of states that reported data for that specific BMP category

BMP category	Minimum (%)	Maximum (%)	Average (%)	Number of states
Timber harvest	88	99	95.0	8
Forest roads	84	99	91.3	13
Skid trails	75	100	89.7	10
Log landings	92	100	95.8	9
Stream crossings	72	98	89.2	13
SMZs	86	98	93.2	13
Wetlands	70	100	94.1	9
Reforestation	95	100	97.6	7
Mechanical site preparation	74	99	91.6	9
Chemical site preparation	93	100	98.6	8
Pesticide	98	100	99.6	5
Fertilizer	100	100	100.0	2
Prescribed burning	60	100	87.4	8
Wildfire suppression	100	100	100.0	2
Wildfire rehabilitation	100	100	100.0	1
Public lands	94	100	97.8	5

Whether they are regulatory, quasi-regulatory, or non-regulatory, BMPs are utilized in all states in the supply area and their use is effective as a tool to monitor harvesting practices including those that can cause harm to water resources. Monitoring of BMP implementation is a core function of the BMP process and implementation rates are above 90% as concluded from the audits conducted. This is a high degree of compliance and add to the effectiveness of BMP's as a mitigation measure.

Supply Base BMP Manuals can be found at the following sites:

Alabama:
http://www.forestry.alabama.gov/Pages/Management/Forms/2007_BMP_Manual.pdf
Mississippi:
https://www.mfc.ms.gov/sites/default/files/Entire_bmp_2008-7-24_2.pdf
Georgia:
https://treeordzone.files.wordpress.com/2017/04/georgias-best-management-practices-for-forestry.pdf
Louisiana:
http://www.ldaf.state.la.us/wp-content/uploads/2014/04/BMP.pdf
Florida:
https://www.fdacs.gov/ezs3download/download/25527/516407/Media/Files/Florida-Forest-Service-Files/silvicultural_bmp_manual.pdf
Texas:
https://tfsweb.tamu.edu/uploadedFiles/Sustainable/bmp/Publications/BMP%20Manual_March2014-web.pdf
South Carolina:
https://www.scforestry.org/best-management-practices.htm
North Carolina:
https://www.ncforestservice.gov/water_quality/bmp_manual.htm
Tennessee:
https://www.tn.gov/content/dam/tn/agriculture/documents/forestry/AgForBMPs.pdf
Arkansas:
https://www.uaex.edu/environment-nature/water/quality/forest-bmps.aspx
Kentucky:
https://forestry.ca.uky.edu/files/for_130_bmp_guide_small.pdf
Missouri:

	https://mdc.mo.gov/sites/default/files/downloads/woody_biomass_harvesting_bmp_book.pdf Through the various collaborative forest management programs and legislation offered at the federal, state and local level with the aim at ensuring consistent management approaches at the landscape level, it is justifiable to suggest that the supply area has rigorous requirements in place to ensure that forest management practices minimize harm to ground, surface and water downstream from forest management activities. Based on the findings reviewed and presented in this indicator, there is sufficient evidence to conclude low risk for this indicator.
Means of Verification	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • State Forest Action Plans • BMP's and implementation audits
Evidence Reviewed	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • State Forest Action Plans • BMP's and implementation audits
Risk Rating	**X 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	The only potential adverse impact to air quality would be from prescribed burning. Permits or authorizations for prescribed burning are required in Alabama and Mississippi, the states where most of the wood is sourced, and from many of the other states in the supply area. Much of the supply base area is found in forestry dominant communities. The maintenance of forests in these communities is a key metric in ensuring harvest and residue removal minimises environmental impact. The land owners are incentivized to maintain ecosystem function and minimise environmental impacts to optimize stand health and maintain a steady flow of revenue from timber products. With the 2008 Farm Bill, Congress tasked the states and territories with assessing the condition of trees and forests within their boundaries, regardless of ownership, and developing strategies to: conserve working forest landscapes, protect forests from harm, and enhance public benefits from trees and forests. The resulting state Forest Action Plans—completed in 2010 and reviewed in 2015 by all 59 states and territories—offer practical and comprehensive roadmaps for investing federal, state, local, and private resources where they can be most effective in achieving national conservation goals. All states have a state forest action plan that sets outs collaborative goals for managing impacts on water quality, however many BMP's also set targets and

management strategies for harvest planning, equipment impacts, handling of dangerous goods (fuels, oils) and other strategies that ensure a collective landscape level approach is brought to forest and harvesting practices in the supply base.

https://www.stateforesters.org/forest-action-plans/

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- Assisting landowners to actively manage their land and related resources
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- Increasing the economic benefits of land (timber harvesting, for example) while conserving the natural environment

There are currently more than 25 million acres being managed under Forest Stewardship Plans.

https://www.fs.usda.gov/managing-land/private-land/forest-stewardship

Prescribed burning is included in state level BMPs.

State Forest Action Plans provide a set of Best Management Practices (BMP's) that vary by state and are tailored to the states current priorities with regard to forest management objectives. State BMP's are a tool used by the BP to demonstrate that suppliers investigate the implementation rates of the BMP's and whether any BMP's non-conformities have been issued against the supplier. The state also conducts BMP inspections to monitor the effectiveness of BMP's at achieving land management objectives.

The latest data on BMP implementation and BMP categories are as follows:

Table 1—Southeastern survey results for forestry BMP regulation, BMP manual year, implementation rate (%), and implementation year

State	State regulation	BMP manual	Implementation rate (%)	Implementation year
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Kentucky	Regulatory	2008	94	2012
Louisiana	Non-regulatory	2000	96	2012
Mississippi	Non-regulatory	2008	91	2010
North Carolina	Quasi-regulatory	2006	85	2011
Oklahoma	Non-regulatory	1991	95	2010
South Carolina	Quasi-regulatory	2012	91	2012
Tennessee	Non-regulatory	2003	84	2010
Texas	Non-regulatory	2010	95	2011
Virginia	Quasi-regulatory	2011	90	2012

Table 2—Forestry BMP implementation rate results by individual BMP categories. Minimum, maximum, average, and number of states that reported data for that specific BMP category

BMP category	Minimum (%)	Maximum (%)	Average (%)	Number of states
Timber harvest	88	99	95.0	8
Forest roads	84	99	91.3	13
Skid trails	75	100	89.7	10
Log landings	92	100	95.8	9
Stream crossings	72	98	89.2	13
SMZs	86	98	93.2	13
Wetlands	70	100	94.1	9
Reforestation	95	100	97.6	7
Mechanical site preparation	74	99	91.6	9
Chemical site preparation	93	100	98.6	8
Pesticide	98	100	99.6	5
Fertilizer	100	100	100.0	2
Prescribed burning	60	100	87.4	8
Wildfire suppression	100	100	100.0	2
Wildfire rehabilitation	100	100	100.0	1
Public lands	94	100	97.8	5

Whether they are regulatory, quasi-regulatory, or non-regulatory, BMPs are utilized in all states in the supply area and their use is effective as a tool to monitor harvesting practices including those that can cause harm to air quality. Monitoring of BMP implementation is a core function of the BMP process and implementation rates are above 90% as concluded from the audits conducted. This is a high degree of compliance and add to the effectiveness of BMP's as a mitigation measure.

Supply Base BMP Manuals can be found at the following sites:

Alabama:
http://www.forestry.alabama.gov/Pages/Management/Forms/2007_BMP_Manual.pdf
Mississippi:
https://www.mfc.ms.gov/sites/default/files/Entire_bmp_2008-7-24_2.pdf
Georgia:
https://treeordzone.files.wordpress.com/2017/04/georgias-best-management-practices-for-forestry.pdf
Louisiana:
http://www.ldaf.state.la.us/wp-content/uploads/2014/04/BMP.pdf
Florida:
https://www.fdacs.gov/ezs3download/download/25527/516407/Media/Files/Florida-Forest-Service-Files/silvicultural_bmp_manual.pdf
Texas:
https://tfsweb.tamu.edu/uploadedFiles/Sustainable/bmp/Publications/BMP%20Manual_March2014-web.pdf
South Carolina:
https://www.scforestry.org/best-management-practices.htm
North Carolina:
https://www.ncforestservice.gov/water_quality/bmp_manual.htm
Tennessee:
https://www.tn.gov/content/dam/tn/agriculture/documents/forestry/AgForBMPs.pdf
Arkansas:
https://www.uaex.edu/environment-nature/water/quality/forest-bmps.aspx
Kentucky:
https://forestry.ca.uky.edu/files/for_130_bmp_guide_small.pdf

	Missouri: https://mdc.mo.gov/sites/default/files/downloads/woody_biomass_harvesting_bmp_book.pdf Through the various collaborative forest management programs and legislation offered at the federal, state and local level with the aim at ensuring consistent management approaches at the landscape level, it is justifiable to suggest that the supply area has rigorous requirements in place to ensure that forest management practices minimize impacts to air quality. Based on the findings reviewed and presented in this indicator, there is sufficient evidence to conclude low risk for this indicator.
Means of Verification	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • State Forest Action Plans • BMP's and implementation audits
Evidence Reviewed	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • State Forest Action Plans • BMP's and implementation audits
Risk Rating	**X 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	Much of the supply base area is found in forestry dominant communities. The maintenance of forests in these communities is a key metric in ensuring harvest and residue removal minimises environmental impact. The land owners are incentivized to maintain ecosystem function and minimise environmental impacts to optimize stand health and maintain a steady flow of revenue from timber products. With the 2008 Farm Bill, Congress tasked the states and territories with assessing the condition of trees and forests within their boundaries, regardless of ownership, and developing strategies to: conserve working forest landscapes, protect forests from harm, and enhance public benefits from trees and forests. The resulting state Forest Action Plans—completed in 2010 and reviewed in 2015 by all 59 states and territories—offer practical and comprehensive roadmaps for investing federal, state, local, and private resources where they can be most effective in achieving national conservation goals. All states have a state forest action plan that sets outs collaborative goals for managing impacts on water quality, however many BMP's also set targets and management strategies for harvest planning, equipment impacts, handling of dangerous

goods (fuels, oils) and other strategies that ensure a collective landscape level approach is brought to forest and harvesting practices in the supply base.

https://www.stateforesters.org/forest-action-plans/

The Forest Stewardship Program (FSP) provides assistance to owners of forest land where good stewardship, including agroforestry practices, will enhance and sustain multiple forest resources and contribute to healthy and resilient landscapes. The program also helps create jobs in rural communities by sustaining local markets for forest products and increasing demand for qualified private forestry consultants and state field foresters.

The Forest Stewardship Program focuses on three main areas:

- Assisting landowners to actively manage their land and related resources
- Keeping land in a productive and healthy condition for present and future owners
- Increasing the economic benefits of land (timber harvesting, for example) while conserving the natural environment

There are currently more than 25 million acres being managed under Forest Stewardship Plans.

https://www.fs.usda.gov/managing-land/private-land/forest-stewardship

State BMP Manuals address the application of chemicals and prescribe best practices to avoid water quality impacts.

State Forest Action Plans provide a set of Best Management Practices (BMP's) that vary by state and are tailored to the states current priorities with regard to forest management objectives. State BMP's are a tool used by the BP to demonstrate that suppliers investigate the implementation rates of the BMP's and whether any BMP's non-conformities have been issued against the supplier. The state also conducts BMP inspections to monitor the effectiveness of BMP's at achieving land management objectives.

The latest data on BMP implementation and BMP categories are as follows:

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Tennessee	Non-regulatory	2003	84	2010
Texas	Non-regulatory	2010	95	2011
Virginia	Quasi-regulatory	2011	90	2012

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Prescribed burning	60	100	87.4	8
Wildfire suppression	100	100	100.0	2
Wildfire rehabilitation	100	100	100.0	1
Public lands	94	100	97.8	5

Whether they are regulatory, quasi-regulatory, or non-regulatory, BMPs are utilized in all states in the supply area and their use is effective as a tool to monitor harvesting practices including the application of herbicides, pesticides and historical insect/disease management plans. Monitoring of BMP implementation is a core function of the BMP process and implementation rates are above 90% as concluded from the audits conducted. This is a high degree of compliance and add to the effectiveness of BMP's as a mitigation measure.

Supply Base BMP Manuals can be found at the following sites:

Alabama:
http://www.forestry.alabama.gov/Pages/Management/Forms/2007_BMP_Manual.pdf
Mississippi:
https://www.mfc.ms.gov/sites/default/files/Entire_bmp_2008-7-24_2.pdf
Georgia:
https://treeordzone.files.wordpress.com/2017/04/georgias-best-management-practices-for-forestry.pdf
Louisiana:
http://www.ldaf.state.la.us/wp-content/uploads/2014/04/BMP.pdf
Florida:
https://www.fdacs.gov/ezs3download/download/25527/516407/Media/Files/Florida-Forest-Service-Files/silvicultural_bmp_manual.pdf
Texas:
https://tfsweb.tamu.edu/uploadedFiles/Sustainable/bmp/Publications/BMP%20Manual_March2014-web.pdf
South Carolina:
https://www.scforestry.org/best-management-practices.htm
North Carolina:
https://www.ncforestservice.gov/water_quality/bmp_manual.htm
Tennessee:
https://www.tn.gov/content/dam/tn/agriculture/documents/forestry/AgForBMPs.pdf
Arkansas:
https://www.uaex.edu/environment-nature/water/quality/forest-bmps.aspx
Kentucky:

	https://forestry.ca.uky.edu/files/for_130_bmp_guide_small.pdf Missouri: https://mdc.mo.gov/sites/default/files/downloads/woody_biomass_harvesting_bmp_book.pdf Through the various collaborative forest management programs and legislation offered at the federal, state and local level with the aim at ensuring consistent management approaches at the landscape level, it is justifiable to suggest that the supply area has rigorous requirements in place to ensure that forest management practices minimize impacts to air quality. Based on the findings reviewed and presented in this indicator, there is sufficient evidence to conclude low risk for this indicator
Means of Verification	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • State Forest Action Plans • BMP's and implementation audits
Evidence Reviewed	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • State Forest Action Plans • BMP's and implementation audits
Risk Rating	**X 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	Much of the supply base area is found in forestry dominant communities. The maintenance of forests in these communities is a key metric in ensuring harvest and residue removal minimises environmental impact. The land owners are incentivized to maintain ecosystem function and minimise environmental impacts to optimize stand health and maintain a steady flow of revenue from timber products. With the 2008 Farm Bill, Congress tasked the states and territories with assessing the condition of trees and forests within their boundaries, regardless of ownership, and developing strategies to: conserve working forest landscapes, protect forests from harm, and enhance public benefits from trees and forests. The resulting state Forest Action Plans—completed in 2010 and reviewed in 2015 by all 59 states and territories—offer practical and comprehensive roadmaps for investing federal, state, local, and private resources where they can be most effective in achieving national conservation goals. All states have a state forest action plan that sets outs collaborative goals for managing impacts on water quality, however many BMP's also set targets and management strategies for harvest planning, equipment impacts, handling of dangerous goods (fuels, oils) and other strategies that ensure a collective landscape level approach is brought to forest and harvesting practices in the supply base.

https://www.stateforesters.org/forest-action-plans/

The Forest Stewardship Program (FSP) provides assistance to owners of forest land where good stewardship, including agroforestry practices, will enhance and sustain multiple forest resources and contribute to healthy and resilient landscapes. The program also helps create jobs in rural communities by sustaining local markets for forest products and increasing demand for qualified private forestry consultants and state field foresters.

The Forest Stewardship Program focuses on three main areas:

- Assisting landowners to actively manage their land and related resources
- Keeping land in a productive and healthy condition for present and future owners
- Increasing the economic benefits of land (timber harvesting, for example) while conserving the natural environment

There are currently more than 25 million acres being managed under Forest Stewardship Plans.

https://www.fs.usda.gov/managing-land/private-land/forest-stewardship

State Forest Action Plans provide a set of Best Management Practices (BMP's) that vary by state and are tailored to the states current priorities with regard to forest management objectives. State BMP's are a tool used by the BP to demonstrate that suppliers investigate the implementation rates of the BMP's and whether any BMP's non-conformities have been issued against the supplier. The state also conducts BMP inspections to monitor the effectiveness of BMP's at achieving land management objectives.

The latest data on BMP implementation and BMP categories are as follows:

Table 1—Southeastern survey results for forestry BMP regulation, BMP manual year, implementation rate (%), and implementation year

State	State regulation	BMP manual	Implementation rate (%)	Implementation year
Alabama	Quasi-regulatory	2007	97	2010
Arkansas	Non-regulatory	2002	87	2011
Florida	Quasi-regulatory	2008	99	2011
Georgia	Non-regulatory	2009	97	2011
Kentucky	Regulatory	2008	94	2012
Louisiana	Non-regulatory	2000	96	2012
Mississippi	Non-regulatory	2008	91	2010
North Carolina	Quasi-regulatory	2006	85	2011
Oklahoma	Non-regulatory	1991	95	2010
South Carolina	Quasi-regulatory	2012	91	2012
Tennessee	Non-regulatory	2003	84	2010
Texas	Non-regulatory	2010	95	2011
Virginia	Quasi-regulatory	2011	90	2012

Table 2—Forestry BMP implementation rate results by individual BMP categories. Minimum, maximum, average, and number of states that reported data for that specific BMP category

BMP category	Minimum (%)	Maximum (%)	Average (%)	Number of states
Timber harvest	88	99	95.0	8
Forest roads	84	99	91.3	13
Skid trails	75	100	89.7	10
Log landings	92	100	95.8	9
Stream crossings	72	98	89.2	13
SMZs	86	98	93.2	13
Wetlands	70	100	94.1	9
Reforestation	95	100	97.6	7
Mechanical site preparation	74	99	91.6	9
Chemical site preparation	93	100	98.6	8
Pesticide	98	100	99.6	5
Fertilizer	100	100	100.0	2
Prescribed burning	60	100	87.4	8
Wildfire suppression	100	100	100.0	2
Wildfire rehabilitation	100	100	100.0	1
Public lands	94	100	97.8	5

Whether they are regulatory, quasi-regulatory, or non-regulatory, BMPs are utilized in all states in the supply area and their use is effective as a tool to monitor harvesting practices including waste disposal methods and spill prevention practices. Monitoring of BMP implementation is a core function of the BMP process and implementation rates are above 90% as concluded from the audits conducted. This is a high degree of compliance and add to the effectiveness of BMP's as a mitigation measure.

Supply Base BMP Manuals can be found at the following sites:

Alabama:
http://www.forestry.alabama.gov/Pages/Management/Forms/2007_BMP_Manual.pdf
Mississippi:
https://www.mfc.ms.gov/sites/default/files/Entire_bmp_2008-7-24_2.pdf
Georgia:
https://treeordzone.files.wordpress.com/2017/04/georgias-best-management-practices-for-forestry.pdf
Louisiana:
http://www.ldaf.state.la.us/wp-content/uploads/2014/04/BMP.pdf
Florida:
https://www.fdacs.gov/ezs3download/download/25527/516407/Media/Files/Florida-Forest-Service-Files/silvicultural_bmp_manual.pdf
Texas:
https://tfsweb.tamu.edu/uploadedFiles/Sustainable/bmp/Publications/BMP%20Manual_March2014-web.pdf
South Carolina:
https://www.scforestry.org/best-management-practices.htm
North Carolina:
https://www.ncforestservice.gov/water_quality/bmp_manual.htm
Tennessee:
https://www.tn.gov/content/dam/tn/agriculture/documents/forestry/AgForBMPs.pdf
Arkansas:
https://www.uaex.edu/environment-nature/water/quality/forest-bmps.aspx
Kentucky:
https://forestry.ca.uky.edu/files/for_130_bmp_guide_small.pdf
Missouri:

	https://mdc.mo.gov/sites/default/files/downloads/woody_biomass_harvesting_bmp_book.pdf Through the various collaborative forest management programs offered at the federal, state and local level with the aim at ensuring consistent management approaches at the landscape level, it is justifiable to suggest that the supply area has rigorous requirements in place to ensure that forest management practices including waste disposal and spill prevention practices. Based on the findings reviewed and presented in this indicator, there is there is sufficient evidence to conclude low risk for this indicator.
Means of Verification	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • State Forest Action Plans • BMP's and implementation audits
Evidence Reviewed	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • State Forest Action Plans • BMP's and implementation audits
Risk Rating	**X 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	**For all sources purchased by the BP:** The BP's procurement of wood material contributes to reducing environmental impacts and enhancing the productivity of forests. Markets for low valued wood products allow for more efficient site preparation and reforestation. It is important to note that all material used by the BP does not contribute to increased harvest levels. The BP mainly utilizes secondary feedstocks from sawmills where that feedstock is driven by primary harvesting. In cases of roundwood, the BP would only utilize thinnnings if pulp markets are not available for those sorts, and tree tops, limbs, branches of roadside residuals are other sources of primary feedstock. The BP does monitor the Growth to Drain ratio in states that form the supply area. In all cases the ration remains above one (1) meaning there is more growth occurring than harvesting. This shows that forests continue to contribute positively to carbon stocks and areas are being maintained as forests in the supply base. The following table is data from the forest inventory database that covers forest inventory modelling for the entire US included sub-states.

USFS FIA Data

>/= 5" DBH Live Trees on Forest Land

State	Counties	Growth	Removals	Ratio
AL	All	2,032,471,887	1,271,811,772	1.60
MS	All	1,909,683,921	989,836,420	1.93
MO	All	355,718,558	177,436,208	2.00
AR	All	1,149,891,055	693,963,866	1.66
TX	East	614,416,741	571,933,909	1.07
LA	All	1,053,292,023	733,217,158	1.44
TN	All	701,261,293	408,679,751	1.72
NC	All	1,650,715,959	898,868,563	1.84
SC	All	1,306,833,899	868,192,671	1.51
GA	All	1,988,906,880	1,374,740,587	1.45
FL	All	962,501,033	532,990,909	1.81
Total		13,725,693,249	8,521,671,814	1.61

https://public.tableau.com/views/FIA_OneClick_V1_2/StateSelection?:showVizHome=no

Means of Verification	• Maps • FIA growth-to-drain data • Company procedures • State Forest Action Plans
Evidence Reviewed	• Maps • FIA growth-to-drain data • Company procedures • State Forest Action Plans
Risk Rating	**X 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	The BP conducts at minimum annual internal training for all staff responsible for carrying out relevant procedures. The training is designed to educate employees about the SBP system and how it functions. Internal Training records are maintained through an automated system that ensures delivery of the training to relevant personnel in a timely manner. FSC, SFI, PEFC and ATFS all require training as part of the certifications management system. Certified feedstock remains a significant portion of total feedstock deliveries and is relevant for training and awareness of SBP and other certification systems.

State forest action plans are another means that ensure local contractors remain up to date on priorities and strategies that maintain best management practices. BMP's are prevalent in the supply base and change over time. BMP implementation audits ensure that loggers and contractors are up to date on BMP's and are reflected in their forest practices.

The latest data on BMP implementation and BMP categories are as follows:

Table 1—Southeastern survey results for forestry BMP regulation, BMP manual year, implementation rate (%), and implementation year

State	State regulation	BMP manual	Implementation rate (%)	Implementation year
Alabama	Quasi-regulatory	2007	97	2010
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Kentucky	Regulatory	2008	94	2012
Louisiana	Non-regulatory	2000	96	2012
Mississippi	Non-regulatory	2008	91	2010
North Carolina	Quasi-regulatory	2006	85	2011
Oklahoma	Non-regulatory	1991	95	2010
South Carolina	Quasi-regulatory	2012	91	2012
Tennessee	Non-regulatory	2003	84	2010
Texas	Non-regulatory	2010	95	2011
Virginia	Quasi-regulatory	2011	90	2012

Table 2—Forestry BMP implementation rate results by individual BMP categories. Minimum, maximum, average, and number of states that reported data for that specific BMP category

BMP category	Minimum (%)	Maximum (%)	Average (%)	Number of states
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Stream crossings	72	98	89.2	13
SMZs	86	98	93.2	13
Wetlands	70	100	94.1	9
Reforestation	95	100	97.6	7
Mechanical site preparation	74	99	91.6	9
Chemical site preparation	93	100	98.6	8
Pesticide	98	100	99.6	5
Fertilizer	100	100	100.0	2
Prescribed burning	60	100	87.4	8
Wildfire suppression	100	100	100.0	2
Wildfire rehabilitation	100	100	100.0	1
Public lands	94	100	97.8	5

Whether they are regulatory, quasi-regulatory, or non-regulatory, BMPs are utilized in all states in the supply area and their use is effective as a tool to monitor harvesting practices including effective training for contractors and logging personnel. Monitoring of BMP implementation is a core function of the BMP process and implementation rates are above 90% as concluded from the audits conducted. This is a high degree of compliance and add to the effectiveness of BMP's as a mitigation measure.

	Based on the findings reviewed and presented in this indicator and the training procedures implemented by the BP, there is there is sufficient evidence to conclude low risk for this indicator.
Means of Verification	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • State Forest Action Plans • BMP's and implementation
Evidence Reviewed	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • State Forest Action Plans • BMP's and implementation
Risk Rating	**X 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	Harvesting of low valued biomass fuel makes a significant contribution to employment for logging, silviculture, forest management and landowners. Local harvesting contractors are utilized by the primary harvesting industry and the sector is strong in the supply base area. Improved utilization of low grade and waste streams increases the incremental gain on forest resources that would otherwise receive no value for the biomass volume utilized by the BP. The biomass industry fits into the larger forest industry as a means to increase utilization while maintaining the same level final harvest in the supply base. Many in the industry view biomass utilization as a means to recoup sunk costs that go toward further the profitability and success of the local workforce. The economic contribution of forestry to Southeast U.S. economy is substantial: The following table shows the economic impact of forestry-related businesses by state and region as published by Forest2Market in a report commissioned by NAFO in 2014.

Geographic Area	Timberland Acres	Total (DII) Employment	Total (DII) Payroll	Value of Timber Sales & Mfg. Shipments	Paper, Wood & Furniture Mfg. Contribution to GDP	Share of Mfg. GDP
Alabama	22,810,247	97,652	$3,512,515,063	$14,412,766,963	$4,090,000,000	12.0%
Arkansas	18,441,183	62,830	$2,421,920,237	$8,843,333,644	$2,665,000,000	16.2%
Florida	15,356,654	93,934	$3,413,198,484	$8,970,879,959	$2,792,000,000	7.0%
Georgia	24,164,204	163,926	$6,924,915,882	$18,667,071,023	$5,559,000,000	10.9%
Louisiana	14,679,603	50,560	$2,024,370,459	$8,109,382,539	$2,324,000,000	4.5%
Mississippi	19,284,936	43,340	$1,612,921,224	$8,403,860,539	$2,245,000,000	14.7%
Missouri	14,909,631	80,363	$2,456,156,861	$7,127,124,635	$1,848,000,000	5.3%
North Carolina	17,887,864	158,876	$6,137,983,821	$18,655,032,606	$4,950,000,000	5.3%
Oklahoma	7,282,172	23,780	$1,020,375,897	$3,584,027,016	$913,000,000	5.4%
South Carolina	12,876,009	76,579	$3,003,839,242	$11,778,815,770	$3,726,000,000	12.6%
Tennessee	13,407,151	101,707	$4,496,652,093	$9,640,476,958	$3,905,000,000	8.3%
Texas	14,128,995	182,679	$7,383,054,332	$16,332,376,392	$4,610,000,000	2.0%
Virginia	15,308,778	85,705	$3,330,444,530	$8,920,413,822	$2,751,000,000	6.6%
South	210,537,427	1,221,931	$47,738,348,126	$143,445,561,867	$42,378,000,000	6.0%
Kentucky	12,260,840	63,284	$2,500,202,504	$8,144,565,993	$1,901,000,000	5.4%
Maryland	2,199,414	24,020	$1,047,472,532	$2,599,111,324	$613,000,000	3.3%
Ohio	7,813,832	128,314	$5,442,112,950	$12,339,339,839	$3,268,000,000	3.4%
Pennsylvania	16,410,736	162,154	$7,227,886,638	$19,703,922,837	$5,813,000,000	7.5%
West Virginia	11,820,188	19,234	$736,640,071	$1,427,754,405	$475,000,000	6.5%
Appalachia	50,505,010	397,006	$16,954,314,696	$44,214,694,398	$12,070,000,000	5.2%
Maine	17,027,849	31,878	$1,177,793,840	$5,442,806,614	$1,171,000,000	22.9%
New Hampshire	4,498,435	11,276	$507,668,540	$886,651,104	$264,000,000	3.4%
New York	15,778,522	92,514	$4,240,469,304	$10,359,334,388	$3,095,000,000	4.5%
Vermont	4,282,010	9,984	$384,023,331	$623,275,786	$276,000,000	9.7%
Northeast	41,586,816	145,652	$6,309,955,016	$17,312,067,891	$4,806,000,000	5.7%
California	16,616,065	185,600	$8,318,324,984	$21,019,874,229	$6,262,000,000	2.6%
Idaho	16,414,590	27,652	$1,055,224,249	$3,125,991,931	$659,000,000	8.7%
Montana	19,803,699	11,192	$451,371,903	$969,668,443	$294,000,000	9.4%
Oregon	23,672,384	95,405	$3,811,341,419	$12,125,266,925	$3,045,000,000	5.8%
Washington	17,824,653	89,867	$4,253,640,350	$10,452,218,713	$3,035,000,000	5.4%
Northwest	94,331,391	409,716	$17,889,902,905	$47,693,020,241	$13,295,000,000	3.7%
Illinois	4,587,823	118,551	$5,523,426,145	$10,813,252,584	$3,472,000,000	3.6%
Indiana	4,716,192	95,149	$3,853,130,996	$10,954,862,082	$3,047,000,000	3.4%
Michigan	19,356,131	95,522	$3,841,114,608	$14,906,175,801	$4,667,000,000	5.4%
Minnesota	15,650,872	77,225	$3,315,498,845	$9,291,835,823	$2,969,000,000	7.0%
Wisconsin	16,577,660	168,032	$7,224,628,323	$21,890,989,043	$6,069,000,000	11.3%
Midwest	60,888,678	554,479	$23,757,798,918	$67,857,115,333	$20,224,000,000	5.5%
National	457,849,322	2,728,784	$112,650,319,660	$320,522,459,731	$92,773,000,000	5.3%

The economic contribution from forestry activities to state economies can also be found at the state forestry websites:

The BP's mill is located in a rural location in Alabama where forestry is the dominant employment industry. The BP hire local workforce that contribute to the safe production of biomass.

Means of Verification	• Company Procedures • Employment Records • Forest2Market Data • Supplier Interviews
Evidence Reviewed	• Company Procedures • Employment Records • Forest2Market Data • Supplier Interviews
Risk Rating	**X 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 findings use data from the FSC NRA to draw conclusions on the ability for the supply base area to effectively ensure that forest ecosystem health and vitality is maintained or improved. There is significant overlap with Indicator 2.1.2 (HCV's) as ecosystem health and vitality is a function of maintaining not only the FSC HCV definitions but the various other sources for HCV's used by the BP, detailed in indicator 2.1.1. In addition, maintaining water quality, soil quality, air quality and biodiversity also overlap with health and vitality of forest ecosystems. Where gaps exist, the BP has developed procedures in line with the recommended mitigation measures provided in the FSC NRA to ensure the intent of the indicator is appropriately managed in the supply base. *Protective Designations* FSC US used the Protected Areas Database of the United States (PAD-US) to assess whether or not land was under protection for Category 3 HCVs. This database is the official inventory of protected areas in the United States, published by the U.S. Geological Survey Gap Analysis Program (GAP). The database compiles public parks, designated areas, conservation easements, and Marine Protected Areas, and is continuously updated. The database includes conservation rankings for both GAP Status Codes 1-4 and International Union for the Conservation of Nature (IUCN) categories. As is common practice, the following assessment considers an area as permanently protected if it has a GAP Status of 1 or 2: • Status 1: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management. Example: Federal Wilderness Area • Status 2: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance. Examples: National Park, National Wildlife Refuge, National Natural Landmark The protective designations in the US are generally viewed as effective at identifying areas with high conservation values. There have been few studies on the effectiveness of the protected areas at achieving HCV protections. The majority of forest in the supply area are privately owned. Therefore, there are a number of unknowns in determining how HCV's are managed collectively across the supply area. Many of the HCV's identified in Indicator (2.1.1) are outside of federal or state protected areas. The following sites/areas/ranges are located in the supply area and are identified by FSC NRA as Specified Risk prior to implementation of any mitigation measures. **Mesophytic Cove Sites** Applicable to Mississippi, Alabama, Tennessee, Georgia, South Carolina, and North Carolina. Mesophytic cove sites are diverse, closed-canopy hardwood forests occurring on mesic, sheltered sites (coves). These sites provide habitat for rare animal species with limited ranges like the cerulean warbler and crevice salamander. The major threat to mesophytic coves is conversion to non-forest uses or other forest types (e.g. white pine). **Central Appalachians Critical Biodiversity Area** Applicable to Tennessee and North Carolina. Central Appalachians landscape is home to important plant and animal species, it purifies drinking water for millions of Americans, and filters air for the people that live around the HCV Area. The forests, wild rivers and mountains support natural diversity that few temperate places on Earth can rival. The issues that threaten this the most are energy development, urban sprawl, invasive

species, and climate change. The Central Appalachians are home to abundant energy resources including coal, natural gas, wind and other renewables. The US Forest Service is the single largest forest manager in the Central Appalachians; and state lands make up large portions of high priority areas. The Nature Conservancy is working in partnership with state and federal entities to restore America's forests across the region and protect these open spaces for future generations. The Nature Conservancy is focusing its efforts on policy initiatives that will reduce the spread of invasive species.

Ouachita River Valley Critical Biodiversity Area
Applicable to Arkansas. The Ouachita River headwater is a hot spot for biodiversity. Poorly implemented BMP's and Forest Management Practices could jeopardize the integrity of the biodiversity.

Cape Fear Arch Critical Biodiversity Area
Applicable to North Carolina and South Carolina. The Cape Fear Arch is a region of particularly high biological diversity and supports nationally significant occurrences of animal and plant communities. the Arch is recognized as having the greatest biological diversity along the Atlantic Coast north of Florida. Red-cockaded woodpeckers are known to utilize the arch and nest in cavities of living pine trees. They are dependent on pine woodlands and savannas that have pine trees large enough to provide nesting habitat. They require mature open woodlands usually greater than 60 years old, with abundant herbaceous ground cover. Native Longleaf Pine Savannas, once one of the most widespread forest types in the US, has been reduced to 3% of its original range. Associated with particularly high animal and plant diversity, including RTE species, longleaf pine savanna is responsible in part for the high biodiversity associated with Central Alabama, Florida Panhandle, and Cape Fear Arch critical biodiversity areas. Longleaf pine savanna is also directly associated with the Red Cockaded Woodpecker and Gopher Tortoise species. "Native" in this instance refers to longleaf pine stands that have been restored in areas that have not been historically maintained in longleaf pine. Stands such as this do not apply under this section. Native does not imply a particular regeneration method; these stands may be either planted or naturally regenerated. Biodiversity values are driven in part by the understory plant community. Biodiversity values are potentially harmed via conversion of longleaf to other pine types, and the use of herbicides or other management techniques that inhibit native understory communities.

Southern Appalachians Critical Biodiversity Area
Applicable to Alabama, Tennessee, and Georgia. Fish, mussels, snails, crayfish, and amphibians are abundant in this area. The Cahaba River Watershed is one of the focal points of the area. Sedimentation from forestry is a threat to biodiversity in this area.

- **Cahaba River Watershed**: Biodiversity areas in the southern Appalachians are largely driven by exceptional aquatic biodiversity. The Cahaba River Watershed is the center of the biodiversity hotspot, which includes, fish, mussels, snails, crayfish, and amphibians. The biodiversity area includes other smaller watercourses as well. This biodiversity is potentially threatened by sedimentation from roads. When operating near the Cahaba River Watershed logging crews are advised to use extra caution when constructing logging roads, loading areas and skid trails, and operating near stream side management zones.

- **Bibb County Glades**: (i.e. rock outcrops), exposed limestone glades, and sandstone glades in Central Alabama have high density of rare plants. Loggers are required to use extra caution when constructing logging roads, loading areas and skid trails, and loading areas. These biodiversity areas are potentially harmed by logging and other management activities that may not recognize the value associated with these glades. A rock outcrop may look like an easy area to set up a skid trail or loading area because there are no trees in this area, but it could be a glade with rare, threatened, and endangered species living within it.

- **Montane Longleaf Pine:** This habitat occurs in steep rolling topography, historically maintained by fire, mostly outside of, or on the edge of the Coastal Plain. Biodiversity values are driven in part by the understory plant community.

Biodiversity values are potentially harmed via conversion of longleaf to other pine types, and the use of herbicides or other management techniques that inhibit native understory communities.

Patch-nosed Salamander Range
Applicable to Georgia and South Carolina. This species is endemic to the US and is its second-smallest salamander. It is protected under federal law and it is illegal to disturb its habitat. This species can be found in small streams associated with steep-walled ravines (C. Camp pers. comm. January 2011), either within or along the banks of the non-flooded part of the streambed (Camp *et al.* 2009). Individuals were found under rocks and in loose leaf litter; however, it is thought that they might occupy more terrestrial microhabitats under suitably moist conditions. The clutch size appears to vary between 6-14 eggs (Camp *et al.* 2009), and the species has a multi-year aquatic larval development (C. Camp pers. comm. January 2011).

Dusky Gopher Frog Range
Applicable to Mississippi. Also known as the Mississippi Gopher Frog, this species is one of the top 100 most endangered species and is protected under federal law and it is illegal to disturb its habitat. By 2003 it was only known from Glen's Pond in Desoto National Forest in Harrison County, Mississippi (USFWS 2000h; Young and Crother 2001). However, very recently individuals have been seen at two other sites: one calling male was seen at McCoy's Pond 50 miles east of Glen's Pond, and 50 tadpoles were collected from Mike's Pond, 20 miles west of Glen's Pond (Zippel 2005). The range has been significantly reduced as a result of habitat destruction, fragmentation, and modification. Pre-settlement longleaf pine forests were the dominant forest type of the south-eastern coastal plain. Through the Long Leaf Alliance initiative to reestablish Longleaf pine stands, habitat loss is decreased and Long leaf pine forested acres is on the rise. A majority of the habitat is in the Desoto National Forest which protects the habitat of the frog.

Cheoah Bald Salamander Range
Applicable to North Carolina. This species only occurs in high elevations on a single mountain in North Carolina. Clear cutting strongly depletes local populations of other members of the *Plethodon jordani* complex (Petranka, Eldridge and Haley 1993); the time required for recovery is debatable, but is at least a few decades (Ash 1997; Petranka 1999; Ash and Pollock 1999). Conservation actions taken to protect this species help mitigate risk to its habitat. Part of the range of this species is within the Nantahala Game Lands, which offer some measure of protection because the forest is typically left intact. There is also an effort to declare much of the range as Wilderness, which, if successful, would further protect the species. The species does not appear on any state or federal list of endangered species and education and conservation efforts have kept the population of this Salamander in a stable condition according to the IUCN.

Areas for Specified Risk for Conversion
Applicable to Texas, Louisiana, Mississippi, Alabama, Florida, Georgia, South Carolina, and North Carolina. Urbanization, not forests, is the single biggest threat to forests. Furthermore, healthy demand for forest products mitigates forest loss. (Historical Perspective on the Demand and Relationship between Demand and Forest Productivity in the US South. Forest2Market. July 26, 2017).

Native Longleaf Pine Systems
Applicable to Texas, Louisiana, Mississippi, Alabama, Georgia, Florida, South Carolina, and North Carolina. This species is far less common than it once was, and efforts are underway to promote longleaf pine coverage in its native habitat. The intent of listing species to the Red List is not to promote prohibition of their use but rather to heighten priority setting for conservation of the species' (IUCN Standards and Petitions Subcommittee. 2014. Guidelines for Using the IUCN Red List Categories and Criteria. Version 11. Prepared by the Standards and Petitions Subcommittee.)

Late Successional Bottomland Hardwood Areas
Applicable to Texas, Louisiana, Missouri, Mississippi, Alabama, Georgia, Florida, South Carolina, and North Carolina. Stand conditions of late successional bottomland

	hardwoods are extremely diverse and variable, and can be affected by minor changes in hydrology. Woody species diversity is comparable to the most diverse upland forests in the US. Several species groupings are considered bottomland hardwoods including mixed hardwoods and cypress-tupelo. Much of the original bottomland hardwood in the US has been cleared for agriculture, particularly so in the Mississippi valley. Late successional in this instance refers to bottomland hardwoods that are at least 80 years old and have the complex structural characteristics and species composition associated with late successional stands. **Florida Panhandle Critical Biodiversity Area** Applicable to Florida. This area includes Longleaf Pine habitats, Steephead Ravines, and the Apalachicola Bay & River System. • ***Longleaf Pine*****:** In addition to being a threatened species, Longleaf Pine provides optimal habitat for a number of species including the Gopher Tortoise which is protected by the Forestry Wildlife Best Management Practices for State Imperiled Species and the Red-Cockaded Woodpecker which is protected under the U.S. Endangered Species Act. Longleaf Pine Systems, are described in more detail above. This ecosystem is only a portion of its original range due to urbanization and the withholding of fire from the area. Further loss of this habitat could harm the species which depend on this ecosystem. • ***Steephead Ravines***: Unique to Florida, this area is home to a disproportionate number of imperiled species. This area includes the 6,000 acre Apalachicola Bluffs and Ravines Preserve which is considered to be one of the rarest habitats and is protected by the Nature Conservancy. BMPs are the primary source of protection and because of the extreme slope of the ravines SMZs are typically measured from the break rather than the edge of the ravines and harvesting in these areas is impractical. • ***Apalachicola Bay/River System***: Reptiles, amphibians and mussels are typical of the species found in this area. Sedimentation from forest activities is a potential threat and is mitigated through implementation of BMPs **Central Florida Critical Biodiversity Area** Applicable to Florida. Central Florida is a biodiversity hotspot and has suffered a great loss of habitat. This habitat can be mainly attributed to the highest rate of human population growth within the Southern coastal plain. The Florida Forever conservation fund focuses on the conservation of habitat in Central Florida. Urban Sprawl is the greatest contributor to habitat loss. State forest action plans are another means that ensure local contractors remain up to date on priorities and strategies that maintain best management practices. BMP's are prevalent in the supply base and change over time. BMP implementation audits ensure that loggers and contractors are up to date on BMP's and are reflected in their forest practices. The latest data on BMP implementation and BMP categories are as follows:

Table 1—Southeastern survey results for forestry BMP regulation, BMP manual year, implementation rate (%), and implementation year

State	State regulation	BMP manual	Implementation rate (%)	Implementation year
Alabama	Quasi-regulatory	2007	97	2010
Arkansas	Non-regulatory	2002	87	2011
Florida	Quasi-regulatory	2008	99	2011
Georgia	Non-regulatory	2009	97	2011
Kentucky	Regulatory	2008	94	2012
Louisiana	Non-regulatory	2000	96	2012
Mississippi	Non-regulatory	2008	91	2010
North Carolina	Quasi-regulatory	2006	85	2011
Oklahoma	Non-regulatory	1991	95	2010
South Carolina	Quasi-regulatory	2012	91	2012
Tennessee	Non-regulatory	2003	84	2010
Texas	Non-regulatory	2010	95	2011
Virginia	Quasi-regulatory	2011	90	2012

Table 2—Forestry BMP implementation rate results by individual BMP categories. Minimum, maximum, average, and number of states that reported data for that specific BMP category

BMP category	Minimum (%)	Maximum (%)	Average (%)	Number of states
Timber harvest	88	99	95.0	8
Forest roads	84	99	91.3	13
Skid trails	75	100	89.7	10
Log landings	92	100	95.8	9
Stream crossings	72	98	89.2	13
SMZs	86	98	93.2	13
Wetlands	70	100	94.1	9
Reforestation	95	100	97.6	7
Mechanical site preparation	74	99	91.6	9
Chemical site preparation	93	100	98.6	8
Pesticide	98	100	99.6	5
Fertilizer	100	100	100.0	2
Prescribed burning	60	100	87.4	8
Wildfire suppression	100	100	100.0	2
Wildfire rehabilitation	100	100	100.0	1
Public lands	94	100	97.8	5

Whether they are regulatory, quasi-regulatory, or non-regulatory, BMPs are utilized in all states in the supply area and their use is effective as a tool to monitor harvesting practices including effective training for contractors and logging personnel. Monitoring of BMP implementation is a core function of the BMP process and implementation rates are above 90% as concluded from the audits conducted.

Due to the lack of a collective management plan addressing the aforementioned HCV's areas outside of protected areas, and the correlation between HCV's and ecosystem health and vitality, it is justifiable that the indicator receive a specified risk designation.

The BP has implemented mitigation measures to ensure key ecosystems and habitat are appropriately conserved for the supply area. The mitigation measures are detailed below in the mitigation measures section.

Means of Verification	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • Supplier HCV information packages
Evidence Reviewed	• Supplier Questionnaires • Maps • FSC NRA • Company procedures • Supplier HCV information packages
Risk Rating	☐ **Low Risk** **X Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	The BP implements a supplier mapping and communication program to monitor the activities of its suppliers across the supply area. The supplier mapping and communication program is applicable to secondary feedstocks as primary feedstocks are tracked by location prior to purchasing. The BP collects the following information using the secondary supplier questionnaire: • General supplier information including location of mill • Certification status • How they collect and track their timber procurement activities – scale tickets, severance taxes • BMP monitoring of procurement activities • BMP violations in the review period • Awareness of land conversion in their sourcing area • Awareness of HCV's in their sourcing area • General procurement practices – timber types, species, quality • Complete counties where timber was sourced for the review period The BP uses this information, particularly the county list, it collects from suppliers to determine the extent of the supply base area. If the supply base area exceeds the previous years area, the BP will include the new area during the next assessment period. The BP checks for overlaps with HCV areas to determine where there is overlap. A detailed package is compiled for each supplier to inform them of the findings. The educational packages provided to each supplier allows them to make better informed procurement decisions. Through sharing of this data, the information becomes more widely known to all actors in the supply chain, effectively increasing the awareness of sensitive areas in the supply base and the threats that pose risks to these sensitive areas. Over time, the BP can use the information received from its suppliers to develop a risk matrix to determine if any suppliers or sourcing areas require additional mitigations or interventions. The information provided by the secondary suppliers are reviewed annually and verified by third party auditors to ensure they are complete and correct. The annual information collection and verification exercise reviews the mitigations effectiveness. Any deficiencies are uncovered and new methodologies are developed to close any uncovered gaps. This system is robust, replicable, reviewed annually and revised if necessary. It requires concerted effort by both the BP and its suppliers and will strengthen over time. In conclusion, the mitigation measure is effective at identifying where all feedstock is sourced back to the concession of harvest. It is also effective at identifying which suppliers are at risk of non-compliance with an HCV area management strategy. The mitigation process identifies which forest management practices are effective at addressing the HCV concern and is communicated to the suppliers. The information provided by the supplier is verified for correctness and completeness during annual review audits.

	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	Much of the supply base area is found in forestry dominant communities. The maintenance of forests in these communities is a key metric in ensuring harvest and residue removal minimises environmental impact. The land owners are incentivized to maintain ecosystem function and minimise environmental impacts to optimize stand health and maintain a steady flow of revenue from timber products. With the 2008 Farm Bill, Congress tasked the states and territories with assessing the condition of trees and forests within their boundaries, regardless of ownership, and developing strategies to: conserve working forest landscapes, protect forests from harm, and enhance public benefits from trees and forests. The resulting state Forest Action Plans—completed in 2010 and reviewed in 2015 by all 59 states and territories—offer practical and comprehensive roadmaps for investing federal, state, local, and private resources where they can be most effective in achieving national conservation goals. All states have a state forest action plan that sets outs collaborative goals for managing impacts on water quality, however many BMP's also set targets and management strategies for harvest planning, equipment impacts, handling of dangerous goods (fuels, oils) and other strategies that ensure a collective landscape level approach is brought to forest and harvesting practices in the supply base. https://www.stateforesters.org/forest-action-plans/ The Forest Stewardship Program (FSP) provides assistance to owners of forest land where good stewardship, including agroforestry practices, will enhance and sustain multiple forest resources and contribute to healthy and resilient landscapes. The program also helps create jobs in rural communities by sustaining local markets for forest products and increasing demand for qualified private forestry consultants and state field foresters. The Forest Stewardship Program focuses on three main areas: • Assisting landowners to actively manage their land and related resources • Keeping land in a productive and healthy condition for present and future owners • Increasing the economic benefits of land (timber harvesting, for example) while conserving the natural environment There are currently more than 25 million acres being managed under Forest Stewardship Plans. https://www.fs.usda.gov/managing-land/private-land/forest-stewardship State BMP Manuals address the management of forest health factors such as fire, insect and disease. State Forest Action Plans provide a set of Best Management Practices (BMP's) that vary by state and are tailored to the states current priorities with regard to forest management objectives. State BMP's are a tool used by the BP to demonstrate that suppliers investigate the implementation rates of the BMP's and whether any BMP's non-conformities have been issued against the supplier. The state also conducts BMP inspections to monitor the effectiveness of BMP's at achieving land management objectives. The latest data on BMP implementation and BMP categories are as follows:

Table 1—Southeastern survey results for forestry BMP regulation, BMP manual year, implementation rate (%), and implementation year

State	State regulation	BMP manual	Implementation rate (%)	Implementation year
Alabama	Quasi-regulatory	2007	97	2010
Arkansas	Non-regulatory	2002	87	2011
Florida	Quasi-regulatory	2008	99	2011
Georgia	Non-regulatory	2009	97	2011
Kentucky	Regulatory	2008	94	2012
Louisiana	Non-regulatory	2000	96	2012
Mississippi	Non-regulatory	2008	91	2010
North Carolina	Quasi-regulatory	2006	85	2011
Oklahoma	Non-regulatory	1991	95	2010
South Carolina	Quasi-regulatory	2012	91	2012
Tennessee	Non-regulatory	2003	84	2010
Texas	Non-regulatory	2010	95	2011
Virginia	Quasi-regulatory	2011	90	2012

Table 2—Forestry BMP implementation rate results by individual BMP categories. Minimum, maximum, average, and number of states that reported data for that specific BMP category

BMP category	Minimum (%)	Maximum (%)	Average (%)	Number of states
Timber harvest	88	99	95.0	8
Forest roads	84	99	91.3	13
Skid trails	75	100	89.7	10
Log landings	92	100	95.8	9
Stream crossings	72	98	89.2	13
SMZs	86	98	93.2	13
Wetlands	70	100	94.1	9
Reforestation	95	100	97.6	7
Mechanical site preparation	74	99	91.6	9
Chemical site preparation	93	100	98.6	8
Pesticide	98	100	99.6	5
Fertilizer	100	100	100.0	2
Prescribed burning	60	100	87.4	8
Wildfire suppression	100	100	100.0	2
Wildfire rehabilitation	100	100	100.0	1
Public lands	94	100	97.8	5

Whether they are regulatory, quasi-regulatory, or non-regulatory, BMPs are utilized in all states in the supply area and their use is effective as a tool to monitor harvesting practices including the application of herbicides, pesticides and historical insect/disease management plans. Monitoring of BMP implementation is a core function of the BMP process and implementation rates are above 90% as concluded from the audits conducted. This is a high degree of compliance and add to the effectiveness of BMP's as a mitigation measure.

Supply Base BMP Manuals can be found at the following sites:

Alabama:
http://www.forestry.alabama.gov/Pages/Management/Forms/2007_BMP_Manual.pdf
Mississippi:

	https://www.mfc.ms.gov/sites/default/files/Entire_bmp_2008-7-24_2.pdf Georgia: https://treeordzone.files.wordpress.com/2017/04/georgias-best-management-practices-for-forestry.pdf Louisiana: http://www.ldaf.state.la.us/wp-content/uploads/2014/04/BMP.pdf Florida: https://www.fdacs.gov/ezs3download/download/25527/516407/Media/Files/Florida-Forest-Service-Files/silvicultural_bmp_manual.pdf Texas: https://tfsweb.tamu.edu/uploadedFiles/Sustainable/bmp/Publications/BMP%20Manual_March2014-web.pdf South Carolina: https://www.scforestry.org/best-management-practices.htm North Carolina: https://www.ncforestservice.gov/water_quality/bmp_manual.htm Tennessee: https://www.tn.gov/content/dam/tn/agriculture/documents/forestry/AgForBMPs.pdf Arkansas: https://www.uaex.edu/environment-nature/water/quality/forest-bmps.aspx Kentucky: https://forestry.ca.uky.edu/files/for_130_bmp_guide_small.pdf Missouri: https://mdc.mo.gov/sites/default/files/downloads/woody_biomass_harvesting_bmp_book.pdf Through the various collaborative forest management programs and legislation offered at the federal, state and local level with the aim at ensuring consistent management approaches at the landscape level, it is justifiable to suggest that the supply area has rigorous requirements in place to ensure that forest management practices minimize impacts to air quality. Based on the findings reviewed and presented in this indicator, there is sufficient evidence to conclude low risk for this indicator
Means of Verification	• Supplier Questionnaires • Maps • State BMP Manuals • BMP implementation Rates
Evidence Reviewed	• Supplier Questionnaires • Maps • State BMP Manuals • BMP implementation Rates
Risk Rating	**X 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 FSC National Risk Assessment (FSC NRA) concluded low risk for illegally harvested wood. There are three broad categories of land ownership in the US: • Federal Lands – approx. 33% • Private lands – approx. 60% • State, public agencies and Indigenous Lands – approx.. 7% **Federal land ownership**: • The Bureau of Land Management, managing the "public lands" (100 million hectares, mostly not forested land, but including the commercially valuable forests of the O & C lands in western Oregon) • The US Forest Service, managing the national forests and grasslands and some special reserved lands; by far the largest seller of legal timber from federal lands (78 million hectares, including non-forest lands and lands reserved from commercial harvest) • The US Fish and Wildlife Service, managing the national wildlife refuges (35 million hectares, with the largest of its holdings in Alaska) • The National Park Service, managing national parks, monuments, historic sites, etc. (32 million hectares, also with the majority of its holdings in Alaska) • The Department of Defence, managing military reservations (7 million hectares) The government has a robust land records database where ownership can be easily verified. Public forests in the US are managed either at the state / local level, or by the US Forest Service or the Federal Bureau of Land Management (which conducts its own timber management and timber sales programs). In many cases a harvesting permit, which acts like a concession license is required. On public lands (mainly those managed at the federal level by the US Forest Service) a Timber Sale Contract is required that specifies environmental compliance and a fee based on an evaluation of the timber value. **State, Public Agencies and Indigenous Lands:** • State and local laws govern the classification and management of lands held by state and local governments (about 18 million hectares of potential timberlands). • Typically, state or local land management agencies, such as forestry commissions or parks departments, manage these lands. • Local governments keep land tenure records. In some states, the courts keep the records. In some, the recorder is an administrative office of a local government. • Local or state governments handle business registration, and state governments handle creation of corporations and other legal persons. A business incorporated in one state but operating in several states may have to register as a "foreign" corporation and designate a local agent in each state. In some states, businesses must also register with the state taxing authority. **Private Land Ownership**: • For privately owned lands, state and local laws and institutions largely govern tenure. • State laws govern the sale or transfer of rights to land, the rights of property owners and occupants, and the recording of interests and rights to land. • The general laws for contracts and property transactions govern most transfers of rights to manage and harvest on private lands. These are largely state laws. A private landowner will typically enter into a contract with a logger allowing the logger to harvest timber. • Private lands may be leased long-term for timber production, but it's actually more common for private landowners to lease their lands for hunting and recreation, reserving for themselves the right to sell or harvest timber. • Another form of long-term management control over land is the conservation easement. These are becoming more common in the United States. The private owner grants a third party (typically a government or a non-governmental conservation organization) the right to block uses of the land. The easement may require the land to be kept in a natural state, or it may allow some commercial use

if it is consistent with the purpose of the easement. For example, an easement to protect the views of land around an historic village might allow farming or forestry to continue but would prohibit construction of modern roads or structures. Conservation easements are transfers of rights that bind subsequent owners of the land, and as such the easements are usually recorded in the land records. In return for the easement, the land owner may get a purchase payment, may enjoy lower property taxes due to the reduced market value of land subject to the easement, or may get a one-time deduction for income tax purposes reflecting the value of a donated easement.

- State forestry commission conduct annual audit of harvesting activities on private lands and results show a high degree of compliance with BMP's (>90%)

In all land ownership cases in the US there are substantial legal requirements that ensure legality and ownership can be demonstrated.

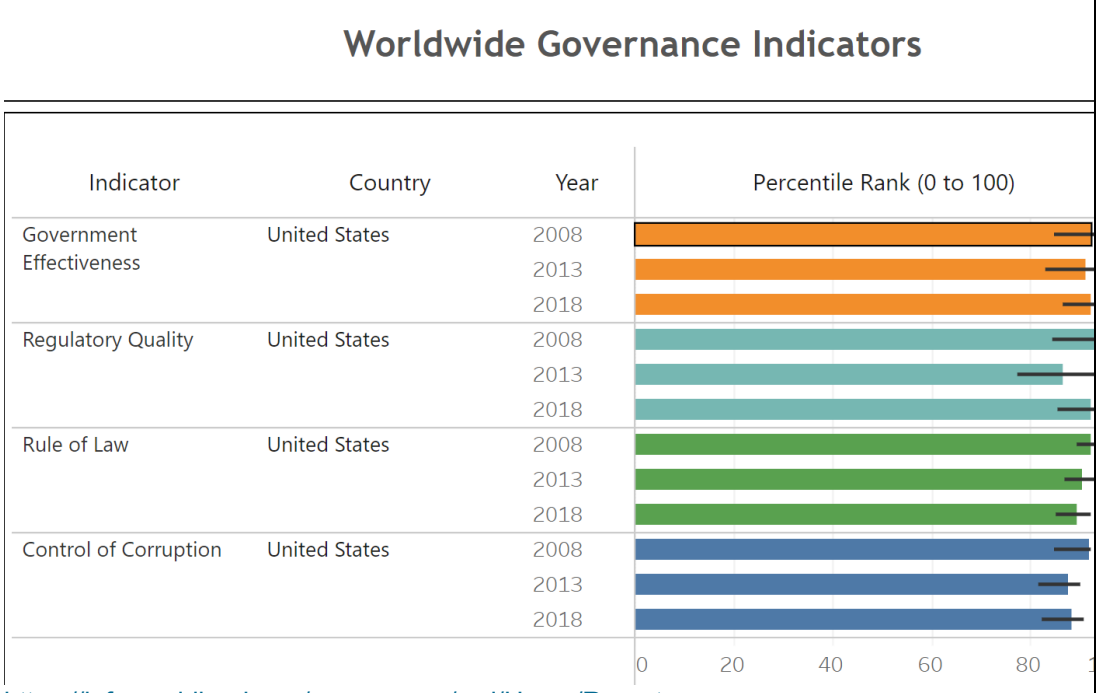
In addition to government legislation, the BP also implements control measures and procedures to ensure legality and ownership can be demonstrated:

- The BP requires valid contracts with feedstock suppliers.
- The BP collects load details to determine where deliveries originate.
- The BP maintains records of payments and receipts for all delivered wood. Wood receipts originate from loggers, dealers and other landowners. Title to the wood is exchanged as it crosses the scale at the pellet mill. A load slip is generated for each load of primary wood as it crosses the scale.

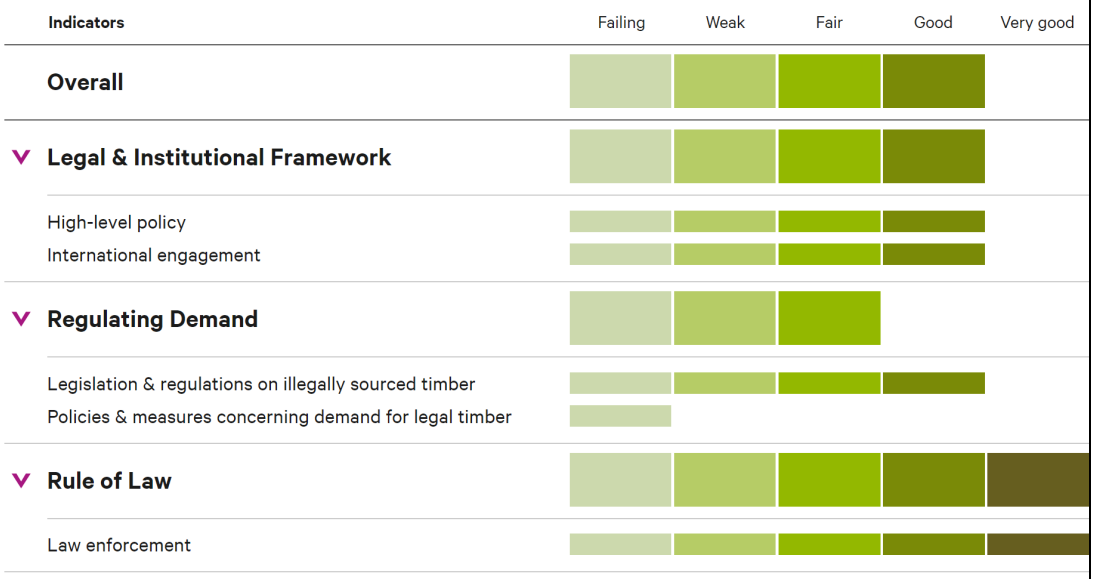
The Procurement Staff periodically reviews information from suppliers contained in a supplier questionnaire. The questionnaire identifies county level information related to the suppliers sourcing area. The supplier questionnaire is completed annually for most suppliers and less frequently for long term suppliers. Contracts with suppliers form an integral part of legality and ownership right to raw material.

Other

The World Bank awarded the U.S. a Global Governance Index rating that exceeds 90% for Regulatory Quality:



https://info.worldbank.org/governance/wgi/Home/Reports

	The illegal logging portal has scored the US in a high percentile according to three indicators of legality: **United States of America** Explore how forest governance has changed over time based on Chatham House's assessment of the institutional and policy frameworks for the sector.  https://forestgovernance.chathamhouse.org/countries/united-states-of-america In conclusion, wood procured in the study area can be considered Low Risk to threat to legality. Based on the determination that there is no reported systematic illegal logging in the supply area, there is robust legal authority and rule of law and land records are tracked and available, there is sufficient evidence to conclude "low risk" for this indicator.
Means of Verification	• FSC NRA • Scale receipt records • Severance tax payment records • Contracts • Supplier Questionnaire • Chain of Custody Claims
Evidence Reviewed	• FSC NRA • Scale receipt records • Severance tax payment records • Contracts • Supplier Questionnaire • Chain of Custody Claims
Risk Rating	**X 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 FSC NRA has concluded Low Risk for "violations of traditional and civil rights" based on the following: **Traditional Rights** " According to the United States Census Bureau, approximately 5.2 million people in the U.S., or 1.7% of the total population, identified as Native American or Alaska Native alone or in combination with another ethnic identity in 2010. In addition, there are roughly half a million persons that identify entirely or partly as Native Hawaiians. There are 567 federally recognized tribal entities in the United States, and many of these have federally recognized national homelands or 'reserves'. Between 200-300 additional groups identify as historical Indigenous nations but have not been federally recognized, although some are in the recognition process and some have achieved recognition at the state level. Indigenous peoples are present in all regions of the US." "There are a number of pieces of legislation at the core of federal policy protecting Native American rights, including: the Indian Self-Determination and Education Assistance Act of 1975, by which tribes are able to assume the planning and administration of federal programs that are devised for their benefit; the American Indian Religious Freedom Act of 1978, which directs federal officials to consult with tribes about actions that may affect religious practices; and the Native American Graves Protection and Repatriation Act of 1990, which directs federal agencies and museums to return indigenous remains and sacred objects to appropriate indigenous groups. A combination of other laws, policies, executive orders and programs fill out the suite of protections by providing additional protections for indigenous religion and culture, and addressing Indian economic and natural resource development, education and civil rights." Indigenous peoples' rights in international law have four main interrelated juridical bases (Kingsbury, 2001): 1. The right of "all peoples" to self determination, as defined in common Article 1 of the international human rights covenants adopted by the United Nations in 1966. The United Nations Human Rights Committee (HRC) applies this right to indigenous peoples when examining state-party reports under Article 40 of the International Covenant on Civil and Political Rights (ICCPR). This right is also applied to indigenous peoples in the UN Draft Declaration on the Rights of Indigenous Peoples and the Proposed American Declaration on the Rights of Indigenous Peoples. 2. "Indigenous rights" are aboriginal rights or rights that predate and survive alien or colonial intervention. As noted by Kreimer: "Indigenous peoples, because of their preexistence to contemporary States, and because of their cultural and historical continuity, have a special situation, an inherent condition that is juridically a source of rights" (1998: pp. 69 - 70). 3. Indigenous rights are also founded on the principle of equal protection of the law and prohibitions of racial discrimination. Read together with other human rights, such as the right to property, these fundamental principles of human rights law require substantive equality including, in some cases, affirmative action or special measures. 4. Finally, indigenous peoples' rights are grounded in the right to cultural integrity, which is a fundamental right enshrined in a range of international instruments.

	http://www.fao.org/3/y5407t/y5407t0g.htm The federal Indian trust responsibility is a legal obligation under which the United States "has charged itself with moral obligations of the highest responsibility and trust" toward Indian tribes (*Seminole Nation v. United States*, 1942). This obligation was first discussed by Chief Justice John Marshall in *Cherokee Nation v. Georgia* (1831). Over the years, the trust doctrine has been at the center of numerous other Supreme Court cases, thus making it one of the most important principles in federal Indian law. The federal Indian trust responsibility is also a legally enforceable fiduciary obligation on the part of the United States to protect tribal treaty rights, lands, assets, and resources, as well as a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes and villages. In several cases discussing the trust responsibility, the Supreme Court has used language suggesting that it entails legal duties, moral obligations, and the fulfillment of understandings and expectations that have arisen over the entire course of the relationship between the United States and the federally recognized tribes. https://www.bia.gov/frequently-asked-questions The Federal Government has a number of programs aimed at ensuring their participation in land use decisions and where applicable upholding land use agreements. Administered through various branches of natural resource management the US has the following programs relevant to indigenous peoples: *Wildlife and Parks Program* This component of the program supports the Wildlife and Parks program at the agency or tribal level. Funding is sub-allotted to Tribes through a local priority setting process determined by the Tribe and the Bureau to fund tribal activities in the areas of fisheries, wildlife, outdoor recreation, and public use management, conservation enforcement and related fields. Activities conducted are determined by Tribes, and cover a broad array of diverse fisheries, wildlife, conservation enforcement, public use, habitat management and related programs. Tribes conduct program planning, implementation and evaluation, with Bureau functions being primarily inherently federal in nature. Tribes, through the local priority setting process, will determine any changes in annual funding and performance. *Fish Hatchery Operations & Maintenance Programs* This program element provides funding to fish-producing Tribes in support of associated hatching, rearing and stocking programs. Salmon and steelhead trout released from tribal hatcheries in the Pacific Northwest benefit Indian and non-Indian commercial and sport fisheries in the United States and Canada, and help satisfy Indian subsistence and ceremonial needs. Throughout the rest of the country, recreational opportunities created by the stocking of trout, walleye and other species attract numerous sport fishermen to Indian reservations and assist in developing reservation economies. Continuing Fish Hatchery Operations projected to receive support through this program are those conducted by the Bad River, Lac Courte Oreilles, Lac du Flambeau, Red Cliff, Hoh, Quileute, Skagit Cooperative, Stillaguamish, Kalispel and Spokane. Funding is also available for the maintenance of tribal fish hatcheries to fish-producing Tribes based on an annual ranking of maintenance project proposals received from Tribes. The ranking factors utilize procedures and criteria in the areas of health and safety, water quality compliance, economic benefits, rights protection, and resource enhancement. *Endangered Species Program* This program element funds central office coordination of Bureau responsibilities associated with Public Law 93-205, the Endangered Species Act (ESA), and the related protection and preservation of trust lands and resources. The program facilitates federal regulatory Bureau compliance of the Endangered Species Act and the National Environmental Protection Act. The program raises Bureau capacity to act in accordance

	with interagency regulatory requirements. *Rights Protection Program* This program element supports the Department's goal of Serving Communities by fulfilling Indian trust responsibilities. A portion of this program element (Water Rights Negotiation/Litigation Program) is administered within the Branch of Water Resources. Under the Rights Protection Program, Bureau field staffs provide advice and technical assistance to tribes and other agency personnel in various rights protection issues. Funds under the program are also provided to tribes under the authorities of Public Law 93-638, as amended. Bureau staff consult and cooperate with Tribes involved in negotiating or litigating their water rights; establishing or protecting tribal treaty hunting, fishing and gathering rights; addressing issues concerning trespass on tribal trust lands; protecting tribal cultural resources; natural resource damage claims; and addressing other unresolved land management issues. The functions performed by program personnel depend on the services and technical expertise required by the Tribes within the jurisdiction of the office that is not available in other programs. The staff may also be requested to assist Tribes in preparing applications for funding from the Bureau's Attorney Fees and Litigation Support programs. *Natural Resources Damage Assessment and Restoration Program* The Natural Resource Damage Assessment and Restoration (NRDAR) Program function is to restore Bureau and tribal natural resources that have been injured as a result of oil spills or hazardous substance releases into the environment as authorized by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Clean Water Act (CWA) and the Oil Pollution Act (OPA). The NRDAR program staff works closely with the Tribes and other state and Federal natural resource trustees to ascertain injuries to natural resources injured as a result of oil spills or hazardous substance releases into the environment that affect tribal trust lands, Bureau facilities and natural resources retained by the tribes through treaties. Achieving actual on-the-ground restoration of injured natural resources is the primary goal of the program. The staff serves on NRDAR trustee councils, performs damage assessment and restoration functions and provides technical assistance to the Tribes. *FERC/Hydroelectric Licensing/Re-Licensing Program* The responsibility of this program is to develop license conditions consistent with the Secretary of the Interior's authority under the Federal Power Act for the protection and utilization of Indian reservations impacted by private hydroelectric power operations that are licensed by the Federal Regulatory Energy Commission (FERC). The conditions are primarily designed to mitigate the impacts caused by the hydroelectric power project located on an Indian reservation. The impacts include the occupation/inundation of reservation land, erosion, destruction of fisheries, water quality and harm to other trust resources. The conditions must be supported by material fact and are subject to appeal under provisions of the Energy Policy Act of 2005 and other legal challenges. Once implemented in a hydroelectric power operation license, the Bureau must monitor, implement and enforce the conditions. https://www.bia.gov/bia/ots/division-natural-resources/branch-fish-wildlife-recreation There are numerous sources of Federal legislation that demonstrates how legal, customary and traditional tenure and use rights of indigenous people and local communities are documented and respected. Given the strong legal framework in the US and the numerous pieces of legislation covering this indicator, there is sufficient evidence to conclude "low risk" for this indicator.
Means of Verification	• FSC NRA • Federal and State Law • United Nations Declaration on the Rights of Indigenous People • American Declaration on the Rights of Indigenous People

Evidence Reviewed	• FSC NRA • Federal and State Law • United Nations Declaration on the Rights of Indigenous People • American Declaration on the Rights of Indigenous People
Risk Rating	**X 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	There are no communities in the supply base where feedstock sources would endanger food, water supply or subsistence means of communities or the fulfilment of basic needs. The state level BMP's are a good source of demonstrating compliance with water supply management and plant communities or land types that could be considered food sources or contributing to food sources to some cultures and communities. Much of the supply base area is found in forestry dominant communities. The maintenance of forests in these communities is a key metric in ensuring harvest and residue removal minimises environmental impact. The land owners are incentivized to maintain ecosystem function and minimise environmental impacts to optimize stand health and maintain a steady flow of revenue from timber products. With the 2008 Farm Bill, Congress tasked the states and territories with assessing the condition of trees and forests within their boundaries, regardless of ownership, and developing strategies to: conserve working forest landscapes, protect forests from harm, and enhance public benefits from trees and forests. The resulting state Forest Action Plans—completed in 2010 and reviewed in 2015 by all 59 states and territories—offer practical and comprehensive roadmaps for investing federal, state, local, and private resources where they can be most effective in achieving national conservation goals. All states have a state forest action plan that sets outs collaborative goals for managing impacts on water quality, however many BMP's also set targets and management strategies for harvest planning, equipment impacts, handling of dangerous goods (fuels, oils) and other strategies that ensure a collective landscape level approach is brought to forest and harvesting practices in the supply base. https://www.stateforesters.org/forest-action-plans/ The Forest Stewardship Program (FSP) provides assistance to owners of forest land where good stewardship, including agroforestry practices, will enhance and sustain multiple forest resources and contribute to healthy and resilient landscapes. The program also helps create jobs in rural communities by sustaining local markets for forest products and increasing demand for qualified private forestry consultants and state field foresters. The Forest Stewardship Program focuses on three main areas: • Assisting landowners to actively manage their land and related resources • Keeping land in a productive and healthy condition for present and future owners

- Increasing the economic benefits of land (timber harvesting, for example) while conserving the natural environment

There are currently more than 25 million acres being managed under Forest Stewardship Plans.

https://www.fs.usda.gov/managing-land/private-land/forest-stewardship

State BMP Manuals address the management of forest health factors such as fire, insect and disease.

State Forest Action Plans provide a set of Best Management Practices (BMP's) that vary by state and are tailored to the states current priorities with regard to forest management objectives. State BMP's are a tool used by the BP to demonstrate that suppliers investigate the implementation rates of the BMP's and whether any BMP's non-conformities have been issued against the supplier. The state also conducts BMP inspections to monitor the effectiveness of BMP's at achieving land management objectives.

The latest data on BMP implementation and BMP categories are as follows:

Table 1—Southeastern survey results for forestry BMP regulation, BMP manual year, implementation rate (%), and implementation year

State	State regulation	BMP manual	Implementation rate (%)	Implementation year
Alabama	Quasi-regulatory	2007	97	2010
Arkansas	Non-regulatory	2002	87	2011
Florida	Quasi-regulatory	2008	99	2011
Georgia	Non-regulatory	2009	97	2011
Kentucky	Regulatory	2008	94	2012
Louisiana	Non-regulatory	2000	96	2012
Mississippi	Non-regulatory	2008	91	2010
North Carolina	Quasi-regulatory	2006	85	2011
Oklahoma	Non-regulatory	1991	95	2010
South Carolina	Quasi-regulatory	2012	91	2012
Tennessee	Non-regulatory	2003	84	2010
Texas	Non-regulatory	2010	95	2011
Virginia	Quasi-regulatory	2011	90	2012

Table 2—Forestry BMP implementation rate results by individual BMP categories. Minimum, maximum, average, and number of states that reported data for that specific BMP category

BMP category	Minimum (%)	Maximum (%)	Average (%)	Number of states
Timber harvest	88	99	95.0	8
Forest roads	84	99	91.3	13
Skid trails	75	100	89.7	10
Log landings	92	100	95.8	9
Stream crossings	72	98	89.2	13
SMZs	86	98	93.2	13
Wetlands	70	100	94.1	9
Reforestation	95	100	97.6	7
Mechanical site preparation	74	99	91.6	9
Chemical site preparation	93	100	98.6	8
Pesticide	98	100	99.6	5
Fertilizer	100	100	100.0	2
Prescribed burning	60	100	87.4	8
Wildfire suppression	100	100	100.0	2
Wildfire rehabilitation	100	100	100.0	1
Public lands	94	100	97.8	5

Whether they are regulatory, quasi-regulatory, or non-regulatory, BMPs are utilized in all states in the supply area and their use is effective as a tool to monitor harvesting practices including the application of herbicides, pesticides and historical insect/disease management plans. Monitoring of BMP implementation is a core function of the BMP process and implementation rates are above 90% as concluded from the audits conducted. This is a high degree of compliance and add to the effectiveness of BMP's as a mitigation measure.

Supply Base BMP Manuals can be found at the following sites:

Alabama:
http://www.forestry.alabama.gov/Pages/Management/Forms/2007_BMP_Manual.pdf
Mississippi:
https://www.mfc.ms.gov/sites/default/files/Entire_bmp_2008-7-24_2.pdf
Georgia:
https://treeordzone.files.wordpress.com/2017/04/georgias-best-management-practices-for-forestry.pdf
Louisiana:
http://www.ldaf.state.la.us/wp-content/uploads/2014/04/BMP.pdf
Florida:
https://www.fdacs.gov/ezs3download/download/25527/516407/Media/Files/Florida-Forest-Service-Files/silvicultural_bmp_manual.pdf
Texas:
https://tfsweb.tamu.edu/uploadedFiles/Sustainable/bmp/Publications/BMP%20Manual_March2014-web.pdf
South Carolina:
https://www.scforestry.org/best-management-practices.htm
North Carolina:
https://www.ncforestservice.gov/water_quality/bmp_manual.htm
Tennessee:
https://www.tn.gov/content/dam/tn/agriculture/documents/forestry/AgForBMPs.pdf
Arkansas:
https://www.uaex.edu/environment-nature/water/quality/forest-bmps.aspx
Kentucky:

	https://forestry.ca.uky.edu/files/for_130_bmp_guide_small.pdf Missouri: https://mdc.mo.gov/sites/default/files/downloads/woody_biomass_harvesting_bmp_book.pdf Through the various collaborative forest management programs and legislation offered at the federal, state and local level with the aim at ensuring consistent management approaches at the landscape level, it is justifiable to suggest that the supply area has rigorous requirements in place to ensure that forest management practices minimize impacts to air quality. Based on the findings reviewed and presented in this indicator, there is sufficient evidence to conclude low risk for this indicator
Means of Verification	• Supplier Questionnaires • Maps • State BMP Manuals • BMP implementation Rates
Evidence Reviewed	• Supplier Questionnaires • Maps • State BMP Manuals • BMP implementation Rates
Risk Rating	**X 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	The FSC National Risk Assessment (FSC NRA) concluded low risk for illegally harvested wood. There are three broad categories of land ownership in the US: • Federal Lands – approx. 33% • Private lands – approx. 60% • State, public agencies and Indigenous Lands – approx.. 7% **Federal land ownership**: • The Bureau of Land Management, managing the “public lands” (100 million hectares, mostly not forested land, but including the commercially valuable forests of the O & C lands in western Oregon) • The US Forest Service, managing the national forests and grasslands and some special reserved lands; by far the largest seller of legal timber from federal lands (78 million hectares, including non-forest lands and lands reserved from commercial harvest) • The US Fish and Wildlife Service, managing the national wildlife refuges (35 million hectares, with the largest of its holdings in Alaska) • The National Park Service, managing national parks, monuments, historic sites, etc. (32 million hectares, also with the majority of its holdings in Alaska) • The Department of Defence, managing military reservations (7 million hectares)

The government has a robust land records database where ownership can be easily verified. Public forests in the US are managed either at the state / local level, or by the US Forest Service or the Federal Bureau of Land Management (which conducts its own timber management and timber sales programs). In many cases a harvesting permit, which acts like a concession license is required. On public lands (mainly those managed at the federal level by the US Forest Service) a Timber Sale Contract is required that specifies environmental compliance and a fee based on an evaluation of the timber value.

State, Public Agencies and Indigenous Lands:

- State and local laws govern the classification and management of lands held by state and local governments (about 18 million hectares of potential timberlands).
- Typically, state or local land management agencies, such as forestry commissions or parks departments, manage these lands.
- Local governments keep land tenure records. In some states, the courts keep the records. In some, the recorder is an administrative office of a local government.
- Local or state governments handle business registration, and state governments handle creation of corporations and other legal persons. A business incorporated in one state but operating in several states may have to register as a "foreign" corporation and designate a local agent in each state. In some states, businesses must also register with the state taxing authority.

Private Land Ownership:

- For privately owned lands, state and local laws and institutions largely govern tenure.
- State laws govern the sale or transfer of rights to land, the rights of property owners and occupants, and the recording of interests and rights to land.
- The general laws for contracts and property transactions govern most transfers of rights to manage and harvest on private lands. These are largely state laws. A private landowner will typically enter into a contract with a logger allowing the logger to harvest timber.
- Private lands may be leased long-term for timber production, but it's actually more common for private landowners to lease their lands for hunting and recreation, reserving for themselves the right to sell or harvest timber.
- Another form of long-term management control over land is the conservation easement. These are becoming more common in the United States. The private owner grants a third party (typically a government or a non-governmental conservation organization) the right to block uses of the land. The easement may require the land to be kept in a natural state, or it may allow some commercial use if it is consistent with the purpose of the easement. For example, an easement to protect the views of land around an historic village might allow farming or forestry to continue but would prohibit construction of modern roads or structures. Conservation easements are transfers of rights that bind subsequent owners of the land, and as such the easements are usually recorded in the land records. In return for the easement, the land owner may get a purchase payment, may enjoy lower property taxes due to the reduced market value of land subject to the easement, or may get a one-time deduction for income tax purposes reflecting the value of a donated easement.
- State forestry commission conduct annual audit of harvesting activities on private lands and results show a high degree of compliance with BMP's (>90%)

In all land ownership cases in the US there are substantial legal requirements that ensure legality and ownership can be demonstrated. Extensive Federal, State and Municipal laws and records are kept to resolve any grievances or disputes related to land use, tenure rights or property rights. Any grievances are taken up by the judicial system, which is seen to be a fair and equitable process globally.

Work Conditions

Work conditions are covered by US labour laws. The FSC NRA has reviewed several

segments of US labour laws and has concluded low risk.

General Social Rights
The Declaration on Fundamental Principles and Rights at Work reads as follows:

"All ILO Members, even if they have not ratified the Conventions in question, have an obligation arising from the very fact of membership in the Organization to respect, to promote and to realize, in good faith and in accordance with the Constitution, the principles concerning the fundamental rights which are the subject of those Conventions, namely:

a) freedom of association and the effective recognition of the right to collective bargaining; b)
b) the elimination of all forms of forced or compulsory labour; c)
c) the effective abolition of child labour; and
d) the elimination of discrimination in respect of employment and occupation."

This indicator specifically addresses whether the country being assessed upholds the ILO Fundamental Principles and Rights at Work – which may be demonstrated by ratification of the 8 relevant ILO Core conventions, or using other evidence. Therefore, the fact that the United States has not ratified all 8 of the Conventions does not automatically infer that the country is not in compliance with the indicator.

The United States has extensive legislation protecting the social rights of individuals and workers. The following pieces of the US legal framework uphold the ILO Fundamental Principles and Rights of Work in the United States:

- The First Amendment to the United States Constitution, adopted in 1791, provides that "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press, or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances". In practice, this means that the Constitution protects employees' rights of association, thereby prohibiting their discharge for union activity.
- Freedom of association in the US is protected by the 1935 National Labor Relations Act (NLRA; 29 USC §151-169), with primary responsibility for enforcement by the National Labor Relations Board (NLRB). Additionally, the US Code (29 USC §171(a)) states that, "it is the policy of the United States that, "sound and stable industrial peace and the advancement of the general welfare, health, and safety of the Nation and of the best interests of employers and employees can most satisfactorily be secured by the settlement of issues between employers and employees through the processes of conference and collective bargaining between employers and the representatives of their employees"
- Forced and compulsory labor is prohibited by the 13th Amendment to the United States Constitution, and is codified in 18 USC § 1589. The amendment specifically outlaws slavery and involuntary servitude, except as punishment for a person duly convicted of a crime
- The Trafficking Victims Protection Act (most recently reauthorized in 2013) authorizes measures to combat human trafficking. Additionally, federal legislation requires every employer to pay each employee a minimum wage (29 U.S.C.§ 206) and overtime pay (29 U.S.C.§ 207).
- The Fair Labor Standards Act of 1938 (29 USC § 201-262) restricts the employment of children under the age of 16 with the exception of children working on farms owned by their parents, and forbids the employment of people younger than 18 in jobs deemed too dangerous (including logging).
- Discrimination with respect to employment is prohibited in the United States by Section VII of the Civil Rights Act of 1964 (Public Law 88-352), and is overseen by the U.S. Equal Employment Opportunity Commission. There are several additional and complementary pieces of legislation, such as: the Equal Pay Act of 1963 (EPA), which protects men and women who perform substantially equal work in the same establishment from sex-based wage discrimination; the Age Discrimination in Employment Act of 1967 (ADEA), which protects individuals who

	are 40 years of age or older; Title I and Title V of the Americans with Disabilities Act of 1990, as amended (ADA), which prohibit employment discrimination against qualified individuals with disabilities in the private sector, and in state and local governments; Sections 501 and 505 of the Rehabilitation Act of 1973, which prohibit discrimination against qualified individuals with disabilities who work in the federal government; All indicators In the Category 1 (legality) assessment were designated as 'low risk' at a national scale, indicating that the relevant legislation is enforced. Based on the extensive legislation in the US covering land use rights and work conditions and based on the legislative analysis conducted as part of the FSC NRA, there is sufficient evidence to conclude "low risk" for this indicator.
Means of Verification	• FSC NRA • Scale receipt records • Severance tax payment records • Contracts • Supplier Questionnaire • Chain of Custody Claims
Evidence Reviewed	• FSC NRA • Scale receipt records • Severance tax payment records • Contracts • Supplier Questionnaire • Chain of Custody Claims
Risk Rating	**X 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	The FSC NRA has concluded low risk for this indicator based on the following findings: <u>*Freedom of Association & Collective Bargaining:*</u> Even though the US has not ratified either of the associated Core Conventions, it has been a member of the ILO since 1980 (and previous to that was a member from 1934 to 1977). As a member, the US has obligations under the ILO Constitution, including a commitment under the Declaration on Fundamental Principles and Rights at Work. Additionally, the US is subject to annual ILO review and reporting processes and also complaint processes (through the Committee on Freedom of Association, CFA). A report by the International Organisation of Employers (IOE) notes that "Most CFA case

	examinations of U.S. law have resulted in conclusions and recommendations that the law or practice subject of the complaint is consistent with the principles of freedom of association" and that "there has never been a wholesale criticism of the NLRA or NLRB by the CFA or the ILO". There are 42 closed complaints cases listed in the US member profile. All of this provides strong evidence that the United States respects, promotes and realizes, in good faith, workers' rights to "freedom of association and the effective recognition of the right to collective bargaining." Some sources question whether the United States is truly respecting workers' rights to freedom of association and the effective recognition of the right to collective bargaining. Concerns include the exemption of a small number of worker categories (such as agricultural workers) from the NLRA, the ability of employers to hire replacement workers for those on strike, the perceived ability of employers to pressure employees against organizing in the workplace, the predominance of enterprise-level bargaining, the perceived lack of fair election processes, and the perceived lack of adequate enforcement. • While the NLRA is an important piece of legislation that protects workers' rights, it is not the only source of protection for workers in the US. The Member profile for the United States lists 80 separate pieces of national legislation associated with 'Freedom of association, collective bargaining and industrial relations'. As noted above, the constitution itself protects the rights of all workers to associate and the US Code establishes in federal policy the respect of the country for collective bargaining – both of these cover all workers, regardless of whether they are covered by the NLRA. Additionally, in the 2003-2005 US Annual Reports to the ILO, the Government writes, "No Government's authorization is required to establish a workers' organization, or to conclude collective agreements. The exercise of freedom of association and the right to collective bargaining is recognized at enterprise, sector/industry, national (and international) levels for the following categories of workers: (i) medical professionals; (ii) teachers; (iii) agricultural workers; (iv) workers engaged in domestic work; (v) workers in export processing zones (EPZs) or enterprises/industries with EPZs status; (vi) migrant workers; (vii) workers of all ages; and (viii) workers in the informal economy." • US labour relations are different than those in other parts of the world. A predominance of enterprise-level bargaining reflects these differences, but does not indicate that collective bargaining is not respected, just that it is done differently. Employers have rights in the US that are different from other countries, including being allowed to actively communicate with employees during collective bargaining, but again this does not indicate that collective bargaining is not respected. While employers are allowed to hire replacement workers so that they may remain in business during strikes, they are required by law to bargain in good faith to resolve those strikes. • Concerns about election processes do not take into account (and were published prior to) recent changes in union election procedures that are universally considered to favor unions. It also fails to consider that, according to election statistics, unions are successful in approximately 70% of the elections that are held. • There is a very robust system for enforcement of these rights. On the federal level, they are guaranteed by the NLRA, which protects the rights of employees and employers, "to encourage collective bargaining, and to curtail certain private sector labor and management practices, which can harm the general welfare of workers, businesses and the U.S. economy." The Act also established the National Labor Relations Board (NLRB), which has primary responsibility for enforcement of the NLRA. Each year, approximately 20,000 charges are filed with the NLRB alleging unfair labor practices, and each one is investigated by regional field examiners and attorneys. More than half of these are withdrawn or dismissed, and of those that receive full investigation, a little over 1,000 each year result in formal complaints detailing the alleged violations. After a decision by a judge, the remaining cases are litigated and reviewed by the NLRB itself each year. The US Annual Reports to the ILO summarize the millions of dollars that

	have been repaid to workers as a result of these enforcement actions. This represents a heavily utilized and strong enforcement system. In its 2017 report, the International Trade Union confederation (ITUC) categorizes the US as a Status 4 (Systemic violations of rights) in its annual index. The categorization is based upon surveys of national unions and review of legislation and then comparison of these results with 97 indicators derived from the ILO Conventions and jurisprudence that represent violations of workers' rights. The primary concerns highlighted in the 2017 report were lack of consultation with unions regarding labor law and policy, and limits on certain types of strike actions. • This index is based on the opinion of the unions, not metrics, and the views of employees and employers are not included. • Other global indices and indicators that address labor rights recognize the US as being above the median. • The status categorization within this index is built upon indicators that are drawn from the ILO Conventions, but as noted by ILO itself, ratification of and conformance with the Conventions is not required for respect of the Fundamental Principles and Rights, and it is the Fundamental Principles and Rights that are the focus of Indicator 2.2 for this risk assessment. Therefore, lack of complete alignment with the Conventions and a lower status in this index does not per se indicate that the US does not respect the basic rights of association and collective bargaining. • The issues highlighted in the report (e.g., consultation with unions regarding labor law and policy, and limits on certain types of strike actions) provide no information regarding whether the US respects the basic rights of association and collective bargaining. • Therefore, it is still possible for the US to respect the Fundamental Principles and Rights, while being categorized with a lower status in this index. It is possible to conclude from the information presented that while the US has not ratified and may not conform with all specifics in the associated Core Conventions, it respects the fundamental rights of freedom of association and the effective recognition of the right to collective bargaining. Based on the findings review from the FSC NRA and the extensive legislations associated with rights and freedom of association, there is sufficient evidence to conclude "low risk" for this indicator.
Means of Verification	• FSC NRA • Equal Opportunity Employment Act • National Labour Relations Act • ITUC Survey of Trade Union Rights Violations • Company policies and procedures
Evidence Reviewed	• FSC NRA • Equal Opportunity Employment Act • National Labour Relations Act • ITUC Survey of Trade Union Rights Violations • Company policies and procedures
Risk Rating	**X 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	The FSC NRA has concluded low risk for this indicator based on the following findings: <u>*Compulsory or Forced Labour*</u> The US ratified Core Convention 105 (Abolition of Forced Labour Convention) in 1991 and the ILO web site indicates the status as 'In Force'. The US has not yet ratified Convention 29 (Forced Labour Convention), but as noted above has legislation that addresses fundamental rights associated with compulsory or forced labor. There are also numerous additional policies, reports, action plans and executive orders that provide evidence of the country's efforts to ensure these rights, particularly as they relate to human trafficking. The United States is consistently categorized as Tier 1 (the highest tier reflecting a country's efforts to address human trafficking problems) in the U.S. Department of State's Trafficking in Persons annual report. The Global Slavery Index's 2016 assessment identifies the United States as a country with one of the lowest estimated prevalence of modern slavery and as a country with one of the strongest responses to modern slavery. Some sources identify the situation of migrant workers in the agricultural sector as an area of concern. The agricultural sector is important for this assessment, as it includes both farmworkers and forest workers. • One of the sources is an ILO report on forced labour. The report is 57 pages in length and the United States is mentioned in a single paragraph within a section on the Agricultural, forestry and fishing sector. The US is identified as an example of a country with a high population of migrant and seasonal farmworkers. The report acknowledges that a high share of migrant workers is reflected in the number of cases of forced labour in the sector as a whole (globally), but does not indicate that the US is of specific concern. • One of the sources identified is Anti-Slavery International, the world's oldest international human rights organization. While this organization has awarded organizations that are fighting forced labor in the United States agricultural sector, it does not identify the United States as a country in which they focus their anti-slavery efforts and a search of 'United States' at the web site does not bring up any reports or other articles about specific concerns in the US or the US in general. Additionally, Anti-Slavery International recognizes the US Department of State's Trafficking in Persons Report (see above) as a valid global index of human trafficking and efforts to eliminate it. • One of the sources is an article written for an online topical research digest hosted by the University of Denver. The article notes a high occurrence of forced labour in the US, but does not provide any data or specific references as evidence. It states that the high occurrence is due to the absence of labor standards and regulations in the industry, and to the increasing number of undocumented immigrant farm workers that have no legal protection. The article recognizes the importance of the Trafficking Victims Protection Act and some limitations, but was written prior to reauthorizations of the act that increased the protections that it provides. However, the article does not recognize the Migrant and Seasonal Agricultural Worker Protection Act which is the principle federal employment law for farmworkers in the US. • Perhaps most pertinently, these sources focus almost entirely on farmworkers, which are one component of the agricultural sector. However, forest workers are a separate component of the agricultural sector, but are not specifically addressed in these sources. While the 2017 Trafficking of Persons report does identify forced labour in the forestry sectors of Burma, Czechia, Guyana, Mongolia, Sweden, and Uganda, and the 2016 List of Goods Produced by Child Labour or Forced Labour

	identifies forced labour for timber in Brazil, North Korea, and Peru, the US is not mentioned in association with forestry or timber in either report. While the US has not ratified both relevant Core Conventions, it is still possible to conclude that the US respects the fundamental right to the elimination of all forms of forced or compulsory labour, and in particular that there are no concerns identified in the forest sector. Based on the findings review from the FSC NRA and the extensive legislations associated with rights and freedom of association, there is sufficient evidence to conclude "low risk" for this indicator.
Means of Verification	• FSC NRA • Equal Opportunity Employment Act • National Labour Relations Act • ITUC Survey of Trade Union Rights Violations • Company policies and procedures
Evidence Reviewed	• FSC NRA • Equal Opportunity Employment Act • National Labour Relations Act • ITUC Survey of Trade Union Rights Violations • Company policies and procedures
Risk Rating	**X 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	The FSC NRA has concluded low risk for this indicator based on the following findings: Child Labour The United States ratified Core Convention 182 (Worst Forms of Child Labour Convention) in 1999 and the ILO web site indicates the status as 'In Force'. The US has not yet ratified Convention 138 (Minimum Age Convention), but as noted above has legislation that addresses fundamental rights associated with child labour. Additionally, every state has legislation that further limits the hours and days per week that minors may work in non-farm employment and 34 states have similar limits for farm work. And all states have compulsory education until at least 16 years of age. The US Annual Reports to the ILO also detail statistics on the effective enforcement of the federal legislation, including hundreds of cases, thousands of children affected and millions of dollars paid in fines each year. The United States does not feature in the ILO Child Labour Country Dashboard, which indicates a low risk for child labour in the United States. The 2016 List of Goods Produced by Child Labour or Forced Labour does not associate any goods produced in the US with child labour. Some sources identify the situation of children in the agricultural sector as an area of concern. The agricultural sector is important for this assessment, as it includes both farmworkers and forest workers. However, the focus of all of these sources are exemptions in the US legislation that allow children under the age of 16 to work on family farms and does not in any way include children working in forests. The US Labour

	legislation clearly prohibits the employment of minors between 16 and 18 years of age in forestry service occupations and associated occupations as they are “occupations particularly hazardous or detrimental to [the minors’] health or well-being”. No sources of information were identified that suggest that child labour in the forest sector is a concern. While the US has not ratified both relevant Core Conventions, it is still possible to conclude that the US respects the fundamental right to the effective abolition of child labour, particularly in the forest sector. Based on the findings review from the FSC NRA and the extensive legislations associated with rights and freedom of association, there is sufficient evidence to conclude “low risk” for this indicator.
Means of Verification	• FSC NRA • Equal Opportunity Employment Act • National Labour Relations Act • ITUC Survey of Trade Union Rights Violation • Company policies and procedures
Evidence Reviewed	• FSC NRA • Equal Opportunity Employment Act • National Labour Relations Act • ITUC Survey of Trade Union Rights Violation • Company policies and procedures
Risk Rating	**X 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	The FSC NRA has concluded low risk for this indicator based on the following findings: Discrimination Even though the US has not ratified either of the associated Core Conventions, it has been a member of the ILO since 1980 (and previous to that was a member from 1934 to 1977). As a member, the US has obligations under the ILO Constitution, including a commitment under the Declaration on Fundamental Principles and Rights at Work. Additionally, the US is subject to annual ILO review and reporting processes. As noted above, the US has a suite of federal laws that prohibit discrimination in the workplace, including discrimination based on race, color, religion, sex, national origin, gender, age, pregnancy, disability, gender identity, sexual orientation, and genetic information. The Equal Employment Opportunity Commission (EEOC) is responsible for enforcement of these laws. In 2015, the EEOC received 89,385 private sector charges of discrimination and achieved 92,641 resolutions, including more than $356.6 million in monetary benefits. Some sources question whether the United States is truly respecting workers’ rights to

	elimination of discrimination. Concerns include differences in unemployment rates between African Americans and whites, wage gaps between races and genders, discrimination against workers with family responsibilities, slow progress on affirmative action, an increase in religious discrimination and age discrimination claims, and wage gaps and unemployment rate gaps for persons with and without disabilities. • The US generally scores well or very well on global indices and reviews of gender equality in the workplace, on social progress, fundamental rights (including discrimination), and discrimination in employment & vocational training. • Conclusions about racial, gender, religious, age and other discrimination cannot be drawn from simple statistics such as wage and unemployment gaps without delving deeper into the issues. FSC-GUI-60-008 (V1-0) states, "Concerning non-discriminatory employment and occupation practices, the working group clarified that differences in remuneration between workers are not considered discriminatory where they exist due to inherent requirements or specifics of the job, e.g. due to length of employment, experience, technical expertise and performance". There must be recognition or consideration of the many different factors that may contribute to employment differences where they do exist. For example, research results indicate that a majority of racial and gender wage gaps in the US can be explained by differences in education, labour force experience, occupation or industry and other factors that can be measured. Therefore, while lack of a wage or unemployment gap could be used as evidence that discrimination does not exist, existence of a gap does not automatically infer that the US does not respect the fundamental right to the elimination of discrimination. • In recent years, the US has significantly improved protections for workers with family responsibilities, including the 2010 Patient Protection and Affordable Care Act that amended the Fair Labour Standards Act to require that employers provide break time for nursing mothers, and the Family and Medical Leave Act of 1993 that requires the provision of leave time for family reasons (i.e., maternity/paternity leave) and for medical reasons. A number of the sources with concerns were published prior to implementation of these new laws. • No sources of information were identified that suggest that any form of discrimination related to race, religion, disability or age in the forest sector is a concern. It is possible to conclude from the information presented that while the US has not ratified and may not conform to all aspects of the associated Core Conventions, it respects the fundamental rights of the elimination of discrimination in respect of employment and occupation, particularly in the forest sector. Based on the findings review from the FSC NRA and the extensive legislations associated with rights and freedom of association, there is sufficient evidence to conclude "low risk" for this indicator.
Means of Verification	• FSC NRA • Equal Opportunity Employment Act • National Labour Relations Act • ITUC Survey of Trade Union Rights Violation • Company policies and procedures
Evidence Reviewed	• FSC NRA • Equal Opportunity Employment Act • National Labour Relations Act • ITUC Survey of Trade Union Rights Violation • Company policies and procedures
Risk Rating	**X 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	**Consolidated State Minimum Wage Update Table** **(Effective Date: 01/01/2020)** **Greater than federal MW** / **Equals federal MW of $7.25** / **No MW Required** AK $10.19 / CNMI / AL AR $10.00 / GA / LA AZ $12.00 / IA / MS CA $12.00 / ID / SC CO $12.00 / IN / TN CT $11.00 / KS DC $14.00 / KY DE $9.25 / PA FL $8.56 / TX HI $10.10 / UT IL $9.25 / WI MA $12.75 / NC MD $11.00 / ND ME $12.00 / NH MI $9.65 / VA MN $10.00 / OK MO $9.45 / WY MT $8.65 / PR NE $9.00 NJ $11.00 NM $9.00 NV $8.25 NY $11.80 OH $8.70 OR $11.25 RI $10.50 SD $9.30 VT $10.96 WA $13.50 WV $8.75 VI $10.50 GU $8.25 **29 States + DC, GU, & VI** / **16 States + PR, CNMI** / **5 States** Like the federal wage and hour law, State law often exempts particular occupations or industries from the minimum labor standard generally applied to covered employment. Some states also set subminimum rates for minors and/or students or exempt them from coverage or have a training wage for new hires. Additionally, some local governments set minimum wage rates higher than their respective state minimum wage. Such differential provisions are not identified in this table.

	The state minimum wage rate requirements, or lack thereof, are generally controlled by legislative activities within the individual states. Federal minimum wage law supersedes state minimum wage laws where the federal minimum wage is greater than the state minimum wage. In those states where the state minimum wage is greater than the federal minimum wage, the state minimum wage prevails. CNMI has a minimum wage set lower than the federal minimum wage. There are 29 states plus the District of Columbia, Guam, and the Virgin Islands with minimum wage rates set higher than the federal minimum wage. There are 16 states plus Puerto Rico that has a minimum wage requirement that is the same as the federal minimum wage requirement. The remaining 5 states do not have an established minimum wage requirement. The District of Columbia has the highest minimum wage at $14.00/hour. Note: There are 18 states (AK, AZ, CA, CO, DC, FL, ME, MN, MO, MT, NV, NJ, NV, NY, OH, OR, SD, and WA) that currently have scheduled annual adjustments for their minimum wages based on varying formulas. Most of these increases occur around January 1st. Individuals should consult the relevant state labour offices for information on the particular formula used to adjust the state minimum wage. https://www.dol.gov/agencies/whd/mw-consolidated State and Federal labour laws are covered extensively in indicators: • 2.7.1 • 2.7.2 • 2.7.3 • 2.7.4 The BP has policies and procedures in place, administered through the Human Resources department, to ensure fair and competitive wages are offered to employees. Based on the FSC NRA review of 2.7.1, 2.7.2, 2.7.3 and 2.7.4, based on the laws in place governing minimum wage requirements in all US states and based on the BP's own policies and procedures, there is sufficient evidence to conclude "low risk" for this indicator.
Means of Verification	• FSC NRA • Equal Opportunity Employment Act • National Labour Relations Act • ITUC Survey of Trade Union Rights Violation • Company policies and procedures
Evidence Reviewed	• FSC NRA • Equal Opportunity Employment Act • National Labour Relations Act • ITUC Survey of Trade Union Rights Violation • Company policies and procedures
Risk Rating	**X 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	Health and Safety of forest workers is covered under the United States Department of Labour Occupational Safety and Health Administration (OSHA) and its laws and regulations. OSHA is part of the United States Department of Labor. The administrator for OSHA is the Assistant Secretary of Labor for Occupational Safety and Health. OSHA's administrator answers to the Secretary of Labor, who is a member of the cabinet of the President of the United States. The OSH Act covers most private sector employers and their workers, in addition to some public sector employers and workers in the 50 states and certain territories and jurisdictions under federal authority. Those jurisdictions include the District of Columbia, Puerto Rico, the Virgin Islands, American Samoa, Guam, Northern Mariana Islands, Wake Island, Johnston Island, and the Outer Continental Shelf Lands as defined in the Outer Continental Shelf Lands Act. With the Occupational Safety and Health Act of 1970, Congress created the Occupational Safety and Health Administration (OSHA) to ensure safe and healthful working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education and assistance. There are numerous health and safety measures related to health and safety of forest workers enforced by US Department of Labour. There are several categories of regulation, policy, directives, statutes and guidelines that govern forest workers, including: • OSHA enforced Standards - Federal • Registrar Notices - Federal • Directives - Federal • Letter of Interpretation - Federal • Logging Operation Safety Standards - State Examples of standards that protect the safety and health of forest workers include: • Occupational health and environmental control • Occupational noise exposure • Machinery and machine guarding • Rules for logging operations • Logging Safety Rules https://www.osha.gov/SLTC/logging/standards.html Although Forestry remains a high-risk activity for safety and health, there are numerous standards in place to improve awareness and overall safety performance in the forest industry. Many of these standards are enforced at the federal level and companies not in compliance with OSHA safety and health standards are subject to penalties and other serious infractions. OSHA is committed to strong, fair, and effective enforcement of safety and health requirements in the workplace. OSHA inspectors, called compliance safety and health

	officers, are experienced, well-trained industrial hygienists and safety professionals whose goal is to assure compliance with OSHA requirements and help employers and workers reduce on-the-job hazards and prevent injuries, illnesses, and deaths in the workplace. Normally, OSHA conducts inspections without advance notice. Employers have the right to require compliance officers to obtain an inspection warrant before entering the worksite. https://www.osha.gov/OshDoc/data_General_Facts/factsheet-inspections.pdf The BP implements a robust health and safety program to ensure the safety of all employees and contractors that enter BP managed sites. The Health and Safety program includes regular safety meetings, in depth job specific training, safety representation at the local level for all BP sites and an organized platform for ensuring safety training compliance. The safety culture with BP sites is prevalent when communicating with employees. The BP has created a culture of "owning safety". One where we are proud to showcase and put significant resources to ensuring we are leading the way in wood products industry safety. The government oversight of safety and health of forest workers at the national level, including the use of enforcement officers and compliance monitoring, and paired with the BP's internal safety program, there is sufficient evidence to conclude "low risk" for this indicator.
Means of Verification	• OSHA laws and regulations • OSHA safety audits • BP Safety Audits • BP Safety Procedures • Third Party Audits
Evidence Reviewed	• OSHA laws and regulations • OSHA safety audits • BP Safety Audits • BP Safety Procedures • Third Party Audits
Risk Rating	**X 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	In general, the stands in south eastern US considered to contain high carbon stocks as this indicator is interpreted are wetlands and other areas typically not targeted for timber development. The BP does not source feedstock from short rotation crops which would have been established after January 2008 and previously containing high carbon stocks.

As indicated in 2.3.1, forest stocks continue to grow in all areas of the supply base. Furthermore, the growth in carbon can be quantified as indicated in the following table.

Change in Carbon Stocks in Supply Area
Source: USDA Forest Inventory Anaylsis Data

State	Time Period*	Live Above/Below Ground	Gain/(Loss)	Change
Alabama	2000 (2000) 2006-2015 (2015)	982,703,863,601 1,181,049,383,557	198,345,519,956	20.2%
Mississippi	2006 (2006) 2009-2015 (2015)	915,626,606,511 1,036,141,248,303	120,514,641,793	13.2%
Georgia	1997 (1997) 2011-2015 (2015)	1,115,366,654,316 1,328,280,807,674	212,914,153,358	19.1%
Louisiana	2001-2008 (2005) 2001-2014 (2014)	680,819,793,494 1,433,156,552,142	752,336,758,647	110.5%
Florida**	2002-2007 (2007) 2009-2015 (2015)	643,558,440,567 1,445,035,043,601	801,476,603,034	124.5%
Texas**	2001-2003 (2003) 2009-2015 (2015)	525,105,691,104 539,616,344,112	14,510,653,009	2.8%
Tennessee	1999 (1999) 2010-2014 (2014)	845,705,662,232 952,016,096,982	106,310,434,750	12.6%
South Carolina	1999-2001 (2001) 2009-2015 (2015)	622,857,503,150 761,893,078,891	139,035,575,741	22.3%
North Carolina	2002 (2002) 2009-2015 (2015)	1,075,713,467,445 1,244,742,795,601	169,029,328,156	15.7%
Arkansas	2002-2005 (2005) 2011-2015 (2015)	881,412,941,815 986,003,798,364	104,590,856,549	11.9%
Missouri**	1999-2003 (2003) 2011-2016 (2016)	673,991,980,749 779,794,188,290	105,802,207,541	15.7%

* Parentheses numbers indicate actual year listed on the report
** Includes all counties

Much of the supply base area is found in forestry dominant communities. The land owners are incentivized to maintain ecosystem function and minimise environmental impacts to optimize stand health and maintain a steady flow of revenue from timber products.

With the 2008 Farm Bill, Congress tasked the states and territories with assessing the condition of trees and forests within their boundaries, regardless of ownership, and developing strategies to: conserve working forest landscapes, protect forests from harm, and enhance public benefits from trees and forests.

The resulting state Forest Action Plans—completed in 2010 and reviewed in 2015 by all 59 states and territories—offer practical and comprehensive roadmaps for investing federal, state, local, and private resources where they can be most effective in achieving national conservation goals. All states have a state forest action plan that sets outs collaborative goals for managing impacts on water quality, however many BMP's also set targets and management strategies for harvest planning, equipment impacts, handling of dangerous goods (fuels, oils) and other strategies that ensure a collective landscape level approach is brought to forest and harvesting practices in the supply base.

https://www.stateforesters.org/forest-action-plans/

The Forest Stewardship Program (FSP) provides assistance to owners of forest land where good stewardship, including agroforestry practices, will enhance and sustain multiple forest resources and contribute to healthy and resilient landscapes. The program also helps create jobs in rural communities by sustaining local markets for forest products and increasing demand for qualified private forestry consultants and state field foresters.

The Forest Stewardship Program focuses on three main areas:

- Assisting landowners to actively manage their land and related resources
- Keeping land in a productive and healthy condition for present and future owners
- Increasing the economic benefits of land (timber harvesting, for example) while conserving the natural environment

There are currently more than 25 million acres being managed under Forest Stewardship Plans.

https://www.fs.usda.gov/managing-land/private-land/forest-stewardship

State BMP Manuals address the management of forest health factors such as fire, insect and disease.

State Forest Action Plans provide a set of Best Management Practices (BMP's) that vary by state and are tailored to the states current priorities with regard to forest management objectives. State BMP's are a tool used by the BP to demonstrate that suppliers investigate the implementation rates of the BMP's and whether any BMP's non-conformities have been issued against the supplier. The state also conducts BMP inspections to monitor the effectiveness of BMP's at achieving land management objectives.

The latest data on BMP implementation and BMP categories are as follows:

Table 1—Southeastern survey results for forestry BMP regulation, BMP manual year, implementation rate (%), and implementation year

State	State regulation	BMP manual	Implementation rate (%)	Implementation year
Alabama	Quasi-regulatory	2007	97	2010
Arkansas	Non-regulatory	2002	87	2011
Florida	Quasi-regulatory	2008	99	2011
Georgia	Non-regulatory	2009	97	2011
Kentucky	Regulatory	2008	94	2012
Louisiana	Non-regulatory	2000	96	2012
Mississippi	Non-regulatory	2008	91	2010
North Carolina	Quasi-regulatory	2006	85	2011
Oklahoma	Non-regulatory	1991	95	2010
South Carolina	Quasi-regulatory	2012	91	2012
Tennessee	Non-regulatory	2003	84	2010
Texas	Non-regulatory	2010	95	2011
Virginia	Quasi-regulatory	2011	90	2012

Table 2—Forestry BMP implementation rate results by individual BMP categories. Minimum, maximum, average, and number of states that reported data for that specific BMP category

BMP category	Minimum (%)	Maximum (%)	Average (%)	Number of states
Timber harvest	88	99	95.0	8
Forest roads	84	99	91.3	13
Skid trails	75	100	89.7	10
Log landings	92	100	95.8	9
Stream crossings	72	98	89.2	13
SMZs	86	98	93.2	13
Wetlands	70	100	94.1	9
Reforestation	95	100	97.6	7
Mechanical site preparation	74	99	91.6	9
Chemical site preparation	93	100	98.6	8
Pesticide	98	100	99.6	5
Fertilizer	100	100	100.0	2
Prescribed burning	60	100	87.4	8
Wildfire suppression	100	100	100.0	2
Wildfire rehabilitation	100	100	100.0	1
Public lands	94	100	97.8	5

Whether they are regulatory, quasi-regulatory, or non-regulatory, BMPs are utilized in all states in the supply area and their use is effective as a tool to monitor harvesting practices including the application of herbicides, pesticides and historical insect/disease management plans. Monitoring of BMP implementation is a core function of the BMP process and implementation rates are above 90% as concluded from the audits conducted. This is a high degree of compliance and add to the effectiveness of BMP's as a mitigation measure.

Supply Base BMP Manuals can be found at the following sites:

Alabama:
http://www.forestry.alabama.gov/Pages/Management/Forms/2007_BMP_Manual.pdf
Mississippi:
https://www.mfc.ms.gov/sites/default/files/Entire_bmp_2008-7-24_2.pdf
Georgia:
https://treeordzone.files.wordpress.com/2017/04/georgias-best-management-practices-for-forestry.pdf
Louisiana:
http://www.ldaf.state.la.us/wp-content/uploads/2014/04/BMP.pdf
Florida:
https://www.fdacs.gov/ezs3download/download/25527/516407/Media/Files/Florida-Forest-Service-Files/silvicultural_bmp_manual.pdf
Texas:
https://tfsweb.tamu.edu/uploadedFiles/Sustainable/bmp/Publications/BMP%20Manual_March2014-web.pdf
South Carolina:
https://www.scforestry.org/best-management-practices.htm
North Carolina:
https://www.ncforestservice.gov/water_quality/bmp_manual.htm
Tennessee:
https://www.tn.gov/content/dam/tn/agriculture/documents/forestry/AgForBMPs.pdf
Arkansas:
https://www.uaex.edu/environment-nature/water/quality/forest-bmps.aspx
Kentucky:
https://forestry.ca.uky.edu/files/for_130_bmp_guide_small.pdf

	Missouri: https://mdc.mo.gov/sites/default/files/downloads/woody_biomass_harvesting_bmp_book.pdf
Means of Verification	• Supplier Questionnaires • Maps • State BMP Manuals • BMP implementation Rates • FIA Data
Evidence Reviewed	• Supplier Questionnaires • Maps • State BMP Manuals • BMP implementation Rates • FIA Data
Risk Rating	**X 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	Research demonstrates that forest management in the U.S. does not diminish the capability of the forest to serve as sinks. According to the U.S Forest Service: “U.S. forests currently serve as a carbon 'sink', offsetting approximately 13% of U.S. emissions from burning fossil fuels in 2011, and from 10 to 20% of U.S. emissions each year. Climate change may affect the ability of U.S. forests to continue to store and sequester carbon.” http://www.fs.usda.gov/ccrc/topics/forest-carbon Research addressing harvest impacts on soil carbon storage in temperate forests indicates that there are no significant impacts on mineral soils and their capacity to serve as carbon sinks. See Forest Ecology and Management research article: http://www.nrs.fs.fed.us/pubs/jrnl/2010/nrs_2010_nave_001.pdf Additionally, US Forest service research indicates that forest carbon stocks increased across all regions of the United States from 1990 to 2016. In forests that remained forests, carbon accumulation from net forest growth resulted in net annual accumulation in all regions. The North (Missouri) and South (all other states in the supply basin) regions demonstrated an increasing rate of net forest growth as indicated in Figure 9 below.

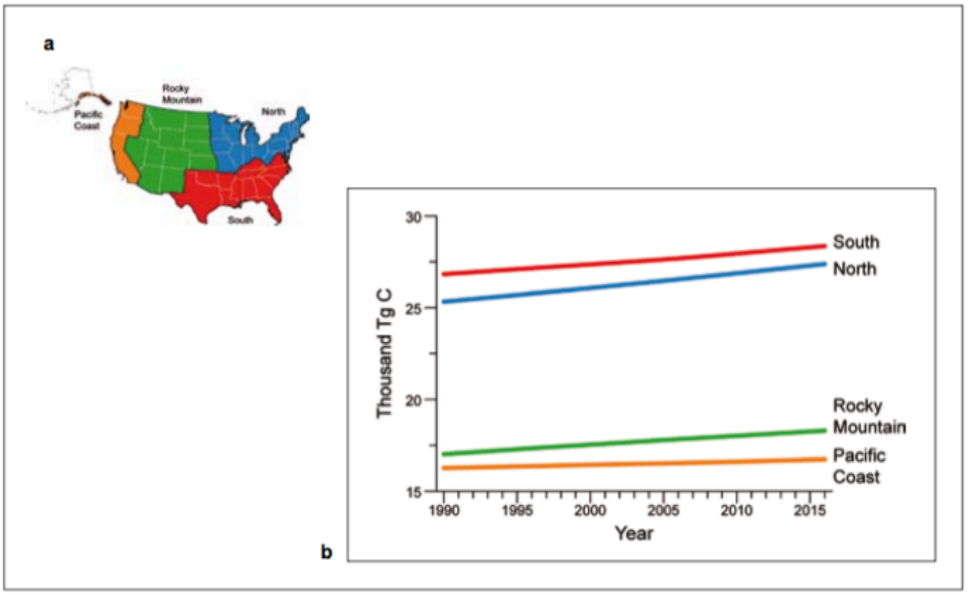


Figure 9.—Regional disaggregation of forest carbon analysis, 1990-2016: (a) regional delineations, (b) U.S. forest carbon stocks, and (c) annual forest carbon flux delineated by forests remaining forest (net forest carbon accretion) and land use change (net carbon transfer into forest land use) by region.

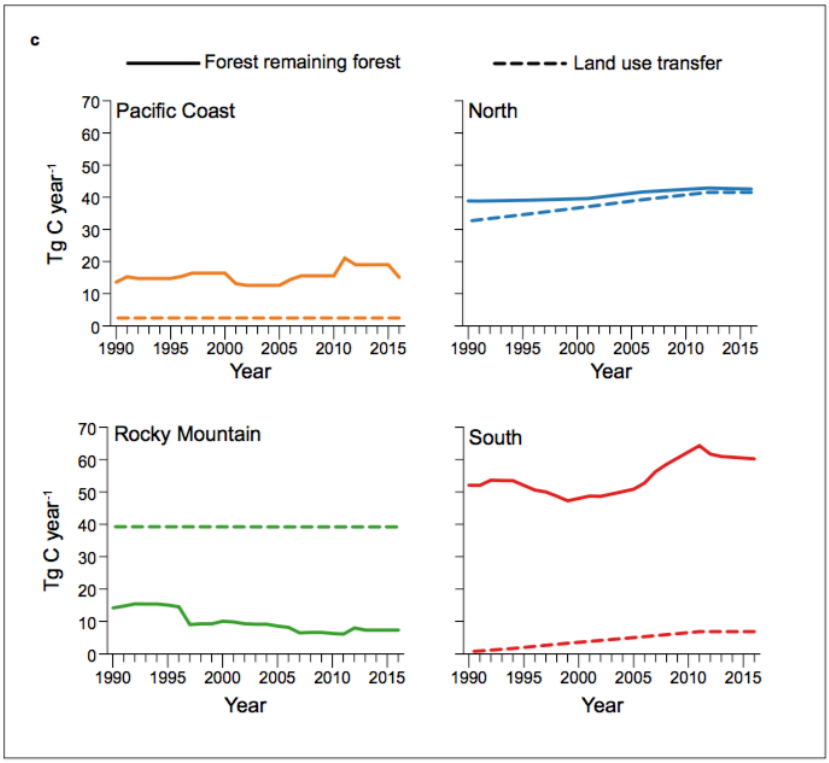


Figure 9 (continued).—Regional disaggregation of forest carbon analysis, 1990-2016: (a) regional delineations, (b) U.S. forest carbon stocks, and (c) annual forest carbon flux delineated by forests remaining forest (net forest carbon accretion) and land use change (net carbon transfer into forest land use) by region.

Source:
Woodall, Christopher W.; Coulston, John W.; Domke, Grant M.; Walters, Brian F.; Wear, David N.; Smith, James E.; Andersen, Hans-Erik; Clough, Brian J.; Cohen, Warren B.; Griffith, Douglas M.; Hagen, Stephen C.; Hanou, Ian S.; Nichols, Michael C.; Perry, Charles H.; Russell, Matthew B.; Westfall, James A.; Wilson, Barry T. 2015. The U.S. forest carbon accounting framework: stocks and stock change, 1990-2016. Gen. Tech. Rep. NRS-154. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 49 p.

	Based on the significant available data on carbon stores in the south east US through FIA data and analysis, there is sufficient evidence to conclude low risk for this indicator.
Means of Verification	• FIA carbon stock data • Third party reports • Attached research data
Evidence Reviewed	• FIA carbon stock data • Third party reports • Attached research data
Risk Rating	**X 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 FSC NRA has concluded low risk for this indicator based on the following findings: The agencies responsible for oversight of the products of agricultural modern biotechnology are the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (USDA-APHIS), the U.S. Environmental Protection Agency (EPA), and the Department of Health and Human Services' Food and Drug Administration (FDA). Depending on its characteristics, a product may be subject to review by one or more of these agencies. The United States does not have any federal legislation that is specific to genetically modified organisms (GMOs). Rather, GMOs are regulated pursuant to health, safety, and environmental legislation governing conventional products. The US approach to regulating GMOs is premised on the assumption that regulation should focus on the nature of the products, rather than the process in which they were produced. Currently there are no GMO trees for commercial timber use. Fruit (papaya/plum) trees can be found as GMO, as well as research plots. Currently an application for commercial timber use of freeze tolerant GM eucalyptus is being evaluated for potential use in the US. In 2017, the USDA sought public input on a draft environmental impact statement and preliminary plant pest risk assessment as part of its review of the GM Eucalyptus. No further decisions have been made. If this petition will be approved there will be no requirements to register/regulate the MU using GMO trees, every GMO that has been deregulated has been analysed by FDA, USDA, and/or EPA and has thus been regulated prior to this. In 2012, ArborGen submitted a letter to the USDA requesting confirmation that genetically engineered loblolly pine (Pinus taeda) does not need to be regulated by the agency due to the method used to modify the species. The USDA responded in 2014, confirming that these GE species are not a regulated article. Further correspondences with experts (Experts 2,3,4) indicates that these species are not being used commercially in the United States.

	Currently there is no use of GMO trees for commercial use, but the US might be close to approving the use of such. If this happens it will not be possible to identify the use of that GMO to a certain MU, which is why there might be specified risk in the future. But as the situation is now in the US there are no commercial GMO timber trees. Based on the findings from the FSC NRA, there is sufficient evidence to conclude low risk for this indicator.
Means of Verification	• FSC NRA • Regulatory framework covering GMO use
Evidence Reviewed	• FSC NRA • Regulatory framework covering GMO use
Risk Rating	**X Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	**N/A**