

SCS Global Services Evaluation of Enviva Pellets Sampson, LLC Compliance with the SBP Framework: Public Summary Report

Scope Change Audit

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

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

Document history

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1 Overview

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Current report completion date: 28/Jan/2019

Report authors: Sebastian Haefele & Theodore Brauer

Name of the Company: Enviva Pellets Sampson, 11499 Faison Hwy, Faison, NC 28341, USA

Company contact for SBP: Don Grant, Franklin, VA, USA, +1.757.304.5080, don.grant@envivabiomass.com

Certified Supply Base: Wilmington regional supply base, includes counties from the coastal plains to the piedmont regions of Norther Carolina, South Carolina and Virginia.

SBP Certificate Code: SBP-04-06

Date of certificate issue: 31/Jan/2017

Date of certificate expiry: 30/Jan/2022

This report relates to the Scope Change Audit

2 Scope of the evaluation and SBP certificate

Certification scope: Production of wood pellets, for use in energy production, at Enviva Pellets Sampson and transport to the North Carolina State Ports Authority for storage, aggregation, vessel loading and shipping. It also covers a Supply Base Evaluation for the sourcing of feedstock from the states of North Carolina, South Carolina, and Virginia. The scope includes communication of Dynamic Batch Sustainability Data.

3 Specific objective

The object of this expansion of scope audit was to confirm:

- The Biomass Producer's management system is implemented across the entire scope of certification (SBP ST 4, & 5).
- Implementation of Dynamic Batch Sustainability Data communication as per Instruction Document 5D.
- Organization conforms with the requirements at critical control points; including supplier documentation with feedstock properties (trip/ scale tickets) and incoming loads database, material accounting records, credit ledgers for tracking of volumes, feedstock types and claims, spreadsheets with total volume of pellets produced, staff awareness assessed through interviews.
- Collection assessment information
- Generating assessment findings

4 SBP Standards utilised

4.1 SBP Standards utilised

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

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

4.2 SBP-endorsed Regional Risk Assessment

Not applicable: No SBP endorsed Regional Risk Assessment for supply area.

5 Description of Company, Supply Base and Forest Management

5.1 Description of Company

Enviva Holdings, LP (“Enviva”) Sampson is under the umbrella of Enviva Holdings LP, which encompasses six pellet mills in south eastern and eastern United States. Enviva produces approximately 2.3 million metric tons of wood pellets annually. Pellets are primarily delivered to power plants in the United Kingdom and Europe.

The Enviva Sampson pellet mill is located near Faison, NC in Sampson County. Manufacturing began in mid-2016 and in the annual production for 2017 was 397,583 metric tonnes of pellets. The production capacity of the pellet mill is 500,000 metric tonnes of pellets per year. Pellets are transported by truck to the North Carolina State Ports Authority in Wilmington, NC for export to European utilities. In exceptional circumstances pellets may be transported to the Port of Chesapeake.

5.2 Description of Company's Supply Base

Enviva operates one pellet mill in Sampson County, North Carolina under the name Enviva Sampson. Its supply base includes 90 counties in North Carolina, 32 counties in South Carolina, and 53 counties in Virginia, encompassing a total area of 10.8 million hectares of timberland. Of that, 5.4 million hectares can be effectively sourced for the feedstock supply base. Currently, only primary material is sourced for Enviva Sampson, however, the supply base was defined to accommodate the known sawmills in the area that could potentially supply the mill with their residuals (secondary material).

100% of feedstock is sourced directly from the forest in the form of low-grade roundwood or woodchips, all of which are vetted and qualified prior to delivery. Suppliers must sign a contract with Enviva Sampson prior to first delivery. This contract requires suppliers to use duly-trained loggers during harvest, follow Best Management Practices (BMPs) for water and soil quality, and to avoid controversial sources of fiber, such as illegal logging, wood harvested in violation of traditional and civil rights, wood harvested in forests converted to plantations or non-forest use, and wood from forests in which genetically modified trees are planted.

Enviva may use forest residues, such as tree tops, limbs, deformed trees and any other wood produced during harvest that is otherwise unacceptable to other wood users in the area. Enviva's sourcing does not directly compete with other forest product industries since there are few economically viable options for low-grade material outside of pulp & paper. Due to structural changes in the pulp & paper industry and shifting demand for pulp & paper products, Enviva can accept low-grade hardwood material that used to be sold almost exclusively to local pulp mills. However, it warrants mention that pulp & paper still represents the dominant use of low-grade material with there being at least three mills within the procurement radius of Enviva Sampson. Enviva does not use sawlogs in the production of pellets, nor does the plant use any construction debris, treated wood, or post-consumer material.

Enviva's supply base includes regions with Longleaf pine (*Pinus palustris*). Longleaf pine is included in the IUCN Red List of Threatened Species because its current extent is much reduced from its historical range in the Southeastern US. However, conservation groups, such as the Longleaf Alliance, agree that establishing commercial viability for Longleaf pine products is crucial to its restoration. Enviva procures longleaf from stand thinnings or other harvest residuals that support its commercial viability, and encourages landowners to restore and continue to manage longleaf stands. Enviva will not procure fiber from natural longleaf pine stands if they are going to be converted to non-forest or another forest type.

Additional detail is provided in the Enviva Sampson Supply Base Report (SBR), which can be found on its website at the following address: <http://www.envivabiomass.com/sustainability/wood-sourcing/sustainable-biomass-partnership>

5.3 Detailed description of Supply Base

The supply base:

- Includes 10,855,282 million green metric tons of standing timber.
- Is approximately 52% mixed hardwoods and 48% conifer species.
- Currently Enviva Sampson sources predominantly primary material and 0.2% secondary feedstock.
- Enviva Sampson is still in ramping up production and it is expected to source less than 10% of the total fiber harvested in the primary supply area.
- Approximately 93% of the timberland is privately held
- employs approximately 100 local people, and its operations support an additional 50 various harvesting crews and saw mills.

A quantitative description of the Supply Base can be found in the Enviva Sampson's Supply Base Report (SBR).

5.4 Chain of Custody system

Enviva Sampson is a member of Enviva LP's PEFC multisite certificate, which it uses to track SBP compliant feedstock. Its management system and documented procedures are fully capable of determining feedstock compliance. All wood fiber is tracked from the district of origin through the mill and finally to the final bill of sale.

Enviva uses a database to gather and control information related to the feedstock such as supplier name, scale tickets, fibre type, certification, and district of origin. Enviva has appropriate control mechanisms to calculate output volumes, claims and trademark/logo approval. Additionally, Enviva conducts an annual Management Review of the commitments, programs and procedures to evaluate the overall effectiveness of the SBP management system.

6 Evaluation process

6.1 Timing of evaluation activities

Audit Activity	Items to Review / Actions	Date & time (EST)
Opening meeting	Introductions, auditor review of audit scope, audit plan and intro/update to SBP and SCS standards and protocols, client description of organization	January 25, 2019 11 am
Review of ST 5 ID-5D: procedures, staff interviews, material balances and records. DTS. For all seven mills	Auditor-selected sample of the following: material tracking system, summary of purchases and sales, invoices, shipping documents, training records, and records, tracebacks from certified outputs to eligible inputs. Interviews with appropriate number and diversity of staff to assess knowledge of CoC procedures related to their position.	11:20
Break		2:00 pm
Cont'd Review of ST 5 ID-5D.	idem	2:20-5:30
End of day 1		
Closing meeting preparation	Auditors take time to consolidate notes and review audit findings for presentation at closing meeting	January 28, 2019 3:45pm
Closing meeting and review of findings	Convene with all relevant staff to summarize audit findings, review identified nonconformities, and discuss next steps	4:00-4:30
End of audit		

Participants:

Kim Cesafsky – Enviva

Shawn Cook – Enviva

Theodore Brauer – SCS Global Services

Sebastian Hafele – SCS Global Services

6.2 Description of evaluation activities

The remote expansion of scope audit was conducted to include instruction document 5D.

Audit methods consisted of review of documentation, studies, assessments, surveys, websites, and staff interviews.

6.3 Process for consultation with stakeholders

N/A – expansion of scope audit.

7 Results

7.1 Main strengths and weaknesses

The rigour of the Greenhouse Gas data collection and calculations are a strength for Enviva Sampson. The information is detailed and laid out in an easily understood manner.

For weaknesses, please review the Surveillance audit update section where new nonconformities are listed.

7.2 Rigour of Supply Base Evaluation

N/A – expansion of scope to ID-5D

7.3 Collection and Communication of Data

Enviva Pellets Sampson has a sophisticated excel database where all Greenhouse Gas data is compiled. All compilation is conducted by one individual at Enviva, Kim Cesafsky, from the Enviva Holdings main office in Bethesda. She appropriately keeps the data for each pellet mill under the Enviva umbrella separate from the other pellet mills. For Enviva Pellets Sampson, most energy use is invoiced by the month and requires no adjustment to match the reporting period.

7.4 Competency of involved personnel

The SBE was completed by Enviva's in-house fiber procurement group who has local forestry experience and knowledge of ecological and social values associated with the supply base, applicable laws and regulations, business management practices, operation of suppliers, and the local forest resource.

Enviva's management and control systems for SBP are the same as those used to meet the SFI/PEFC CoC, which have been in place since 2012. Key personnel tasked with implementing and maintaining the management and control systems relating to SBP compliance are well trained and competent. Enviva assigned management with appropriate skills and competency to implement and execute the management and control systems relating to SBP compliance. Management interviewed during the assessment were found to be knowledgeable of the SBP requirements.

Enviva engaged a qualified third-party auditor, Scott Berg, President, R.S. Berg & Associates, Inc. to review the SBE. Scott Berg has many years of experience in auditing forestry certification programs and in the creation of supply base evaluations/risk assessments for chain of custody systems. Scott Berg also attended an SBP training session in January 2015.

7.5 Stakeholder feedback

Not applicable for second surveillance audit.

PwC conducted the initial stakeholder consultation for Enviva Pellets Cottondale's main evaluation. An update to the stakeholder consultation conducted by SCS Global Services in 2016.

7.6 Preconditions

Not applicable

8 Review of Company’s Risk Assessments

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

The auditors conducted a thorough evaluation of the supply base by visiting the correct sample number of FMUs to determine compliance with each indicator during standard 1. Result were recorded and non-conformities, if applicable, were issued.

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

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

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

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

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

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

9 Review of Company's mitigation measures

The following mitigation measures were taken to address the specified risks in the updated SBE:

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.

Suppliers are required to have an employee on each harvest site trained in the use of state BMP's and harvest sites are monitored for implementation and contractually bound to support Enviva's sustainability efforts on harvest sites. All supplier tracts are GPS located and vetted for HCV areas in advance of agreement to purchase fiber from the location. Suppliers understand Enviva's commitment to HCV protection and in areas identified by the US Endowment tracts are assessed using the Enviva Forest Conservation Program HCV Tract Approval process to ensure conformance to the Enviva Forest Conservation High Conservation Value policy.

Specified Risk

The FSC NRA designates certain control systems and procedures to identify and address potential threats to forests and high conservation value areas which are incorporated in Enviva's SBE/RA. Enviva's PEFC Chain of Custody Due Diligence System establishes the entire supply area contains no controversial sources so all of the fiber supply is SBP-controlled at a minimum. However, Enviva has knowledge that some bottomland hardwood areas in the supply region could be HCV forests. Since Enviva is striving to achieve SBP-compliant feedstock it has implemented additional controls around certain forest types. Enviva's consultation with The US Endowment for Forests and Communities identified four specific bottomland priority forest types; Cypress-tupelo swamps, Atlantic white cedar stands, Pocosins and Carolina bays. These areas were identified and mapped during the SBE/RA process as well. Enviva developed robust procedures to address potential negative impacts due to Enviva's fiber sourcing activities in the supply region.

Enviva purchases primary feedstock through supplier/vendor purchased tracts where the supplier/vendor has a harvesting agreement with the landowner. Enviva maintains a contract with the supplier/vendor which defines our expectations for how harvesting is to be conducted. Enviva's Track & Trace Program requires data collection such as species composition, stand age, harvest type, tract size, and GPS locations for all primary feedstock tracts prior to delivery. If the GPS location places the tract in one of three specific US Fish and Wildlife Wetlands Mapper water regime codes, meets the definition of a mature bottomland hardwood stand or contains a significant percentage of cypress the tract must be evaluated using the HCV Tract Approval process to determine if harvesting is the best outcome for the tract. If Enviva determines harvesting is not the best outcome for the tract then Enviva will not purchase fiber from that location.

Supplier/vendor purchased tracts, where the supplier/vendor who has a harvesting agreement with the landowner, make up the majority of primary feedstock purchases. Enviva maintains a contract with the supplier/vendor which defines our expectations for how harvesting is to be conducted. Harvesting contractors are trained in the use of state BMP's and harvest sites are monitored for BMP implementation, conformance to the harvest plan and any other tract-specific considerations.

Enviva partnered with the US Endowment for Forestry and Communities to determine if the Wilmington supply base area contains high conservation value bottomland forest types. This work identified four specific forest types of concern; Cypress tupelo swamps, Carolina bays, Pocosins and Atlantic white cedar stands. Enviva

evaluated these forest types and developed the Enviva Forest Conservation Program HCV Tract Approval process. Enviva's Track & Trace requires data collection such as species composition, stand age, harvest type, tract size, and GPS locations for all primary feedstock tracts prior to delivery. If the GPS location places the tract in one of three specific US Fish and Wildlife Wetlands Mapper water regime codes, meets the definition of a mature bottomland hardwood stand or contains a significant percentage of cypress the tract must be evaluated using the HCV Tract Approval process to determine if harvesting is the best outcome for the tract. Harvesting may be a best outcome for various reasons such as; poor forest health, insect infestations, or the adverse effects of previous high grading. If Enviva determines harvesting is not the best outcome for the tract then Enviva will not purchase fiber from that location.

Mitigation Measures

Primary Material

All vendor/producer tracts in bottomland areas are assessed using the Enviva Forest Conservation Program High Conservation Value Tract Approval process to ensure Enviva's procurement is not negatively affecting potential HCV sites. This process requires a site visit to conduct a field assessment to any potential source tract that meets the criteria described above. After the site assessment, Enviva will only agree to accept fiber from that source tract if it is determined that harvesting is the best possible outcome for that tract. This policy exceeds the minimum requirements for any CoC or DDS certification Enviva operates.

Vendors/producers are contractually required to implement appropriate BMP's. Enviva utilizes a proprietary Track & Trace Program to monitor tract information such as; BMP implementation rates, age, forest type, remaining woody ground cover, forest direct district of origin compliance and other valuable information concerning its wood supply. North Carolina, South Carolina and Virginia have active Divisions of Forestry that inspect harvesting sites to assist operators in implementing proper controls as well. Logger training programs also educate in the identification and protection of certain HCV areas.

Secondary Fiber

While the Sampson mill does not currently purchase secondary feedstocks, Enviva maintains a process for gathering data about the supply base of suppliers of this material. If the Sampson mill intends to purchase secondary feedstock in the future, the procurement staff will implement the process as described here.

Secondary feedstock suppliers receive an initial visit prior to beginning deliveries, to verify their operations and products. All sawmill and wood industry suppliers are required to complete a Residual Supplier Reporting Form, providing Enviva with information on the source of their fiber as well as any certifications and species used. Enviva includes their supply areas in our supply base evaluation and provides each supplier with feedback on their supply area, noting any areas of risk that may be present. Enviva may choose to cease deliveries from a supplier which refuses to provide the necessary data for us to properly include their supply area in our risk assessment. Enviva contacts each sawmill and wood industry supplier annually to ensure their data is accurate.

With this information, in addition to our internal expertise and knowledge of the location of the mill and the products it produces, Enviva can evaluate each supplier's ability to provide fiber that meets the SBP Feedstock Standard. Enviva works with its residual suppliers to ensure the data they have provided is complete and accurate, and will regularly check to ensure they are providing the material they have reported. In addition to an initial visit before signing a contract with a residual supplier to verify their operations and products are as-stated, Enviva can monitor the incoming products to ensure they are consistent with the data submitted annually in the Residual Supplier Data Sheet. Further, this data collection and monitoring process is now a part of Enviva's SBP implementation program, and thus is checked annually during audits. Currently, all of Enviva's residual suppliers have returned completed Residual Supplier Data Forms, and so Enviva has all the data to properly assess each suppliers supply chain, and to incorporate their source area into its SBE. Enviva will work proactively with its suppliers that fall into the "Controlled" category to achieve SBP-Compliant status via outreach, our Enviva Forest Conservation Program, mitigation measures when appropriate, and other

measures as identified. Further, if a supplier is unwilling to provide Enviva with the data required to properly assess the risk of their supply chain, then Enviva may cease to purchase fiber from those sawmills in the future.

In the Sampson supply base area, the potential for specified risk that may affect our residual supply comes from those suppliers who cannot provide data showing that they do not use material from bottomland forests Enviva has identified to be of high conservation value (HCV), based on our own internal policies. Thus Enviva must categorize some of the residual supply as SBP-controlled, instead of SBP-compliant.

Enviva evaluates each supplier, based on our knowledge of their operations, our own internal HCV evaluation procedures, our PEFC due diligence system (DDS), and the data collected through the Residual Supplier Data Form to assess whether their fiber is SBP-compliant or SBP-controlled.

If Enviva identifies and sources of fiber that do not meet the SBP standards for controlled sources, Enviva will eliminate them from the fiber supply.

SBP-compliant Sources are:

- The proportion of secondary and wood industry material received at Enviva with FSC/PEFC/SFI certified content claims (only the proportion of certified fiber is SBP-compliant).
- Other areas deemed low risk as per the assessment of this SBE. Specifically, residues from sawmills that only use commercial pine species, or suppliers where it can be verified that they do not operate in or use species from bottomland forests

SBP-controlled Sources are:

- Fiber delivered to Enviva with PEFC/FSC controlled claims
- Any other fiber delivered to Enviva that meets the requirements of our third-party certified PEFC due diligence system (DDS):
 - Enviva maintains a valid PEFC DDS that excludes controversial sources from the supply chain
 - The DDS assesses the risk of obtaining controversial sources, as defined by PEFC. As all indicators are “low risk” in our PEFC DDS, the fiber we procure is considered “controlled.”
 - If Enviva identifies any sources of fiber that are out of compliance with the DDS Enviva will eliminate them from the supply chain.

Enviva Sampson currently only has one potential residual supplier, which exclusively uses commercial pine logs. Thus all material used by Enviva Sampson is SBP-Compliant.

Locally Applicable Verifiers

- a. ENV-SFIS-01 Certified Sourcing Implementation Manual
- b. ENV-COC-01 Implementation Manual
- c. ENV-COC-03 CS Risk Assessment
- d. Pellet Wood Contract
- e. State BMP Manuals
- f. [Enviva Forest Conservation Fund](#)
- g. Track & Trace
- h. Enviva Forest Conservation Fund HCV Tract Approval Process
- i. District of Origin procedures and forms
- j. Residual Supplier Reporting Form

Considering the mitigation measure for the identified specific risks the risk of purchasing wood fiber with the potential to damage HCV areas is “low”.

2.2.3 The Biomass Producer has implemented appropriate control systems and procedures to ensure that there are key ecosystems and habitats are conserved or set aside in their natural state (CPET S8b). (HVC-2 & 3)

The FSC US National Controlled Wood Risk Assessment DRAFT identified Intact Forest Landscapes as a specified risk west of the Mississippi River. These areas are defined as 500 acres or larger road less areas or large areas containing unique attributes. Three of these regions are identified east of the Mississippi with none included in the Wilmington region supply base.

All the HCV3 Roadless Areas that exist in the supply base are owned by the United States Forest Service. As these lands are owned and managed by the US Federal Government, there are many requirements and restrictions on how and if they can be harvested. The Fish and Wildlife Service only manages land to improve habitat for important wildlife. The US Forest Service does perform harvest operations, but are required to perform extensive stakeholder consultations on all planned management activities. They are also subject to all the requirements of the US National Environmental Policy Act (NEPA) which requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions. And potential damage to these regions is a low risk.

There are no know primary forests in the Wilmington procurement region. There has been logging activity in the region starting in the 1600's producing lumber and masts for the English fleet (North Carolina Digital History, 2016). Around 1720 naval stores businesses moved into the Cape Fear region because of the abundant Longleaf pine stands (North Carolina Digital History, 2016) . Product such as turpentine, pitch and tar were used as wood preservatives for the wood ships of the period (North Carolina Digital History, 2016). The likelihood of finding Type 1 or Type 2 old growth forests in the Wilmington procurement region is low.

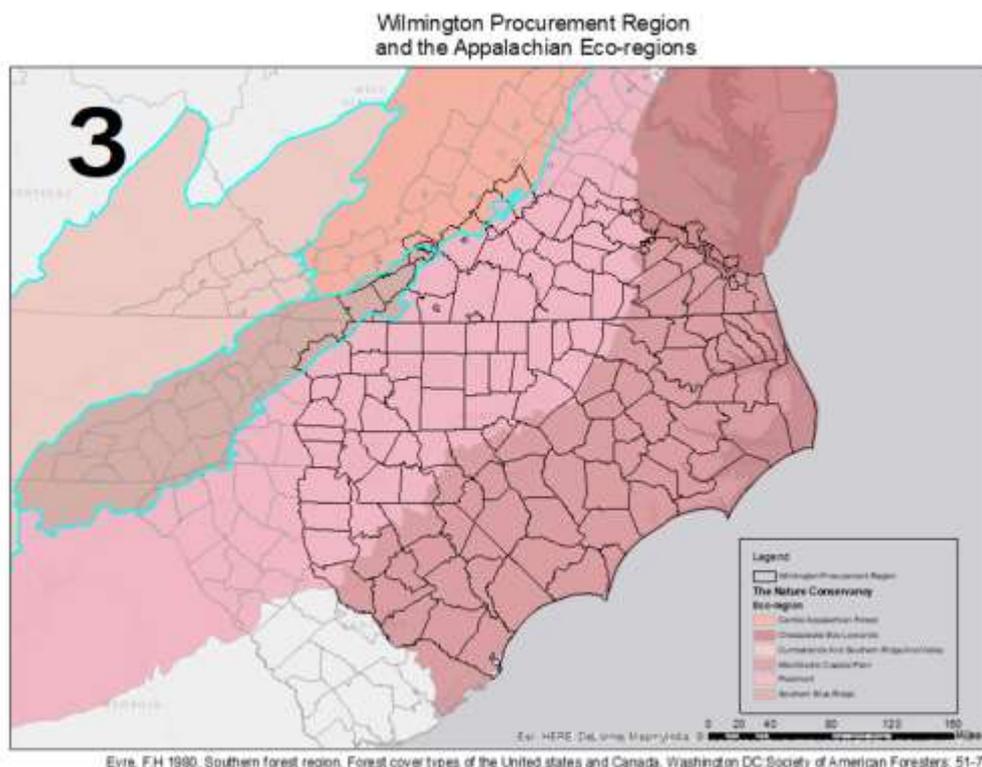
Native longleaf pine savannas are identified as Priority Forest Types (PFT), particularly for Central Alabama, Florida Panhandle and Cape Fear Arch critical biodiversity areas. With respect to longleaf pine savannas that may fall within Enviva's supply base, the State of North and South Carolina have active programs to restore longleaf pine ecosystems, in conjunction with private conservation organizations such as the Nature Conservancy and the Conservation Fund. Organizations like the Longleaf Alliance report that the acreage in longleaf forest has increased across the Southeast region from 2.8 million acres in the 1990's to approximately 3.2 million acres. More information on the Longleaf Alliance and the status of recovery efforts are available at The Longleaf Alliance website (The Longleaf Alliance, 2016).

Enviva engaged the US Endowment for Forestry and Communities to evaluate its southeastern catchment area to determine other areas of high conservation value. The Endowment consulted with leading independent academics and environmental organizations and identified four specific bottomland priority forest types; Cypress-tupelo swamps, Atlantic white cedar stands, Pocosins and Carolina bays. The [Enviva Forest Conservation Fund](#) website contains information regards each bottomland forest type. Enviva has committed five million dollars over a ten year period beginning in 2016 to fund conservation efforts targeting these forest types. The fund is administered by the US Endowment for Forestry and Communities. While each of these forest types have been part of managed forest operations for more than a century, in recent years cypress and Atlantic white cedar have not been regenerating as expected. All supplier tracts will be assessed using the Enviva Forest Conservation Program High Conservation Value Tract Approval process to ensure conformance with Enviva's commitment to protect these special forest types.

There is a specified risk for PFT in the Wilmington procurement region. Described in the FSC US Controlled Wood Risk Assessment DRAFT.

Appalachian Eco-region (Map 11)

Map 11. Wilmington Procurement Region and the Appalachian Eco-regions



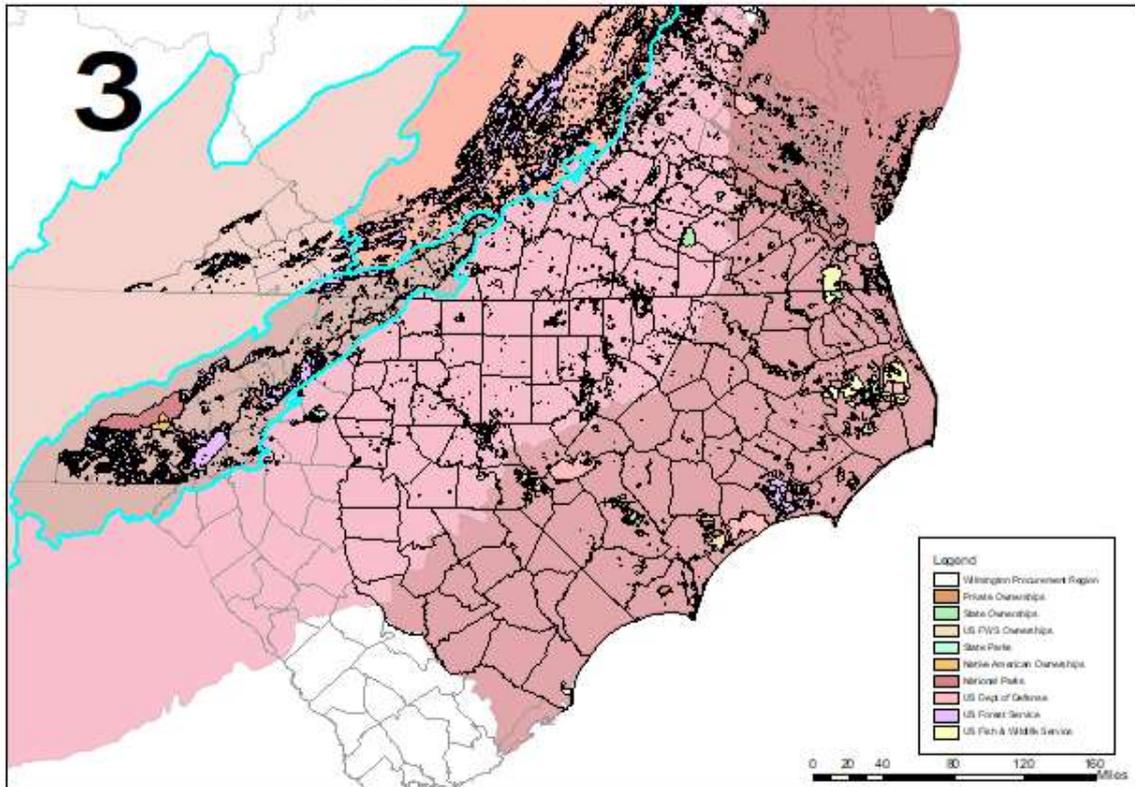
Mesophytic cove sites: Mesophytic cove sites are diverse closed canopy hardwood forest occurring on mesic, sheltered sites (coves). In addition to a very diverse flora, mesophytic coves provide habitat for rare animal species with limited ranges like the cerulean warbler and crevice salamander. The major threat to mesophytic cove sites is conversion to non-forest uses or other forest types (e.g. white pine).

Specified risk:

In the Wilmington procurement region these sites are largely controlled by national and state agencies and are on the fringe of the western fringe supply area and generally fall outside of an economic hauling radius (Illustration 1). The potential impact of a poorly executed harvest could be high but the likelihood of a raw material delivery from a mesic site reaching an Enviva Wilmington region facility is low.

Illustration 1. Wilmington Procurement Region and Potential Mesophytic & Spruce-Fir Forests Mitigation measures

Wilmington Procurement Region Eco-regions with Potential Mesophytic Coves & Spruce-Fir Forests



Eyre, F.H 1980. Southern forest region. Forest cover types of the United states and Canada. Washington DC: Society of American Foresters. 51-77

Stands that are harvested under the control of Enviva will be managed to preserve diversity and structure. A portion will left protected to preserve late successional elements. Enviva will provide education and assistance to any supplier harvesting on a mesic site. In either case state forest BMP’s will be followed.

Native Spruce-Fir Forests: Comprised of native Red spruce and Frasier fir, these habitats occur on Appalachian mountaintops, generally above 4,500 feet in elevation. They are a rare boreal forest type that is isolated from other boreal forests types, and provide necessary habitat to endemic high-elevation species.

Specified risk:

As with mesic sites, Native Spruce-Fir Forests exist in the far western region of the Wilmington procurement region and generally fall outside an economic hauling radius (Illustration 1). The sites are generally owned or controlled by national and state agencies. The potential impact of a poorly executed harvest could be high but the likelihood of a raw material delivery from a Native Spruce-Fir site reaching an Enviva Wilmington facility is low.

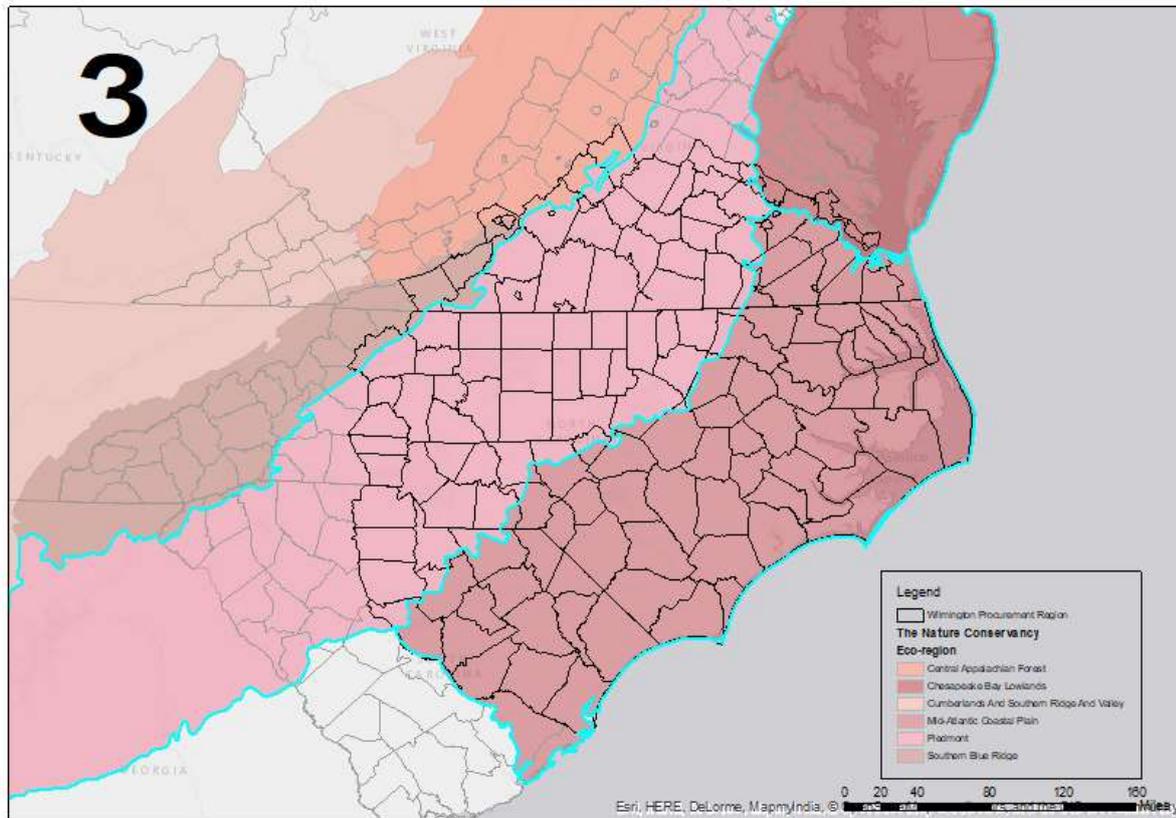
Mitigation measures:

Stands that are harvested under the control of Enviva will be managed to preserve diversity and structure. A portion will left protected to preserve late successional elements. Enviva will provide education and assistance to any supplier harvesting on a mesic site. In either case state forest BMP’s will be followed.

Southeast Eco-regions (Map 12)

Map 12. Wilmington Procurement Region and the Southeast Eco-regions

Wilmington Procurement Region
and the Southeast Eco-regions



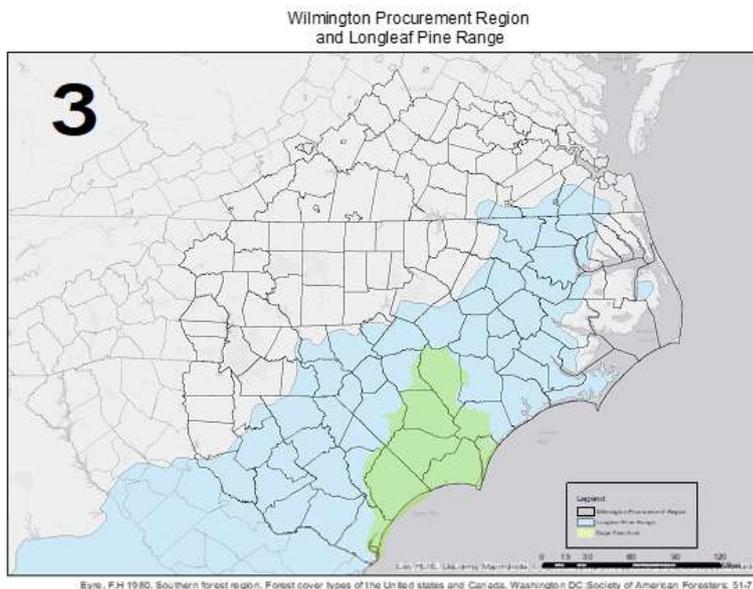
Eyre, F.H. 1980. Southern forest region. Forest cover types of the United states and Canada. Washington DC: Society of American Foresters: 51-77

Late successional bottomland hardwoods: 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 in the Mississippi valley.

Illustration 2. Wilmington Procurement Region and Potential Late Successional Bottomland Forests

sites is moderate given the nature of such stands having little to no hardwood understory and the higher value use of the pine for lumber (Illustration 3).

Illustration 3. Wilmington Procurement Region with Longleaf Pine Range & Cape Fear Arch



Mitigation measures:

Stands should managed to preserve diversity and structure and replant the site in longleaf to preserve the cover type. A portion should be left and protected to preserve stand elements. Enviva will provide education and assistance to any supplier harvesting on a mesic site. In either case state forest BMP’s will be followed. Both North Carolina and Virginia have well documented restoration programs.

All of the Southeastern States have Forestry Assessments and Strategies, as well as Wildlife Action Plans. Federal and State legislation such as the Endangered Species Act and the Clean

Water Act are policed effectively. Enviva, requires all suppliers of raw material adhere to all applicable laws and regulations and employ BMPs during harvest. Enviva also requires the use of trained loggers, which have completed training on BMPs, T&E species, identification of special sites, and more. Enviva will not contract with companies exhibiting poor performance.

Pocosins/Carolina Bays: Pocosins are shallow depressions that support palustrine wetlands on the coastal plains of the Carolinas, which in turn harbor rare native plant diversity like the venus fly trap. They generally have a pine overstory and are regularly associated with longleaf pine. Some groups are concerned that “shovel harvesting” of the mesic sites may result in undesirable regeneration.

Specific risk:

Pocosins are known to exist in the Wilmington procurement region and are often associates with longleaf pine. Pocosins are species rich and unique geological formations and the name, translated from native American means “swamp on a hill” (North Carolina Digital History, 2016) (Illustration 3).

Carolina bays are isolated depressions found primarily in Georgia and the Carolinas and range in size of less than an acre to many acres (Carolina Bays fact Sheet, 2016) with a diverse species composition dependent on water depth.

Mitigation measures:

Enviva engaged the US Endowment for Forestry and Communities to evaluate its southeastern catchment area to determine other areas of high conservation value. The Endowment consulted with leading independent academics and environmental organizations and identified four specific bottomland priority forest types; Cypress-tupelo swamps, Atlantic white cedar stands, Pocosins and Carolina bays. The [Enviva Forest Conservation Fund](#) website contains information regards each bottomland forest type. Enviva has committed five million dollars over a ten year period beginning in 2016 to fund conservation efforts targeting these forest types. The fund is administered by the US Endowment for Forestry and Communities. While each of these

forest types have been part of managed forest operations for more than a century, in recent years cypress and Atlantic white cedar have not been regenerating as expected. All supplier tracts will be assessed using the Enviva Forest Conservation Program High Conservation Value Tract Approval process to ensure conformance with Enviva's commitment to protect these special forest types. Further the stakeholder group on improved bottomland harvesting techniques that Enviva is commissioning will assist in developing further mitigation measures.

Locally Applicable Verifiers

- a. ENV-SFIS-01 Certified Sourcing Implementation Manual
- b. Wood Pellet Contract
- c. Harvesting Contracts
- d. Track & Trace Program
- e. [Enviva Forest Conservation Fund](#)
- f. ENV-COC-01 Implementation Manual
- g. ENV-COC-02 CS Procedure
- h. ENV-COC-03 CS Risk Assessment
- i. State restoration programs
- j. [Enviva Forest Conservation Fund](#)
- k. [US Endowment for Forestry & Communities](#)
- l. [FSC US Controlled Wood Risk Assessment DRAFT](#)

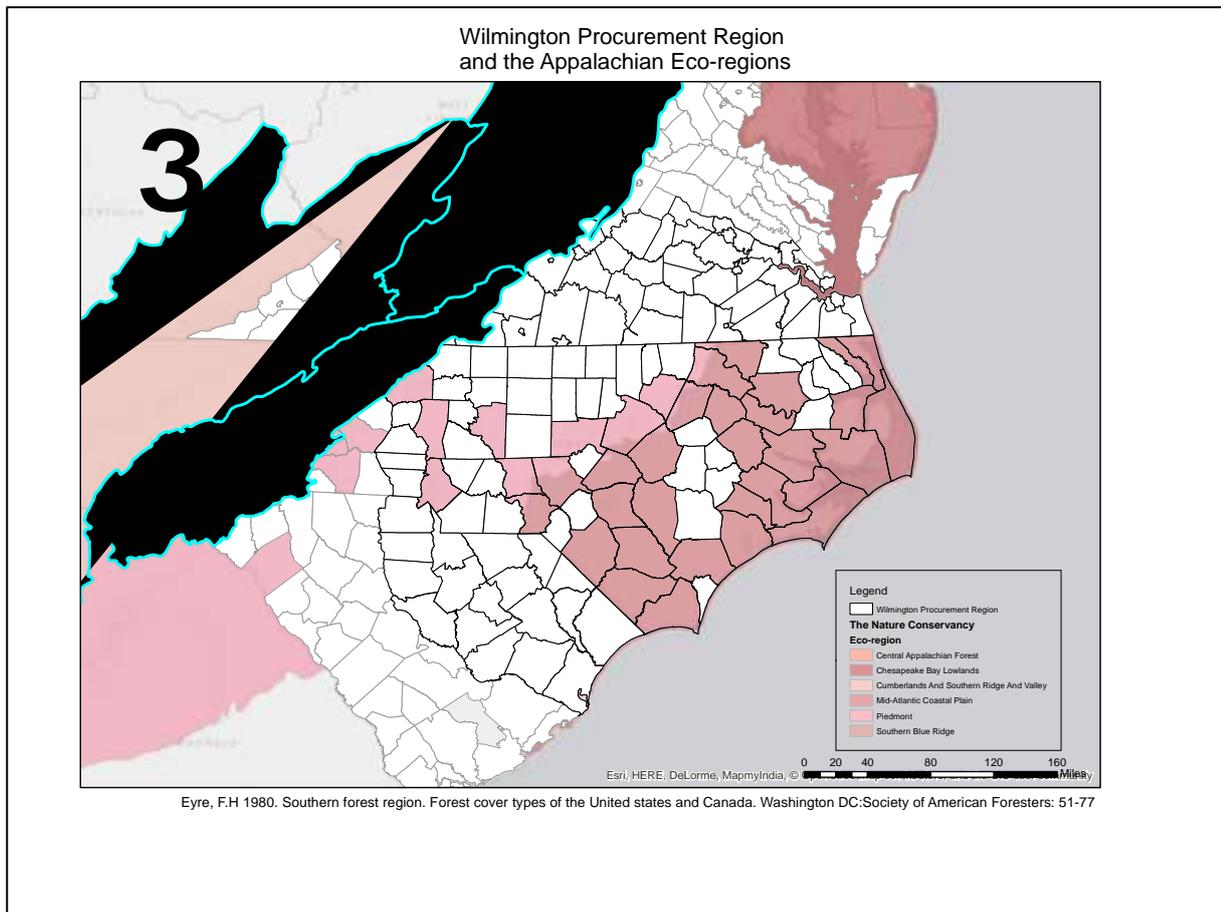
Considering the mitigation measures for the identified specific risks the risk of purchasing wood fiber from key eco-systems and habitats “low”.

2.2.4 The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b). (HVC 1)

Enviva's supply area includes the following specified risks related to biodiversity as indicated in the FSC US Controlled Wood National Risk Assessment DRAFT;

Appalachian Eco Region (Map 14)

Map 14. Wilmington Procurement Region and the Appalachian Eco-regions



Montane longleaf pine: Montane longleaf pine habitats occur 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.

Specified risk:

This area occurs in the rolling topography on the outside edge of the Coastal Plain and is similar to other Longleaf Pine ecosystems that provide a wide range of biodiversity values closely associated with native plant diversity. These open stands with abundant native groundcover provide optimal habitat for the Red-Cockaded Woodpecker and the Gopher Tortoise. The historical presence of fire in this area defined the range of Longleaf Pine and created the Montane Longleaf Pine ecosystem. As the population of this area increased and fire was withheld from the forest, the Longleaf ecosystem began a sharp decline to 3% of its original range. Further loss of this habitat could harm the species that depend upon this ecosystem.

Mitigation measures:

Landscape Level Mitigation Measures: A variety of federal, state, and private entities have led the push for Longleaf reforestation and ecosystem restoration in the Southeast United States. In order for Longleaf restoration efforts to be successful, private landowners must be assured that planting Longleaf Pine is a sensible investment. A strong market for Longleaf Pine products is an essential component of any successful Longleaf reforestation effort. The Longleaf Alliance is the regional leader in Longleaf Pine management and restoration and they recognize that markets are an important catalyst for their objectives “Current markets make longleaf management more attractive than ever.” (<http://www.longleafalliance.org>). By accepting Longleaf Pine, local mills provide the financial incentive needed to fuel Longleaf reforestation.

Tract Mitigation Measures: When harvesting operations occur in and around Longleaf ecosystems, procedures are in place to protect those species closely associated with this habitat. Protection of the Red-Cockaded Woodpecker exist in the form of the U.S. Endangered Species Act. Logger training programs also educate producers in the identification and protection of threatened and endangered species and HCV areas. A variety of federal, state, and private entities have led the push for Longleaf reforestation and ecosystem restoration in this area. In order for Longleaf restoration efforts to be successful, private landowners must be assured that planting Longleaf Pine is a sensible investment. A strong market for Longleaf Pine products is an essential component of any successful Longleaf reforestation effort. The Longleaf Alliance is the regional leader in Longleaf Pine management and restoration and they recognize that markets are an important catalyst for their objectives “Current markets make longleaf management more attractive than ever.” (<http://www.longleafalliance.org>). By accepting Longleaf Pine, Enviva Sampson and other local sawmills provide the financial incentive needed to fuel Longleaf reforestation.

Longleaf Pine Habitat Specified Risk Enviva Sampson supply base area lies is within the natural range of Longleaf Pine. This area has been defined by the Nature Conservancy as an area of specified risk for biodiversity within the draft FSC US Controlled Wood National Risk Assessment. The rich biodiversity associated with the Longleaf Pine ecosystem is a key component of this assessment of high conservation value. The open stands and abundant native groundcover present in the Longleaf ecosystem provide optimal habitat for the Red-Cockaded Woodpecker and the Gopher Tortoise. The historical presence of fire in this area defined the range of Longleaf Pine and created the Longleaf ecosystem. As the population of this area increased and fire was withheld from the forest, the Longleaf ecosystem began a sharp decline to 3% of its original range. Further loss of this habitat could harm the species that depend upon this ecosystem.

Landscape Level Mitigation Measures: A variety of federal, state, and private entities have led the push for Longleaf reforestation and ecosystem restoration. In order for Longleaf restoration efforts to be successful, private landowners must be assured that planting Longleaf Pine is a sensible investment. A strong market for Longleaf Pine products is an essential component of any successful Longleaf reforestation effort. The Longleaf Alliance is the regional leader in Longleaf Pine management and restoration and they recognize that markets are an important catalyst for their objectives “Current markets make longleaf management more attractive than ever.” (<http://www.longleafalliance.org>). By accepting Longleaf Pine, Enviva Sampson and other local mills provide the financial incentive needed to fuel Longleaf reforestation. Occasionally Longleaf Pine is planted beyond its previously defined range and in soils that are not optimal for survival and growth. Landowners that are faced with this situation may opt to replace the Longleaf with a more ecologically suited species without impacting the overall Longleaf ecosystem. Enviva will not source from natural longleaf stands that are being converted to another forest type. Enviva is a Corporate Conservation Partner of the Longleaf Alliance.

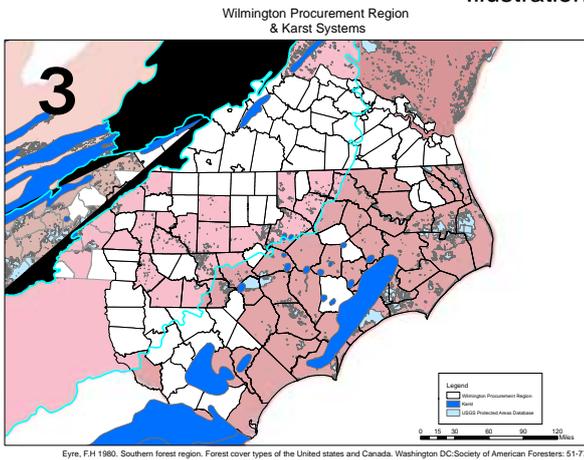
A variety of federal, state, and private entities have led the push for Longleaf reforestation and ecosystem restoration in this area. In order for Longleaf restoration efforts to be successful, private landowners must be assured that planting Longleaf Pine is a sensible investment. A strong market for Longleaf Pine products is an essential component of any successful Longleaf reforestation effort. The Longleaf Alliance is the regional leader in Longleaf Pine management and restoration and they recognize that markets are an important catalyst for their objectives “Current markets make longleaf management more attractive than ever.” (<http://www.longleafalliance.org>). By accepting Longleaf Pine, Enviva Sampson and other local sawmills provide the financial incentive needed to fuel Longleaf reforestation.

Tract Level Mitigation Measures: When harvesting operations occur in and around Longleaf ecosystems, procedures are in place to protect those species closely associated with this habitat. Protection of the Red-Cockaded Woodpecker exist in the form of the U.S. Endangered Species Act, and many states have guidelines for protecting the gopher tortoise. Given the gopher tortoise natural range the likelihood of Enviva Sampson receiving fiber from a tract with a gopher tortoise burrow is low.

Monitoring: In addition to tract monitoring audits conducted during harvest operations, Enviva monitors Longleaf Pine habitats at the landscape level. The Longleaf Alliance web site (<http://www.longleafalliance.org/>) contains a variety of publications useful for monitoring Longleaf Pine restoration efforts in this area. One of the most comprehensive sources for information about on-the-ground restoration activities is the Longleaf Partnership Council annual Range-wide Accomplishment Report 2014 Accomplishment Report. Information from these locations will be monitored annually to determine any changes to Enviva’s risk rating for HCV values within Longleaf Pine ecosystems. The Wilmington Risk Assessments and Supply Base Evaluation will be updated as needed.

Karst Habitat: There are numerous areas of high aquatic and terrestrial biodiversity in the karst habitats of the Appalachians. The aquatic resources include fresh water mussels, fish and insects. The karst systems are rich with endemic and globally rare fishes, insects and cave invertebrates. The Clinch, Powell and Duck rivers are just a few of the nationally important river systems in the region. Sediment from poor logging practices and improperly constructed and maintained roads are the primary potential forestry related threats.

Illustration 4. Wilmington Procurement Region & Karst Systems



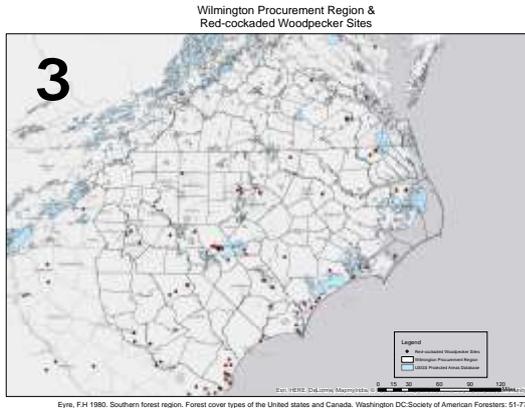
Specified risk: In the Wilmington procurement region at risk sites are largely controlled by national and state agencies and are on the fringe of the western fringe supply area and generally fall outside of an economic hauling radius (Illustration 4). Other Karst sites are located closer to the mill and have an economic hauling radius but are not considered to be at risk. The potential impact of a poorly executed harvest could be high but the likelihood of a raw material delivery from a karst site reaching an Enviva Wilmington region facility is low.

Mitigation measures:

Stands should be managed to preserve diversity and structure. A portion of the stand should be protected to preserve late successional elements. Enviva will provide education and assistance to any supplier harvesting on a mesic site. In either case state forest BMP’s will be followed. There are known Karst habitats outside of the Appalachian Eco region and in the Enviva Wilmington procurement region. Proper forestry BMP’s are required by contract and these areas are considered low risk.

Red cockaded woodpecker (RCW): These birds nest in cavities of living pine trees in the southeastern US. They are dependent on pine woodlands and savannahs that have pine trees large enough to provide nesting habitat. They will nest in all southern yellow pines but prefer longleaf pine. Foraging habitat requires open woodlands with herbaceous groundcover.

Illustration 5. Wilmington Procurement Region and Possible RCW Locations

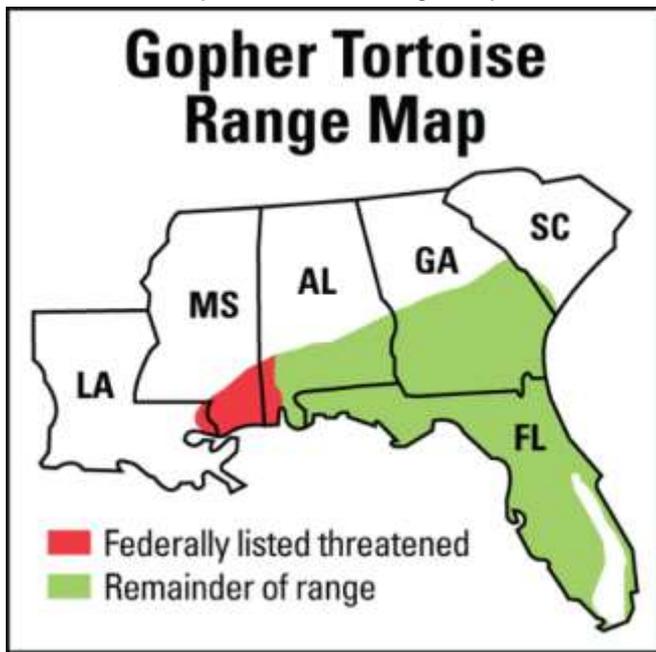


Specified risk: There are known sightings of red cockaded woodpeckers in the Enviva Wilmington procurement region. The potential raw material could be delivered to a mill is moderate given the preferred habitat description (Illustration 5).

Mitigation measures: The Red-cockaded woodpecker is a protected species. Appropriate measures to protect a red cockaded habitat is required by law if the species is found on a tract including the maintenance of an open structure and mature nesting trees of at least 12” DBH.

Gopher tortoise: A keystone species native to longleaf pine forests of the southeastern US and is listed as threatened in the western portion of its range generally due to development.

Illustration 6. Gopher Tortoise Range Map



Specified risk: Though the gopher tortoise range is in the Appalachian Eco-region it is outside of the Enviva Wilmington procurement region (Illustration 6).

Mitigation measures: None

The SFI Fiber Sourcing Standard certification provides evidence of logger training, use and promotion of forestry best management practices”, and monitoring of the use of these practices. SFI Fiber Sourcing also requires that company foresters annually conduct and use BMP monitoring information to maintain rates of conformance to best management practices and to identify areas for improved performance. Enviva will not contract with companies exhibiting poor performance. Enviva’s Track and Trace Program requires BMP compliance spot checks on a subset of suppliers to monitor on-going conformance. Each State Forestry Agency/Commission is responsible for implementing forestry best management practices as directed by the Clean Water Act and conducts periodic BMP implementation monitoring and reports are available of state wide compliance with BMPs.

Agency/Commission is responsible for implementing forestry best management practices as directed by the Clean Water Act and conducts periodic BMP implementation monitoring and reports are available of state wide compliance with BMPs.

Locally Applicable Verifiers

- a. ENV-SFIS-01 Certified Sourcing Implementation Manual
- b. Track & Trace Program
- c. ENV-COC-01 Implementation Manual
- d. ENV-COC-02 CS Procedure
- e. ENV-COC-03 CS Risk Assessment
- f. State BMP Manuals and BMP monitoring data
- g. [FSC US Controlled Wood National Risk Assessment DRAFT](#)
 - a. [SFI 2015-2019 Fiber Sourcing Standards](#)

Considering the mitigation measures for the identified specific risks the risk of purchasing wood fiber from areas without appropriate controls to protect biodiversity is “low”.

10 Non-conformities and observations

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

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

11 Certification decision

Based on the auditor’s recommendation and the Certification Body’s quality review, the following certification decision is taken:	
Certification decision:	Certification approved
Certification decision by (name of the person):	Ciara McCarthy
Date of decision:	12/Feb/2019
Other comments:	<i>Click or tap here to enter text.</i>