SBP
Sustainable Biomass Partnership

Supply Base Report for Enviva Southampton

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Version 1.1
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Document history

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Contents

1. Company Overview

Producer name: Enviva Holdings LP

Producer location: 7200 Wisconsin Ave Suite 1000 Bethesda, MD 20814

Geographic position: Enviva Pellets Southampton, Virginia
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Date report finalised: April 4, 2016

Close of last CB audit: October 1, 2015, Chesapeake, Virginia, USA

Name of CB: PricewaterhouseCoopers LLP

Translations from English: N/A

SBP Standard(s) used: Standard 1 version 1.0, Standard 2 version 1.0, Standard 4 version 1.0 and Standard 5 version 1.0

Web link to Standard(s) used: http://www.sustainablebiomasspartnership.org/documents

SBP Endorsed Regional Risk Assessment: N/A

Web link to Supply Base Evaluation (SBE) on Company website: http://www.envivabiomass.com/sustainability/

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

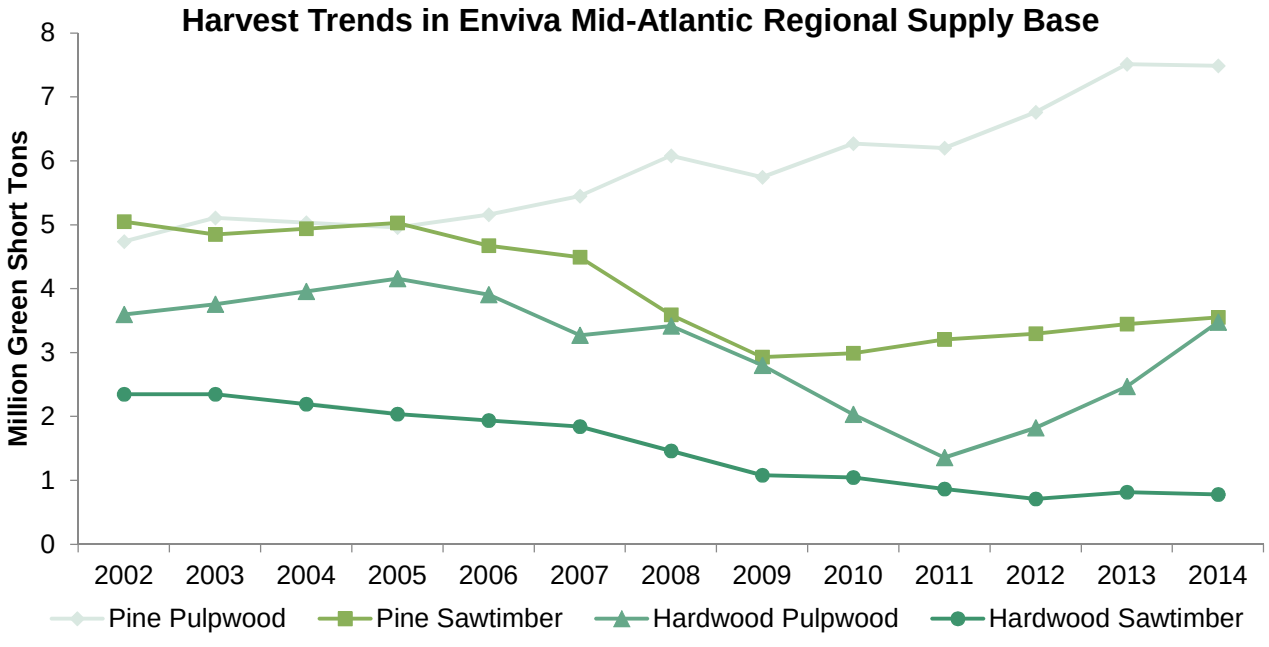
2. Description of the Supply Base

2.1 General Description

Enviva Holdings LP ("Enviva") operates 3 mills in its mid-Atlantic region: Enviva Pellets Southampton, VA, Enviva Pellets Northampton, NC and Enviva Pellets Ahoskie, NC. Each mill has an average supply base area of 120 km, which overlap, as shown in Figure 2. As such, Enviva treats the supply base areas for each mill as one large supply area identified as the mid-Atlantic, with the potential for each mill to obtain fiber from any portion of the supply base area. This mid-Atlantic supply base area includes portions of the states of Virginia and North Carolina, for primary material secondary feedstocks (sawmill and wood industry residues). Enviva made a strategic decision to establish in this area, based on shifts in regional market demand: two major consumers of hardwood pulpwood shut down and/or switched to pine consumption in the years immediately preceding Enviva's entry in the region.

Figure 1 displays historic harvest volumes by product in the supply base, according to Forest2Market's comprehensive delivered fiber database (Forest2Market Inc., 2015). The graph shows the decline in demand for hardwood pulpwood from 2006-2011, and then the subsequent demand recovery from 2011-2014 as Enviva established in the region. Hardwood pulpwood consumption has increased in recent years, but total 2014 demand was 0.7 million tons less than the high of 4.2 million tons removed in 2005; therefore total basin demand for hardwood pulpwood with Enviva operating in the region is below the recent historic highs. Moreover, the most recently available inventory data from the US Forest Service's Forest Inventory and Analysis program shows that the growth to demand ratio for hardwood in our basin is 2.33:1, meaning that net hardwood inventories are increasing and current harvest levels for this product are sustainable. The growth to demand ratio for pine in the basin is 1.73:1 (US Department of Agriculture Forest Service, 2014). Enviva's sourcing does not compete with other forest product industries: instead, it provides a market for low value forest products produced during harvests for high-value timber.

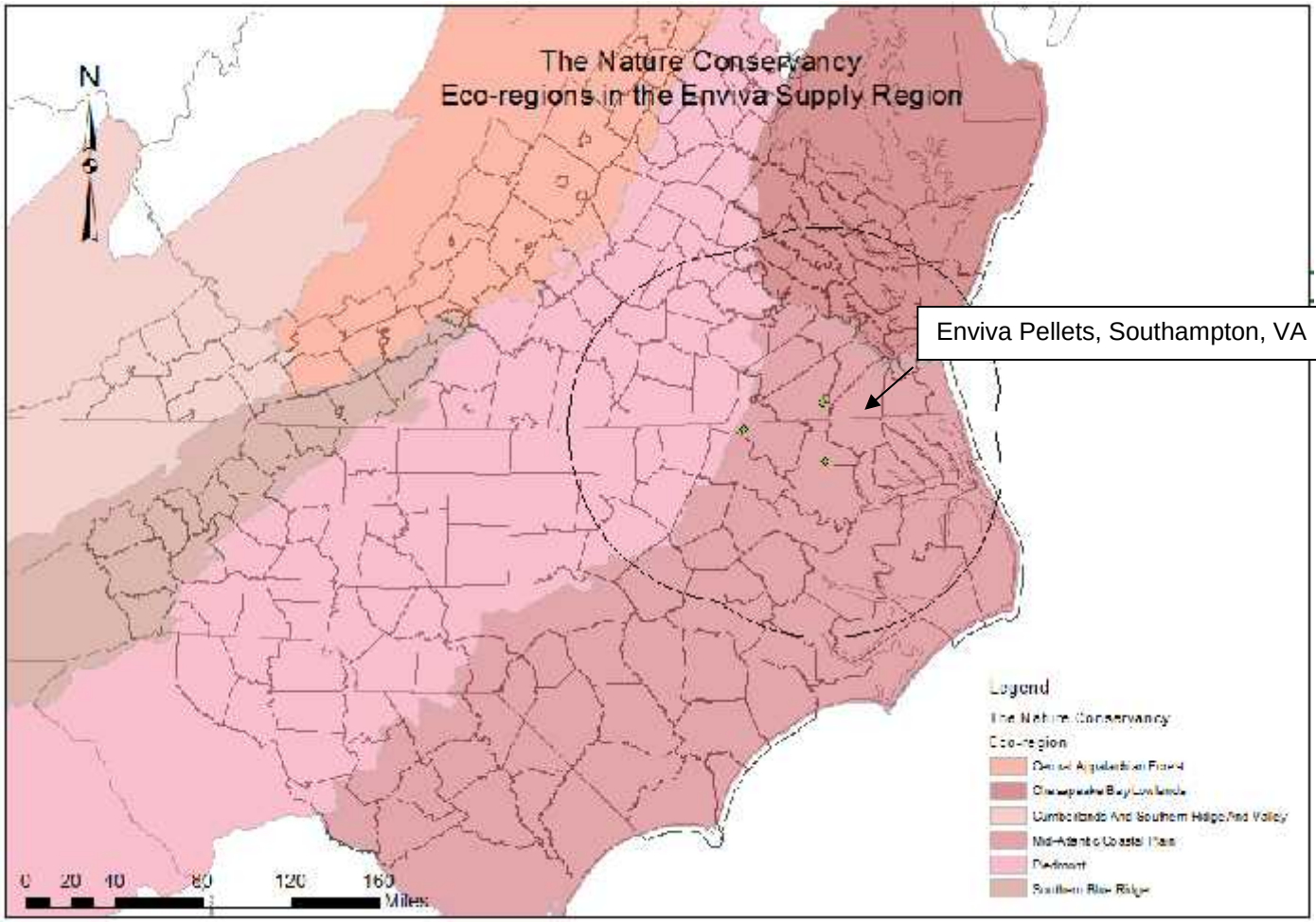
Figure 1. Harvest Trends by Product in the Mid-Atlantic Regional Supply Base



Eco-regions

The catchment area reaches from the coastal plains to the central Appalachians and includes portions of the following The Nature Conservancy (TNC) eco-regions; Central Appalachian Forests, Chesapeake Bay Lowlands, Cumberland and Southern Ridge and Valley, Mid-Atlantic Coastal Plains, Piedmont, and the Southern Blue Ridge (The Nature Conservancy, 2015).

Figure 2. TNC Eco-regions in the Mid-Atlantic Supply Base



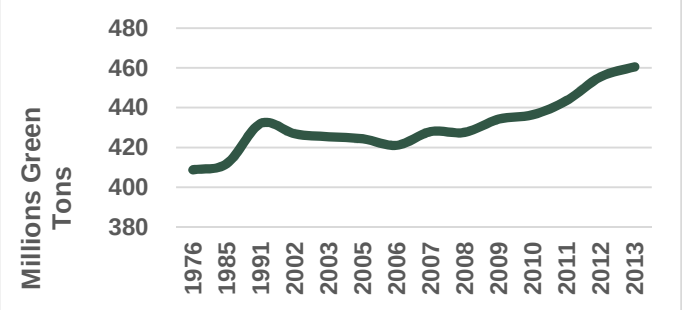
Forest cover types: acres and volumes

The Mid-Atlantic supply region is diverse, reaching from the cypress-tupelo swamps of the coastal plains to the mesophytic forests of the central Appalachians. In Figure 2 above, the black conjoined rings show the primary supply area which contains approximately 5.3 million hectares total land area with 2.9 million hectares of timberland (US Department of Agriculture Forest Service, 2014). When the supply areas of Enviva's sawmill and wood industry suppliers are taken into account, the total forested area within the extended mid-Atlantic supply region is 14.4 million hectares (US Department of Agriculture Forest Service, 2014).

The primary supply area contains approximately 410.3 million green metric tons of standing timber inventory and is approximately fifty-four percent mixed hardwoods with balance in softwood species. The forest standing stock

in the primary supply area has increased steadily since 1976 at an annualized rate of 0.26% (see Figure 3) (US Department of Agriculture Forest Service, 2014).

Figure 3. Standing Inventory in the Primary Fiber Sourcing Area



Based on the 2012 USDA Forest service timber inventory data, growth in the primary supply area exceeds removals by a ratio of 1.54:1. Due to the potential volume of sawtimber removals, the supply area also could generate up to 2.3 green metric tons of forest residues available for pellet production (US Department of Agriculture Forest Service, 2014). Further, sawtimber users in the area generate about 1.8 million dry tons of mill residues per year (US Department of Agriculture Forest Service, 2014).

Operating Scale

Enviva is just one of several industries and entities sourcing fiber in the Mid-Atlantic supply base region. In 2014, Enviva sourced about 15% of the total fiber harvested in its supply base area, all while regional annual inventory growth exceeded the volume harvested. Overall for the three mills in the mid-Atlantic region, 9% of Enviva's primary feedstock is made up of pine, while 91% of primary fiber used is mixed hardwood. At the Southampton mill specifically, 8% of the primary feedstock is made up of pine, while 92% of primary fiber is mixed hardwood.

CITES, IUCN Species

The International Union for the Conservation of Nature (IUCN) Red List of Threatened Species includes *Pinus palustris* (Longleaf pine) which does occur in the supply base region (International Union for the Conservation of Nature, 2015). Longleaf pine is included in the IUCN list because its current extent is much reduced from its historical dominance in the southeast US. However, conservation groups, such as the Longleaf Alliance, agree that creating commercial viability of longleaf pine is crucial to its restoration. Enviva's use of material from longleaf stand thinnings or other forest residues supports its commercial viability and encourages landowners to restore and continue to manage longleaf stands. Enviva will not purchase fiber from natural longleaf pine stands which will be converted to another forest type after harvest.

Further, Enviva maintains a third party audited Controlled Wood Risk Assessment which satisfies the Forest Stewardship Council™ (FSC), Programme for the Endorsement of Forest Certification™ (PEFC) and Sustainable Forestry Initiative® (SFI) Chain of Custody requirements. These certifications address the controls needed to avoid the use of CITES and/ or IUCN species concerns. None of the species used for wood pellets appears in the Convention on International Trade in Endangered Species (CITES) Appendices (Convention on International trade in Endangered Species of Wild Fauna and Flora, 2015).

General Forest Management Techniques

Forestry practices in the Mid-Atlantic region can vary greatly due to landowner demographics and forest types. There are financial and tax incentives available to forest landowners to encourage management, replanting, and riparian zone buffer incentives (Virginia Department of Forestry, 2015) (North Carolina Department of Agriculture and Consumer Services, 2015). Typically, hardwood management relies on natural regeneration of stands where forest tracts are harvested and the natural processes of seedling establishment and sprout growth from the remaining stumps (called "coppice") produce the next forest.

Forest management in bottomland/ wetland hardwood systems

The majority of bottomland hardwood forest stands in the Mid-Atlantic region have been harvested for sawtimber production for centuries. In terms of harvest techniques, as explained by the North Carolina Forest Service in its paper entitled *Managing and Regenerating Timber in Bottomland Swamps* (July 2012), "Implementing a carefully planned and executed swamp timber harvest in a manner that minimizes soil and water impacts has shown to be the practical and viable prescription for forest management in bottomland/cypress swamps." In some instances select cuts may be used for bottomland harvest, however clearcut harvest is the typical management method used in bottomland systems, as "nearly all swamp-adapted tree species require full sunlight to adequately regenerate, thus demanding a removal of the shading overstory" (North Carolina Forest Service, 2012). This harvest technique maximizes the likelihood of regeneration of desirable species post-harvest. Many of these existing bottomland hardwood stands have been poorly managed to date, such that appropriate silvicultural treatments such as clearcut embody restoration for these forests and are the best ecological outcome. For more information on bottomland hardwood forests and their silviculture, please see the excellent guide published by The Forest Guild, at http://www.forestguild.org/node/263.

Numerous state and Federal water quality regulations also govern forestry activities in swamps and wetlands, The North Carolina and Virginia Departments of Forestry describe several forest management guidelines that should be followed when harvesting in bottomland systems. In addition to following best management practices (BMPs) for wetlands as described by the Departments of Forestry in these forest types, streamside management zones (SMZs) are always established according to state guidelines. SMZ's are intended to protect water quality, to provide a visual screen, to enhance wildlife/ bird corridors and to provide an additional source of tree seed to enhance regeneration (North Carolina Forest Service, 2012). Enviva audits its suppliers' performance relative to state and Federal regulations and best management practices.

Forest management in pine systems

Pine plantations are managed under various regimes with the following typical management regime: planting, five years release spray, 15 year thinning and generally a final harvest between years 35 and 40. Other pine stands may be released after 5 years and left to grow as a mixed pine/ hardwood stand. Many pine stands are re-planted and are not intensively managed thereafter, which permits the growth of hardwood tree species within the stand, creating a mixed pine and hardwood forest.

Ownership, Land Use and Certification

The land ownership patterns in the Mid-Atlantic region are typical for the southern United States: approximately ninety-three percent of the timberland is privately held (approximately 5 million hectares). In North Carolina, about 60% of the private landownership is non-industrial (North Carolina Forestry Association, March 2016); and

in Virginia 66% is also non-industrial (Virginia Department of Forestry, March 2016). As listed in Table 1, an estimated 54% of the Mid-Atlantic region is forested, 22% is in agriculture, 10% is developed and 8% is wetlands. These four categories comprise 94% of the land cover (United States Department of the Interior Geological Survey, 2015).

Table 1. Land Cover in the Enviva Primary Fiber Sourcing Area

Cover/Land use	Hectares	%
Water	118,183	2.2%
Developed	541,148	10.1%
Mechanically disturbed	175,226	3.3%
Mining	7,850	0.1%
Naturally barren	1,161	0.0%
Forest	2,910,396	54.5%
Grassland/Shrubland	5,998	0.1%
Agriculture	1,165,277	21.8%
Wetlands	418,116	7.8%
Non-mechanically dist	0	0.0%

Major forest certification schemes such as the American Tree Farm System® (ATFS), Sustainable Forestry Initiative® (SFI), and Forest Stewardship Council® (FSC) have program participants in the Mid-Atlantic supply area. A 2007 Society of American Foresters report noted that SFI member companies operating in North Carolina and Virginia have certified 722,000 hectares, and FSC participants have certified 122,000 hectares (Alvarez, 2007). A query of the ATFS proprietary database returns just over 58,000 hectares in the ATFS program in the mid-Atlantic supply area. Table 2 lists the firms active in either FSC or SFI forest management schemes (ATFS landowners are not listed and they are private individual landowners).

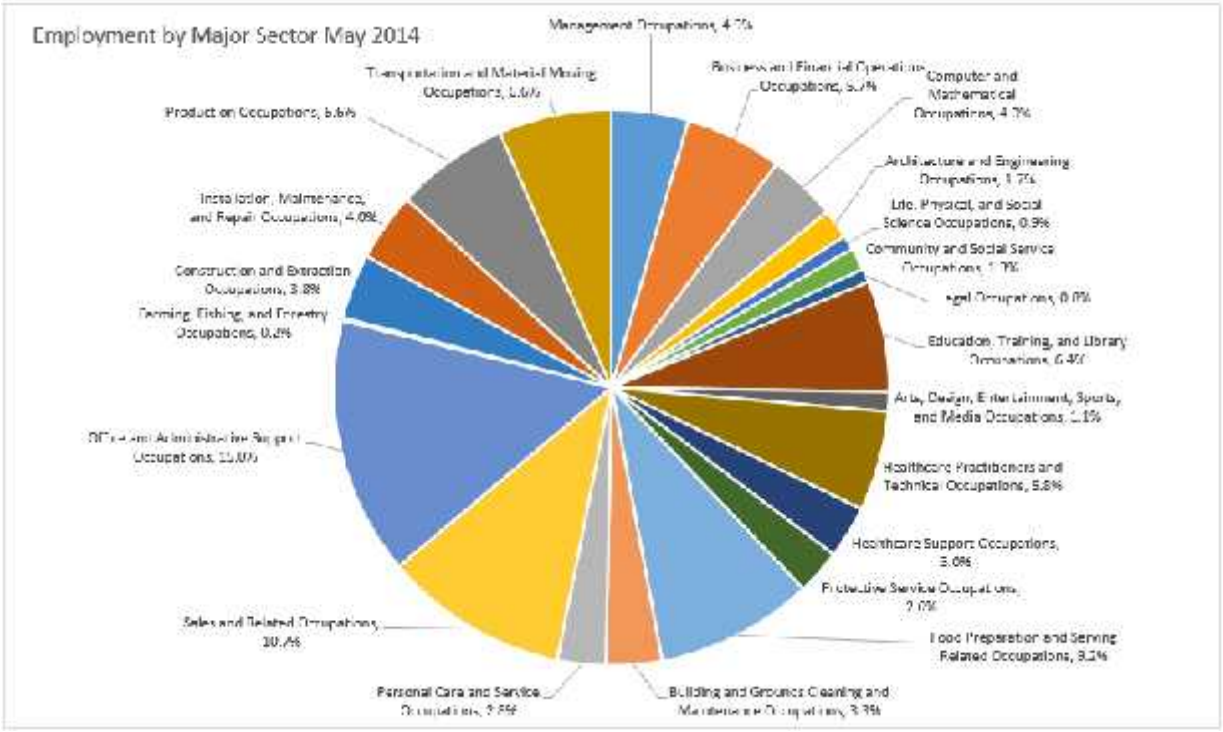
Table 2. Companies Active in SFI or FSC in the Enviva Supply Area

360 Forest Products, Inc.	Duke University	Mid Carolina Timber Company, Inc.	Sonoco Products Company
Campbell Global, LLC - East & SE Regions	Forest Investment Associates	The Molpus Woodlands Group, LLC	South Carolina Forestry Commission
Certified Forest Management, LLC	GreenLink Forest Resources, LLC	Plum Creek Timber Company, Inc.	Westervelt
Conservation Forestry, LLC	Hancock Natural Resource Group	Resource Management Services, LLC	Weyerhaeuser NR Company
The Conservation Fund	Johnson Company, Inc.	S & M Forest Management Group	Timberland Investment Resources, LLC
Crawley Timber Co	Kingstree Forest Products, Inc.	SR Jones Jr Land & Timber	

Regional Socio-economic Conditions

Regional employment is graphed below and provides a snapshot of the social mixture of the Mid-Atlantic supply area. Farming, fishing and forestry make up 0.2% of the total employment in the region. However, due to the nature of pellet production, it also supports other sectors such as transportation & material moving, production, installation, maintenance and repair, business and financial operations and office and administration occupations, which in total make up an additional 40% of the labor force. The mean income for the region is $51,174 and mean income for the employment sector including Forestry is $29,990 (United States Department of Labor, 2015). Mean income for an average mill worker in the region is $34,255 (United States Department of Labor, 2015). Enviva employs directly approximately 350 people in the region. Further, Enviva's operations supports an additional 170 various harvesting crews and saw mills, along with forest managers, feedstock and pellet transport. Local contractors are used in maintaining the mills, providing hundreds of spin-off jobs. Figure 4 illustrates employment by the major industrial groups for the two states included in the supply region (United States Department of Labor, 2015).

Figure 4. North Carolina and Virginia Employment by Major Sector



According to a report created for Enviva by Chmura Economics & Analytics, the total annual economic impact (direct, indirect, and induced impacts) of the ongoing operation of the Southampton wood pellet manufacturing plant in Virginia is estimated to be $152.4 million (measured in 2013 dollars) while supporting 261 state jobs. Aside from the direct impact, an additional indirect impact of $61.0 million and 145 jobs will benefit Virginia businesses that support the plant's operation, including local logging and trucking companies. The economic impact of the plant in North Carolina is smaller, derived entirely from both the indirect and induced impacts. The indirect impact in North Carolina is estimated to be $21.1 million and 27 jobs per year in 2013, which benefits other North Carolina businesses that support the plant's operation, including local logging and trucking companies (Chmura Economics & Analytics, 2013).

Pellet Feedstock Profile

Primary feedstock is sourced direct from the forest in the form of roundwood or wood chips from 120+/- suppliers, all of whom are vetted and qualified prior to delivering. All suppliers must sign a contract with Enviva before fiber can be delivered to an Enviva mill. The contract requires suppliers to use trained loggers during harvest, to follow best management practices for water quality, and to avoid controversial sources of fiber, such as illegal logging. Enviva foresters confirm trained logger status and ensure that loggers delivering fiber maintain their continuing education as required. All suppliers and loggers must also adhere to posted safety requirements while on Enviva property.

Primary feedstock from forest residues, such as tree tops, limbs, deformed and low grade trees, and any other wood produced during harvest that is otherwise unacceptable to other wood users in the area is delivered to an Enviva mill as woodchips. A single load of roundwood from the same harvest can contain tops, limbs, and/or small diameter or malformed understory trees that cannot be distinguished from one another through visual inspection. Enviva does not use sawlogs in the production of pellets, nor do we use any construction debris, treated wood, or post-consumer material.

Enviva also sources secondary feedstock from a variety of sawmill and wood industry suppliers. Sawmills source high-quality logs from the forest and mill them into products like two-by-fours. Wood industry suppliers use the products created by sawmills to produce products such as furniture or other assembled wood products. These feedstocks are most commonly in the form of sawdust or shavings and may be green or kiln-dried.

At the Southampton plant, the pellet feedstock has the following characteristics:

- Primary Feedstock (roundwood and forest residues direct from the forest) comprise 99.6% of the feedstock, all are SBP-compliant Primary Feedstock and 6.7% of the volume is from certified sources.
- Secondary Feedstock (Sawmill and wood industry residues) are 0.4% of the feedstock supplied by 12+/- mills, are a combination of SBP-Controlled Secondary Feedstock and SBP-Compliant Secondary Feedstock and none of the volume is from certified sources.
- Mixed Hardwoods make up 92% of the feedstock and softwood species are the remaining 8%.

As of June 2016, Enviva achieved 100% coverage of our primary feedstock through our Track & Trace monitoring program (see description of the program in the following "Track & Trace" section), meaning that we now have detailed information on the types of forests that provide our pellet feedstocks. During the first half of 2016, Enviva's three mid-Atlantic mills received feedstocks from the following sources, by volume[1]:

- 13.3% was made up of residues supplied by sawmills and wood industries.
- 55.5% was made up of hardwood and pine chips and roundwood from mixed oak-pine forests. These forests are managed for the production of pine sawtimber at low-intensities and contain a mixture of hardwood and pine trees. These forests are either planted in pine or naturally seeded from adjacent stands or seed trees, and little to no fertilizers or herbicides are applied to them throughout their life cycle. This establishes an overstory of straight, large-diameter pine trees with an understory of crooked, small-diameter hardwood trees that cannot be made into solid wood products.
- 20.3% was made up of hardwood and pine chips and roundwood from southern yellow pine forests. These are forests that were planted in pine and either managed moderately with minimal effort to prevent hardwood trees from growing in the understory, or more intensively to suppress significant understory growth, thereby increasing the forest's growth rate and yield. These forests are generally thinned 1-2 times throughout their growth cycle, meaning that certain trees are removed to reduce density in the forest and create additional room for the remaining trees to grow to sawtimber size and quality. These thinned trees are sold to low-grade consumers like Enviva.
- 6.3% was made up of hardwood and pine chips and roundwood from upland hardwood forests. These are low-intensity managed hardwood forests that are naturally seeded with an overstory of large-diameter oak, poplar, and hickory hardwood trees and a significant understory of small-diameter maple, oak, and sweetgum hardwood trees.
- 4.6% was made up of hardwood and pine chips and roundwood from bottomland hardwood forests. These are very low-intensity managed hardwood forests that are located in lowland areas and floodplains along rivers or other water bodies and which have soils that are saturated or flooded for at least part of the year. These forests contain overstories of large-diameter oak, gum, and cypress trees that originate from seedlings and sprouts arising out of stumps from previously harvested trees and a significant understory of small-diameter hardwood trees. When the landowner decides to harvest, the forest is clearcut and the stems of the large-diameter hardwood trees are sold to hardwood sawmills or furniture manufacturers, while the small diameter understory hardwood trees and tops and branches of sawtimber trees are sent to lower grade consumers like Enviva.

[1] During this time period, 15.3% of Enviva's delivered fiber was not covered by the Track & Trace program. This material was applied proportionately to all primary fiber sources (i.e. fiber from landscaping/ urban management and oak-pine, southern yellow pine, upland hardwood, and bottomland hardwood forests).

- Less than 1% was made up of wood from landscaping and urban tree management activities.

Enviva's Commitment to Responsible Fiber Sourcing

Track & Trace

Enviva has implemented management systems to ensure that the wood used to make wood pellets meets our strict sustainability requirements. Specifically, Enviva maintains a robust tracking and monitoring program to ensure that all our suppliers deliver wood that is sourced according to our expectations. First, Enviva uses our SFI Fiber Sourcing verifiable monitoring program as a basis for monitoring tract harvests. In addition, we maintain a third-party audited Track & Trace database which includes information at the tract level, including data on the forest type, age, GPS coordinates, acreage, and the percent of volume from that tract being sold to Enviva. Before agreeing to accept material from a certain tract, Enviva's Fiber Procurement Foresters must obtain this tract-level data and enter it into our database, which generates a unique tract ID. Then, upon delivery to the Southampton mill, each load is linked to that tract's ID number. As a result, Enviva knows the tract-level attributes for all the primary fiber entering the mill.

The Track & Trace data collection is supported by tract audits performed by Enviva foresters. During tract audits, Enviva foresters validate data on the tract characteristics in addition to ensuring that best management practices (BMPs) for water quality are properly implemented, special sites are properly protected, and loggers are trained, along with other metrics for responsible harvesting. In the mid-Atlantic region, Enviva only accepts wood from tracts in which the logger has completed and maintains training through a SFI-approved trained logger program. Enviva's Track & Trace data collection process indicates that Enviva receives 38% of its incoming primary material from final fellings that are typically managed in rotations =/>40 years old. If any of these monitoring programs uncover issues with incoming raw material, Enviva will contact suppliers to notify them of the issue. If needed, Enviva will cease accepting deliveries from a supplier who does not perform to our sustainability standards. Enviva will not accept further deliveries from a poorly performing supplier until the supplier demonstrates the ability to adhere to Enviva's sustainability requirements.

Identifying and protecting High Conservation Value (HCV) Areas: Partnership with the US Endowment, Enviva's tract approval process, and the Enviva Forest Conservation Fund

Enviva worked with the US Endowment for Forestry and Communities to evaluate the mid-Atlantic catchment area to identify forest types with potentially high conservation value. After consulting with leading independent academics and environmental organizations, the Endowment identified four specific bottomland priority forest types; Cypress-tupelo swamps, Atlantic white cedar stands, Pocosins and Carolina bays. See the Enviva Forest Conservation Fund website (http://envivaforestfund.org/about-the-enviva-forest-conservation-fund/about-bottomland-forests/) for additional information about these bottomland forest types. Enviva has committed not to source from high conservation value areas that might fall into one of these four categories.

While gathering Track & Trace data on specific tracts prior to purchase, the Procurement Forester must evaluate whether there is a risk that the tract might be considered HCV. This assessment is conducted on a site-by-site basis in order to evaluate the condition of the stand and to maximize the likelihood of regeneration of desirable species post-harvest. In this region, the most common priority forest type is cypress tupelo. While all of these four priority types are bottomland hardwood systems, it is important to note that not all bottomland hardwoods have high conservation value, and in fact, the majority of them are working forests that have been managed as timberlands for centuries (North Carolina Forest Service, 2012). Ninety-three percent of the forests in our mid-Atlantic fiber supply base are privately owned, meaning that their owners have considerable freedom in choosing how to manage these lands. Markets for timber from working bottomland hardwoods provide an important incentive for landowners to maintain their forests as forests.

There is no general consensus, at a site by site level, of what makes a bottomland hardwood stand also a HCV. For example, the Draft US FSC National Risk Assessment, which is the basis for Enviva's supply base evaluation, defines HCV bottomland hardwood stands as those that are 80 years or older and have the structure and composition of old-growth stands. However, FSC does not physically designate where those forests are found. Other groups may have their own descriptions of precisely what constitutes a HCV bottomland forest, based on their own organizational goals. Some are long-term focused and are interested in ensuring that bottomland hardwood forests are connected on the landscape and are still thriving in light of climate change. Others feel that all bottomland hardwood forests are inherently HCV and should be protected. Because a general consensus does not exist and we do know that most of these forests are appropriately categorized as working forests, Enviva developed its own set of site specific characteristics that can help us to determine in a granular fashion, at the site by site level, whether certain stand is actually a HCV tract.

Overall, when deciding whether to purchase primary feedstock from a given tract, Enviva's goal is to determine whether that tract will, if harvested, produce a new tract with the same desirable species content that was present before harvest. Indicators that should be considered in this decision include forest type (i.e. whether it is likely one of the four priority forest types), location, species composition, hydrology and water flow, stand age and soil saturation. When assessing a tract for HCVs, Enviva evaluates all of these important characteristics. If there is evidence based on this first level of evaluation that the site may be an HCV bottomland, then the Forester must perform a second level review which includes an on-site assessment, data collection and documentation prior to purchase. At the landscape scale, we endeavor to contribute to a working forest landscape with a diversity of age classes representing bottomland hardwood assemblages which can, over the long and short term, provide wildlife habitat, recreation, buffers for climate change, and other ecosystem services, while still playing a pivotal role in conservation and working forests in the Mid-Atlantic supply base area.

While Enviva does not source from areas that might be deemed too ecologically sensitive, because we work in landscapes that are nearly all privately owned with many forest products industry actors, we cannot guarantee that the areas that we do not source will remain intact. In order to ensure that these special places can remain so, Enviva created the Enviva Forest Conservation Fund (http://envivaforestfund.org/) to work toward protecting and conserving working forest landscapes in ecologically sensitive bottomland hardwood ecosystems. Enviva has committed five million dollars over a ten-year period to fund conservation efforts targeting these forest types. The fund is administered by the US Endowment for Forestry and Communities and the first round of grant awards, protecting more than 2000 acres of bottomland hardwood forests in NC and VA, were awarded in May 2016.

Stakeholder engagement on Bottomland/ Wetland Hardwood Forest Management

Recognizing that the stakeholder community overall has substantial work to do to identify what specifically constitutes HCV, and to understand best practices in bottomland/ wetland hardwood systems, Enviva and the US Endowment co-convened a Bottomland/ Wetland Blue Ribbon Panel stakeholder group in May 2016 to work toward developing a system of best management practices for these priority forest types. More than 45 stakeholders representing academic, NGO, government, and industry groups spent 2.5 days together discussing the state of the art around forest management in bottomland/ wetland hardwood ecosystems. Enviva plans to release the workshop report from this effort to the public, and will continue to engage this stakeholder group in review and evaluation of our sourcing practices going forward.

Minimizing risk from Secondary Feedstock

Enviva purchases sawmill and wood industry residues in the form of sawdust, shavings, or other waste products from the milling process (Figure 5). 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. An example of the reporting sheet is in Appendix I.

2.2 Actions taken to promote certification amongst feedstock supplier

Enviva is third party certified in the three major chain of custody systems (FSC, PEFC & SFI). Enviva also maintains certification to the SFI Fiber Sourcing Standard. SFI Fiber Sourcing requires Enviva to promote responsible forestry activities and certification to our suppliers. Our staff are actively involved in the SFI Implementation Committees in Virginia and North Carolina which are groups of SFI companies that work together to elevate forestry operations on-the-ground.

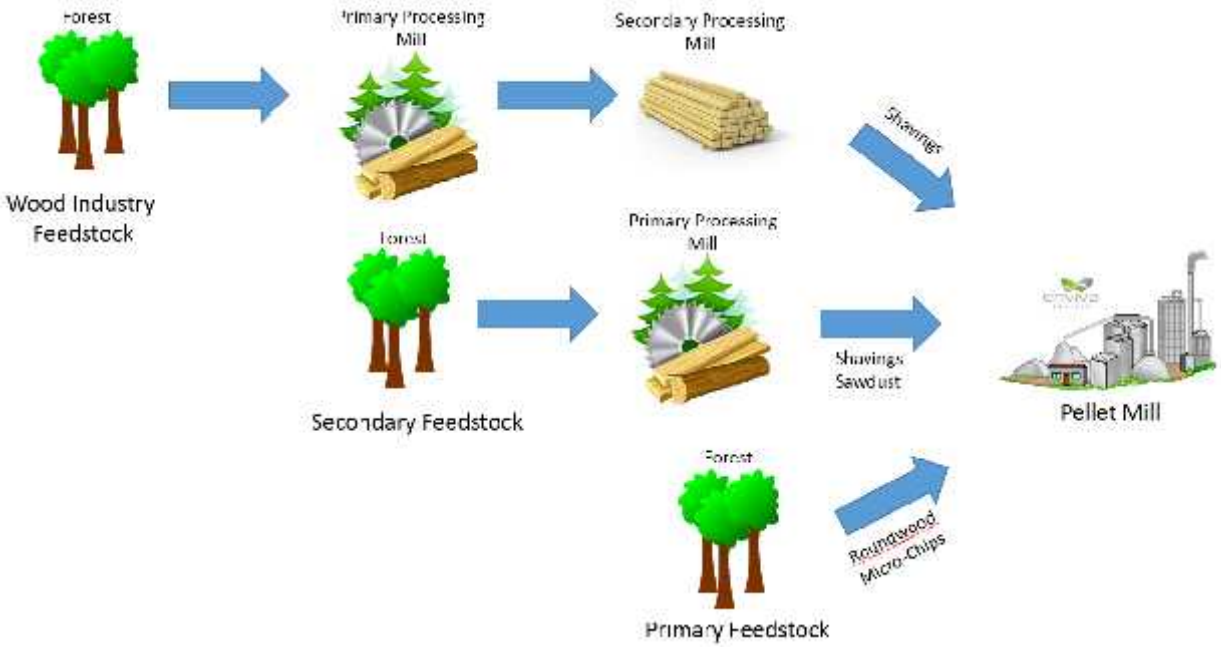
Enviva actively pursues feedstock from certified sources to encourage those landowners to maintain and expand their certified holdings. Enviva also financially supports the American Tree Farm System and has an Independent Management Group under ATFS which was created in 2015. We have staff devoted to working with landowners to recruit them either into our group or the state program, by assisting them with writing management plans and preparing for audits.

2.3 Final harvest sampling programme

Enviva's Track & Trace data collection process indicates that Enviva receives 38% of its incoming primary material from final fellings that are typically managed in rotations =/>40 years old.

2.4 Flow diagram of feedstock inputs showing feedstock type

Figure 5. Typical Process Flow Chart



2.5 Quantification of the Supply Base

Supply Base (data sources; a, b & c (US Department of Agriculture Forest Service, 2014))

a. Total Supply Base area (ha): 14.4 million hectares of forestland in the Mid-Atlantic Supply Base (primary, sawmill and wood industry fiber). Primary fiber sourcing region contains 2.9 million hectares.
b. Tenure by type in the Mid-Atlantic Supply Base (ha):

Table 3. Tenure in millions ha

Ownership type	Entire Supply Area	Primary Supply Area
Private	12.2	6.8
Federal	1.4	0.2
State/local	0.7	0.1

c. Forest by type in the Mid-Atlantic Supply Base (ha):

Table 4. Area of Forestland by Major Forest-type Group

Major Forest type Groups	ha
White - red - jack pine	101,944
spruce - fir	7,951
Longleaf - slash pine	191,640
Loblolly - shortleaf pine	3,961,243
Other eastern softwood	44,830
Exotic softwoods	1,242
Oak - pine	1,699,287
Oak - hickory	5,438,239
Oak - gum - cypress	1,162,427
Elm - ash - cottonwood	421,862
Maple - beech - birch	160,025
Aspen - birch	2,250
Other hardwoods	53,393
Exotic hardwoods	26,630
Nonstocked	125,253
Total	14,398,306

d. Forest by management type in the Mid-Atlantic Supply Base (ha):

- Mixed Hardwoods comprise 69% of the forested hectares. With the exception of the small amount (26,630 ha) of exotic hardwoods, these forests are typically naturally managed, meaning they are left to regenerate and grow on their own, without interventions such as herbicides or thinning.
- The remaining 31% of forests are softwood. Overall, although many pine stands are “planted” they are not intensively managed plantations with little or no understory; instead, once established they are left to grow and routinely have a hardwood dominated understory. Therefore, it is difficult to determine the exact percentage of true plantations in the region.

e. Certified forest by scheme (ha): (e.g. hectares of FSC or PEFC-certified forest)

- SFI: 722,000 ha (Alvarez, 2007)
- FSC: 122,000 ha (Alvarez, 2007)
- ATFS: 58,000 ha (from proprietary ATFS database)

f. Total volume of Feedstock: 800,000-1,000,000 metric tonnes
g. Volume of primary feedstock: 800,000-1,000,000 metric tonnes
h. Percentage of primary feedstock (g), by the following categories.
   - Forest Stewardship Council: 0.0%
   - Program for the Endorsement of Forest Certification: 6.7%
   - Not certified to an SBP-approved Forest Management Scheme: 93.3%
i. All species in primary feedstock, including scientific name

Table5. Primary Feedstock Species

Common name	Scientific name	Common name	Scientific name	Common name	Scientific name
American beech	Fagus grandifolia	Live oak	Quercus virginiana	Slash pine	Pinus elliottii
American elm	Ulmus americana	Loblolly pine	Pinus taeda	Southern red oak	Quercus falcata
Atlantic white cedar	Chamaecyparis thyoides	Longleaf pine	Pinus palustris	Sugar maple	Acer saccharum
Black cherry	Prunus serotina	Northern red oak	Quercus rubra	Swamp chestnut oak	Quercus michauxii
Black gum	nyssa sylvatica	Overcup oak	Quercus lyrata	Sweet gum	Liquidambar styraciflua
Black jack oak	Quercus marilandica	Pecan	Carya illinoensis	Sycamore	Platanus occidentalis
Black oak	Quercus velutina	Persimmon	Diospyros virginiana	Virginia pine	Pinus virginiana
Black walnut	Juglans nigra	Pond pine	Pinus serotina	Water oak	Quercus nigra
Cherry bark oak	Quercus pagoda	Post oak	Quercus stellata	Water tupelo	Nyssa aquatica
Chinkapin oak	Quercus muehlenbergii	Red maple	Acer rubrum	White ash	Fraxinus americana
Green ash	Fraxinus pennsylvanica	River birch	Betula nigra	White gum	Eucalyptus viminalis
Hackberry	Celtis occidentalis	River oak	Casuarina cunninghamiana	White oak	Quercus alba
Hickory	Carya spp	Shortleaf pine	Pinus echinata	Willow oak	Quercus phellos
Holly	Ilex opaca	Shumard oak	Quercus shumardii	Winged elm	Ulmus alata
Laurel oak	Quercus laurifolia			Yellow poplar	Liriodendron tulipifera

j. Volume of primary feedstock from primary forest: 0.0 metric tonnes
k. Percentage of primary feedstock from primary forest (j), by the following categories.
   - Primary feedstock from primary forest certified to an SBP-approved Forest Management Scheme: 0.0
   - Primary feedstock from primary forest not certified to an SBP-approved Forest Management Scheme: 0.0
l. Volume of secondary feedstocks: 0.4% of the total sourced delivered as chips and dust or pine chips, dust or shavings. The feedstock is delivered from within the defined supply base as mapped in section 2.1.
m. Volume of tertiary feedstock: 0%.

3. Requirement for a Supply Base Evaluation (SBE)

SBE completed	SBE not completed
X	☐

Enviva has chosen to complete an SBE for the Mid-Atlantic supply base area because there currently is no SBP-endorsed Regional Risk Assessment (RRA) in the United States. Enviva's SBE was independently reviewed by RS Berg and Associates, an expert consultant who has decades of experience in the forestry industry and provides services to numerous forest companies in meeting sustainability requirements.

4. Supply Base Evaluation

4.1 Scope

Enviva maintains a third party PEFC Chain of Custody including a Due Diligence System (DDS) and an FSC Controlled Wood Risk Assessment that provides the necessary level of confidence needed to claim all of its feedstock is SBP-Controlled at a minimum. Enviva completed a SBE in order to establish the volume of material that is SBP-compliant and clarify the de minimus amount that is SBP-Controlled. Enviva's SBE includes the sources of its primary and secondary feedstock. Enviva has implemented policies and procedures appropriate to the size and scale of its operations and no indicators were excluded. The

definitions of legal and sustainable as used in Standard 1 have been reviewed and met as substantiated in the supply base evaluations. Evidence to support is offered at the supply base level.

Because there is no SBP approved risk assessment in the US, Enviva developed a set of locally applicable verifiers (LAVs), which include a number of publically available sources, in addition to the internal monitoring already described. Details on LAVs are in the sections below.

4.2 Justification

Only a small proportion of feedstock is sourced from SBP-approved certification programs; therefore, Enviva completed a SBE to justify its rationale for SBP-compliant feedstock. Enviva continually monitors its SBP-controlled sources and works to improve these sources to become SBP-compliant. Enviva did not modify any indicators. For the indicators which are not already covered by our existing certifications, Enviva used a number of LAVs to support either risk determinations or mitigation measures, including:

- Draft FSC US National Risk Assessment
- All applicable Federal & state laws, including environmental laws, and occupational health and safety laws
- BMP implementation reports
- State Natural Heritage programs
- Maps and data regarding high conservation values
- Supplier contracts
- Residual Supplier Reporting Form

4.3 Results of Risk Assessment

Each criterion was evaluated and measured against Enviva's existing forest certification and chain of custody programs. The supply base evaluation was peer reviewed by RS Berg & Associates. Enviva identified four criteria which has "specified risk," however via associated mitigation measures Enviva can subsequently designate all indicators as "low risk."

4.4 Results of Supplier Verification Programme

No indicators were defined as unspecified risk so therefore a Supplier Verification Program is not required.

4.5 Conclusion

Enviva has completed a robust supply base evaluation and fully meets the SBP requirements. All criterion have been fully evaluated and appropriate procedures and controls are in place to ensure successful management. As described above, Enviva has an extremely sophisticated data collection and monitoring program which supports the conclusions and actions in the risk assessment. Senior management is fully engaged and involved in the success of SBP Standard conformance. Enviva has well-qualified and knowledgeable staff whom are capable of maintaining process control to achieve conformance to the SBP Standards. Each criterion has specific controls (e.g. contractual, field verification, supplier data requests) to provide Enviva with the best level of confidence to ensure conformance to the criteria included in the SBP Standard.

5. Supply Base Evaluation Process

The mid-Atlantic supply base area, includes over 200 counties in the coastal plains and piedmont regions of North Carolina and Virginia. Data from Enviva's internal Track & Trace and other monitoring programs are reviewed annually to ensure the appropriate area is included in the risk assessment. When needed, Enviva will scope in additional counties based on information from its suppliers. Using all these data sources, Enviva has mapped its supply base for both primary and secondary feedstock inputs for all facilities. According the USFS FIA database the total forested mid-Atlantic supply area is 14,398,306ha and all are considered temperate forest.

Enviva used the Draft FSC US Controlled Wood National Risk Assessment (NRA) (v0.1) along with its third party certified PEFC/SFI Due Diligence System and FSC Controlled Wood Risk Assessment as the basis for the SBE. The FSC NRA is being developed as a collaborative process between conservation groups, forestry companies and scientific organizations. Enviva believes this is the best and most comprehensive source of information regarding where the most risk to high conservation values exist. Various third party data sources were also used for research in the region such as; FSC High Conservation Area Mapping tool, The Nature Conservancy website and various GIS shapefiles and Databasin web mapping tool. Results from the stakeholder consultation were considered and incorporated if relevant to the supply area. The supply base evaluations were completed internally by qualified individuals and peer reviewed by RS Berg and Associates. These findings along with the corresponding mitigation measures were part of the risk assessment and evaluation process used by Enviva in completing the SBE.

Enviva uses a third party-audited Track & Trace Program to conduct field sampling to ensure on the ground conformance of the primary suppliers. Random suppliers and tracts are evaluated against a set standard of criteria, scored and ranked to help Enviva make decisions as to the effectiveness of its efforts to ensure conformance to the SBP Standards. As described earlier, Enviva used data supplied by its secondary suppliers to ensure their raw materials also were incorporated into the SBE and that it meets the SBP Feedstock Compliance Standard.

Lastly, as explained previously, Enviva engaged the US Endowment for Forestry and Communities to evaluate the mid-Atlantic 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. These areas were considered, in addition to the areas identified in the FSC NRA, as areas where there is risk to high conservation values. Enviva's implementation of its HCV assessment process for potential priority forests types, as already discussed, guides Enviva's purchasing decisions in the Mid-Atlantic supply base area.

6. Stakeholder Consultation

6.1 Response to stakeholder comments

In 2015 & 2016, Enviva initiated two stakeholder consultations to receive input for its SBP certification process. Both were conducted via email, with emails sent to over 160 individuals representing state agencies, universities, ENGOs, forest product companies, local community groups, and more. Each consultation was open for 30 days. Enviva set up a separate email account to manage the consultations, and monitored it daily for questions or comments. Enviva also set up a designated webpage on its website for each consultation as well that contained all the same information as the email and had a downloadable comment form.

Below is a list of the stakeholders contacted and their area of operation or interest by state:

Organization	States Covered
25 X 25	US
Alabama Department of Forestry	AL
Alabama Forestry Association	AL
Alabama Professional Logging Manager	AL
Alabama Society of American Foresters Chapter	AL
Alabama Tree Farm Program Chapter	AL
Alabama Wildlife Federation Chapter	AL
American Birds Conservancy	US
American Forest & Paper Association	US
American Forest Management	US
Apalachicola River Keepers	MS/FL
Auburn University	MS
Audubon Florida	FL
Barge Forest Products	MS
Bay County Conservancy	FL
Beall Timber	MS
Calhoun Timber Co	NC/VA
Carolina Pine & Hardwoods	NC/VA
Cooper Marine and Timberlands	MS
Darden Logging	NC/VA
Davis Logging of VA.	VA
Desoto Pole & Piling	MS
Dogwood	US
Dollar Logging	MS
Duke University	NC
E.O. Wilson Biophilia Center	NC
Edward F. Travis Company	MS/AL
Environmental Defense Fund	NC/SC
Florida Dept. of Environmental Protection Northwest District	FL
Florida Fish & Wildlife Conservation Commission Northwest Region	FL
Florida Forest Service	FL
Florida Forestry Association	FL
Florida Master Logger Program	FL
Florida Native Plant Society	FL
Florida Society of American Foresters Chapter	FL
Florida Tree Farm Chapter	FL
Florida Wildlife Federation Chapter	FL
Forest Investment Associates	US

Organization	States Covered
National Alliance of Forest Owners	US
National Association of State Foresters	US
National Council for Air and Stream Improvement	US
National Resources Defense Council	US
National Wild Turkey Federation	US
National Wildlife Foundation	US
NC ProLogger/NC Forestry Association	NC
North Carolina ATFS	NC
North Carolina Bioenergy Council	NC
North Carolina Coastal Land Trust	NC
North Carolina Forest Service D10	NC
North Carolina Forest Service D11	NC
North Carolina Forest Service D13	NC
North Carolina Forest Service D5	NC
North Carolina Forest Service D6	NC
North Carolina Forest Service D7	NC
North Carolina Landowners Association	NC
North Carolina Native Plant Society	NC
North Carolina Society of American Foresters Chapter	NC
North Carolina State University	NC
North Carolina Wildlife Federation	NC
North Carolina/Virginia Association of Consulting Foresters	NC
Northwest Florida Water Mgt. District	FL
Panhandle Forestry Services	FL
Partnership for Southern Forest Conservation	SE US
Pearl River-Stone County Forestry Assn	MS
Pettigrew Forestry Consultants	MS
Pinchot Institute	US
Rex Lumber	FL, GA, AL
Richton Tie and Timber	MS
Rives & Reynolds Lumber	MS, AL
Roundtable for Sustainable Biofuels	US
S & M Forest Management Group	NC/VA
Sapp's Land Clearing & Excavation	FL
Seaboard Timber Co, Inc	NC, SC
Sharp Logger	VA
Smith Brothers Forest Product	MS, AL, FL
South Central Woodland Owners Assoc	AK, LA

Forest Landowners Association	US
Franklin Lumber	NC/VA
Georgia American Tree Farm Chapter	GA
Georgia Forestry Commission	GA
Georgia Master Timber Harvester Program	GA
Georgia Society of American Foresters Chapter	GA
Georgia Wildlife Federation	GA
Hankins Inc.	MS, AL, LA, TN, AR
Homan Industries	MS, AL, TN
Interfor	MS
Jackson County Commissioners	FL
James R. Fincher Timber Co.	MS
John G. Guthrie and Sons, Inc.	MS
Lake Powell Community Alliance	FL
Larson & McGowin	MS
Longleaf Alliance	NC, SC, MS, AL GA
Louisiana Division of Forestry	LA
Louisiana Forestry Association/Tree Farm Chapter	LA
Louisiana Land Owners Association	LA
Louisiana Logger training	LA
Louisiana Wildlife Federation	LA
Meherrin River	NC/VA
Mid-ATL National Wildlife Fed	NC, VA, SC
Mid-South Woodland Owners Assoc	NC, SC, TN, VA
Mississippi American Tree Farm Chapter	MS
Mississippi Division of Forestry	MS
Mississippi Forestry Association	MS
Mississippi Forestry Commission	MS
Mississippi Loggers Association	MS
Mississippi Native Plant Society	MS
Mississippi Professional Logging Manager	MS
Mississippi Society of American Foresters Chapter	MS
Mississippi State University	MS
Mississippi University Extension Service	MS
Mississippi Wildlife Federation	MS
Mobile Forest Products	MS/FL
Mossy Oak	SE US
Southeast Fiber Supply	NC/VA
Southeast Woodland Owners Assoc	AL, FL, GA, MS
Southeastern Wood Producers Association	GA, FL
Southern Environmental Law Center	US
Southern Forestry Consultants	FL, GA, AL
Spanish Trail Lumber Co.	FL
St. Joe Timberland	FL
Swain & Temple, Inc.	NC, VA
T L Bain	NC/VA
Tennessee Forestry Association	TN
Tennessee Master Logger	TN
Tennessee Wildlife Federation	TN
The Conservation Fund	US
The Endowment for Forests and Communities	US
The Nature Conservancy of Alabama	AL
The Nature Conservancy of Florida	FL
The Nature Conservancy of Georgia	GA
The Nature Conservancy of Louisiana	LA
The Nature Conservancy of Mississippi	MS
The Nature Conservancy of North Carolina	NC
The Nature Conservancy of Virginia	VA
Timber Investment Resources	GA, TN, NC
Trust for Public Land	US
University of Florida School of Forest Resources and Conservation	FL
Virginia Conservation Network (NWF Virginia Affiliate)	VA
Virginia Forestry Association	VA
Virginia Landowners Association	VA
Virginia Native Plant Society	VA
Virginia Society of American Foresters Chapter	VA
Virginia Tree Farm Chapter	VA
West Fraser	MS
Weyerhaeuser	US
Whitfield Timber Company	FL
Wildlife Management Institute	US
Woodridge Timber Co	NC/VA
World Wildlife Federation	US

The first consultation was held from August 15th, 2015 – September 15, 2015 and was based on SBP Standard #1: Feedstock Compliance Standard. During Consultation 1, Enviva asked interested stakeholders to provide us with any data or resources they believed would help us properly complete our Supply Base evaluation based on the Indicators in Standard #1. We received two comments.

Enviva's second consultation was completed between January 8 and February 2, 2016. This consultation focused on the Locally Applicable Verifiers (LAVs) used to support the risk designations in our Supply Base Evaluation. Interested stakeholders were asked to comment on the LAVs Enviva chose and their applicability to certain indicators in Standard #1. We received one set of comments from one stakeholder.

Responses to comments received can be found in Annex II of this document.

7. Overview of Initial Assessment of Risk

Enviva maintains third party certified chains of custody in the three major systems (FSC, PEFC & SFI), which sufficiently support the SBP criterion. The company also maintains a third party certified SFI Fiber Sourcing Program that addresses many concerns such as conservation of biodiversity, contractual requirements for the use of forestry Best Management Practices (BMP's), logger training, legal and regulatory compliance, research support, community and landowner outreach, public communication and management review. Further, our proprietary Track & Trace program is third-party certified to ensure credibility in our data collection. The mid-Atlantic region is located in the United States where there is a strong legal system, with federal & state laws and regulations that are well enforced. Enviva also included additional LAV's described previously to ultimately lead to low risk designations on all legality aspects of the risk assessment. As described in section 5, Enviva used various credible third party data sources to determine the risk level for the criterion beyond the scope HCV portions of its Chain of Custody (CoC) system such as the FSC US Controlled Wood Risk Assessment – DRAFT (v 0.1), FSC High Conservation Area Mapping tool, The Nature Conservancy website and various GIS shapefiles and Databasin web mapping tool.

Enviva engaged the US Endowment for Forestry and Communities to evaluate the mid-Atlantic supply base area to determine 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 priority forest type. Enviva has committed five million dollars over a ten year period to fund conservation efforts targeting these forest types. The fund is administered by the US Endowment for Forestry and Communities.

Table 6. Overview of results from the risk assessment of all Indicators (prior to mitigation measures)

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

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

8. Supplier Verification Programme

8.1 Description of the Supplier Verification Programme

Enviva has implemented a robust supply base evaluation including risk assessment and when necessary mitigation measures. Each criteria has been evaluated against the FSC US Controlled Wood Risk Assessment – DRAFT (v0.1) ("NRA") and other appropriate locally available verifiers. Enviva maintains third party certified SFI Fiber Sourcing Program and a PEFC Chain of Custody including a DDS which supplements the supply base evaluation findings. Given the depth of detail of these documents no indicators are considered to be unspecified risk and therefore, a supplier verification programme is not required.

8.2 Site visits

All indicators in the SBE can be categorized and low risk or specified risk, based on evidence from the NRA, Enviva's SFI Fiber Sourcing Program, and PEFC Chain of Custody Due Diligence System, robust District of Origin processes for secondary feedstock and proprietary Track & trace Program for primary feedstock. . Therefore, there is no need for supplier site visits to determine risk levels for any indicator in the SBE.

8.3 Conclusions from the Supplier Verification Programme

N/A

9. Mitigation Measures

Enviva identified four indicators that had specified risk and required mitigation measures. These are detailed below. Implementation of each mitigation measure resulted in reducing the risk of these indicators to 'low-risk'.

9.1 Mitigation measures

Indicator:

2.1.1 The Biomass Producer has implemented appropriate control systems and procedures for verifying that forests and other areas with high conservation value in the Supply Base are identified and mapped.

Risk Designation: Specified Risk

Reason for Risk Designation: The FSC NRA did not designate any HCV areas of concern in the primary sourcing area for the mid-Atlantic supply base. However, Enviva has knowledge that some bottomland hardwood areas in the supply could be HCV forests. The Endowment recommendations identified four specific bottomland priority forest types; Cypress-tupelo swamps, Atlantic white cedar stands, Pocosins and Carolina bays, so Enviva needs more due diligence to ensure that the procurement for pellet production does not negatively affect these forest types.

Mitigation Measure:
In the US, Federal and State legislation such as the Endangered Species Act and the Clean Water Act are policed effectively. Enviva and its third-party suppliers, require through contracts, that 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 and its third party suppliers will not contract with companies exhibiting poor performance. Enviva sends yearly correspondence to all suppliers with verbiage explaining our commitment to avoid HCV areas and our expectation they will comply with our desires.

In addition, the US has a strong network of protected areas through its National Park System, National & State forests, designated wildlife refuges and the US Fish and Wildlife Service.

All of the Southeastern States have Forestry Assessments and Strategies, as well as Wildlife Action Plans. These agencies and others have publicly available mapping software to use in identifying HCV areas. Enviva also utilizes various wed GIS data sources and web mapping tools to compile pertinent data for internal use.

Enviva engaged the US Endowment for Forestry and Communities to evaluate the mid-Atlantic 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 (http://envivaforestfund.org/about-the-enviva-forest-conservation-fund/about-bottomland-forests/) contains information regards each bottomland forest type. Enviva has committed five million dollars over a ten year period to fund conservation efforts targeting these forest types. The fund is administered by the US Endowment for Forestry and Communities.

Purchased stumpage tracts are assessed prior to bid to identify any areas of concern. Monitoring audits are performed on all purchased stumpage tracts. Enviva maintains maps developed using Natural Heritage databases, the Enviva Forest Conservation Fund data and other credible sources to identify any areas of potential concern. Where research indicates that a G-1 or G-2 species, community or sensitive bottomland forests is known to exist in close proximity to the tract, company foresters will assess whether the species or community is actually present on the tract and notify the landowner prior to harvesting. All stumpage and vendor/producer tracts in bottomland areas are assessed using the Enviva Forest Conservation Program HCV Tract Approval process to ensure conformance to the bottomland priority forest type policy.

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.

Risk Designation: Specified Risk

Reason for Risk Designation: 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 could be HCV forests. Since Enviva is striving to achieve SBP-compliant feedstock it has implemented additional controls around certain forest types. The Endowment recommendations identified four specific bottomland priority forest types; Cypress-tupelo swamps, Atlantic white cedar stands, Pocosins and Carolina bays, so Enviva needs more due diligence to ensure that the procurement for pellet production does not negatively affect these forest types.

Enviva purchases primary feedstock through two means; supplier/vendor purchased tracts and Enviva stumpage purchase tracts. 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. Enviva purchases a de minimis amount of primary feedstock through a stumpage purchase program in which Enviva holds a harvest agreement with a landowner and employs a contractor to harvest the tract. Harvest contractors are contractually bound to support Enviva's HCV efforts on Enviva purchased

stumpage sites. In both cases, 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 mid-Atlantic supply region 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. If Enviva determines harvesting is not the best outcome for the tract then Enviva will not purchase fiber from that location.

Mitigation Measures:

Primary Feedstock
All stumpage and 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 Feedstock
Enviva sources fiber from a number of sawmills and wood industry suppliers at all of their mills. In the mid-Atlantic supply base, there are both sawmill and wood industry suppliers which may supply either hardwood or pine residues to Enviva. Enviva has gathered data from all its secondary suppliers and has mapped their supply base within their mid-Atlantic Supply Base Evaluation (SBE), through a rigorous district of origin process with all saw mill and wood industry suppliers that collects specific information such as; catchment radius, raw material species, certification information and other related information. This information is collected through the Residual Supplier Reporting Form (see example in Appendix I). The supplier's responses are mapped and compared to Enviva's mid-Atlantic Supply Base Evaluation to ensure Enviva has included the area with its supply base. Each supplier is provided a map depicting the counties within their catchment area that may contain high conservation value areas and information regarding each high conservation value type. Suppliers are encouraged to share this educational information with their suppliers.

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 secondary 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 secondary 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 secondary 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 mid-Atlantic supply base area, the potential for specified risk that may affect our secondary feedstock 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 secondary feedstock 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 sawmill 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.

Indicator

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).

Risk Designation: Specified Risk

Reason for Risk Designation: The FSC NRA did not designate any HCV areas of concern in the primary sourcing area for the mid-Atlantic supply base. However, Enviva has knowledge that some bottomland hardwood areas in the supply could be HCV forests. The Endowment recommendations identified four specific bottomland priority forest types; Cypress-tupelo swamps, Atlantic white cedar stands, Pocosins and Carolina bays, so Enviva needs more due diligence to ensure that the procurement for pellet production does not negatively affect these forest types.

Mitigation Measure:
Four of the key eco-systems in the mid-Atlantic region catchment area are of concern to the wood supply system; Cypress-tupelo swamps, Atlantic white cedar stands, Pocosins and Carolina bays. Though many acres of these habitats are protected under various conservation easements, and federal or state ownership there is still a significant portions that are controlled by private landowners. There are significant water quality laws in place to address run off and sedimentation concerns. And the federal Threatened and Endangered Species Act provides significant protection for listed species. Conservation efforts and support for the conservation of these habitats is an area of concern.

In conjunction with the US Endowment for Forestry and Communities Enviva has created the Enviva Forest Conservation Fund (http://envivaforestfund.org/) that establishes a $5 million, 10 year program designed to protect tens of thousands of acres of bottomland forests in North Carolina and southeast Virginia. Further, Enviva has made the commitment to not purchase feedstock from these four habitat types.

Indicator

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

Risk Designation: Specified Risk

Reason for Risk Designation: The FSC NRA did not designate any HCV areas of concern in the primary sourcing area for the mid-Atlantic supply base. However, Enviva has knowledge that some bottomland hardwood areas in the supply could be HCV forests. The Endowment recommendations identified four specific bottomland priority forest types; Cypress-tupelo swamps, Atlantic white cedar stands, Pocosins and Carolina bays, so Enviva needs more due diligence to ensure that the procurement for pellet production does not negatively affect these forest types.

Mitigation Measure:

According to the FSC US Controlled Wood National Risk Assessment – DRAFT (v0.1) the following biodiversity concerns exist in the supply region;

- 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: These habitat types are generally located on south and southwestern slopes and ridges up to about 2000 feet in elevation in northern Alabama and Georgia. These region are outside of the mid-Atlantic supply base and are of no risk to the Enviva regional supply chain.
    - Mitigation measures: There are no measures required.

- 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.
    - Specified risk: In the mid-Atlantic supply 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. 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 mid-Atlantic 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. There are known Karst habitats outside of the Appalachian Eco region and in the Enviva mid-Atlantic supply base. Proper forestry BMP's are required by contract and these areas are considered low risk.
- Red cockaded woodpecker: 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.
    - Specified risk: There are known sightings of red cockaded woodpeckers in the Enviva mid-Atlantic supply region. The potential raw material could be delivered to a mill is moderate given the preferred habitat description.
    - Mitigation measures: Enviva stumpage tracts are surveyed to identify the existence of protected species. Appropriate measures to protect a red cockaded habitat will be employed 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.
    - Specified risk: Though the gopher tortoise range is in the Appalachian Eco-region it is outside of the Enviva mid-Atlantic supply base.
    - Mitigation measures: None

9.2 Monitoring and outcomes

The Enviva Forest Conservation Fund is administered by the US Endowment for Forests and Communities. Success of the fund will be reported on a yearly basis. Enviva has released a policy statement to all suppliers and its proprietary Track & Trace Program will ensure that feedstock delivered to our mills meets our expectations with regards to sustainability and the SBP requirements. Enviva employs contractual mechanisms, an SFI Fiber Sourcing Program, FSC/PEFC/SFI Chains of Custody Programs and Track & Trace to ensure conformance and monitoring.

Enviva uses a rigorous district of origin process with all secondary suppliers that collects specific information such as; catchment radius, raw material species, certification information and other related information. The supplier's responses are mapped and compared to Enviva's mid-Atlantic Supply Base Evaluation to ensure Enviva has included the area with its supply base. Each supplier is provided a map depicting the counties within their catchment area that may contain high conservation value areas and information regarding each high conservation value type. Suppliers are encouraged to share this educational information with their suppliers.

10 Detailed Findings for Indicators

See Annex 1

11 Review of Report

11.1 Peer review

As stated previously, the mid-Atlantic SBE was independently peer-reviewed by RS Berg and Associates. R. S. Berg & Associates, Inc. has more than thirty five years' experience in the forest, paper and bio-energy industries and has worked with over 220 organizations in understanding their options and achieving certification to the Standard(s) of their choice. Scott Berg is a trained ISO 14001 EMS Lead Auditor and has over thirty five years in the forest and paper industry working for national and regional trade associations. As the data compiled for this report is generated by the SBE process, further peer review is not required.

11.2 Public or additional reviews

Enviva maintains a third party audited SFI Fiber Sourcing Program, a proprietary Track & Trace program, as well as third party audited FSC/PEFC/SFI chains of custodies. All of these programs are reviewed internally and by our third party certifying bodies on an annual basis. The Supply Base Evaluation was developed internally by qualified personnel using credible third party data sources such as; Forest Stewardship Council, The Nature Conservancy, United Stated Forest Service, United States Department of Labor, United Stated Department of Environmental Protection, State Forest Service Divisions, National Council for Air and Stream Improvement among others.

12 Approval of Report

Approval of Supply Base Report by senior management			
Report Prepared by:	***Don Grant***	***Mid-Atlantic Regional Sustainability & Certifications Manager***	***04/04/16***
	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:	***Jennifer Jenkins, PhD***	***Vice President and Chief Sustainability Officer***	***04/05/16***
	Name	**Title**	**Date**

Report approved by:	***Thomas Meth***	***Executive Vice President of Sales and Marketing***	***04/05/16***
	Name	**Title**	**Date**
Report approved by:	***John Keppler***	***Chief Executive Officer***	***04/05/16***
	Name	**Title**	**Date**

13. Updates

As this is the initial assessment, no updates are required.

13.1 Significant changes to the Supply Base

13.2 Effectiveness of previous mitigation measures

13.3 New risk ratings and mitigation measures

13.4 Actual figures for feedstock over the past 12 months

13.5 Projected figures for feedstock over the next 12 months

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Appendix I: Example Residual Supplier Letter and Reporting Form

Dear Valued Supplier:

As part of Enviva's continued commitment to the practice of sustainable forestry, and in conjunction with our existing forestry certifications, we are reaching out to you to request your assistance in ensuring we have the most accurate data available regarding the extent of our fiber supply.

Enviva maintains chain-of-custody (CoC) under the Forest Stewardship Council™ (FSC), the Programme for the Endorsement of Forest Certification (PEFC) program and the Sustainable Forestry Initiative® (SFI) program. Enviva is also seeking certification under the Sustainable Biomass Partnership (SBP) program.

All four programs require Enviva to know the "district of origin" of all its wood fiber, including those that come from secondary sources, such as sawmills, in order to complete a detailed risk assessment of our entire fiber supply region. Enviva defines the district of origin at the county level.

As part of this process, we are seeking general information on your catchment area and the district of origin for your raw materials. This information will be used as evidence of Enviva's knowledge of our existing supply base and the district of origin of our residual inputs. Therefore, we respectfully ask you to take a few minutes to complete the attached form, which will provide us with the information we need from your facility.

As a part of this process, we will use the data you provide us to fill in any gaps in our risk assessment. While you are not required to alter your operations at all, if we find your supply area may overlap with identified areas of risk (as defined by our certification programs), we will provide you with the outcomes of the risk assessment for your records. Should you wish to implement any mitigation measures suggested, please do let us know.

Further, we would like to make you aware that for as long as you supply material to Enviva, we will be contacting you annually to ensure we maintain accurate records of your supply area. If needed, a forester may also reach out to you by phone or email to verify the data you submitted.

Enviva assures you that the information you provide will be kept confidential and only shared with our contracted auditors, with whom we have confidentiality agreements. Your company name will never appear in connection with any conclusions in our risk assessment, nor in any public documents.

If you have any questions or concerns, please do not hesitate to contact me directly at the phone or email address below.

Thank You for your time and cooperation with this process.

Sincerely,

FORESTER NAME

Phone:

Email:

Secondary Supplier District of Origin Data Request

Supplier Name: _____ Date: _____

Contact: _____

What is the catchment radius for your mill? (miles) _____

Do you source wood from outside the U.S.? Yes _____ No _____ If yes, please explain _____
_____

Do you maintain certification under any CoC or SFI Fiber Sourcing programs? Yes ____ No ____ If yes, please list the type and certificate number(s) below:

Note: If you have a valid FSC, PEFC or SFI CoC you do not have to complete the rest of this form.

What species do you accept at your mill? (Attach list if necessary) _____
_____
_____
_____

Are any non-native species accepted at your mill? Yes ____ No ____ If yes, please explain _____
_____

At what level is the location of harvest documented for your raw material receipts? (check all that apply) County _____ Landowner _____ No Documentation _____

Other (Explain) _____
_____

Do you require producers delivering to your mill to have valid logger training? Yes _____ No_____

Is there evidence of illegal logging within your procurement area? Yes ___ No ____ Unknown _____

Is there evidence of significant land conversion within your procurement area? Yes _____ No_____ Unknown _____

Is any of your primary fiber sourced from areas where High Conservation Values are threatened by forestry activities? Yes ___ No ____ Unknown ____ If yes, please explain _____
_____
_____
_____

Do you have a Sustainability Policy? Yes ____ No ____ (Please provide a copy)

SBP

Sustainable Biomass Partnership

Supply Base Report for Enviva Southampton: Annex 1

www.sustainablebiomasspartnership.org

Version 1.0
March 2015

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

Document history

Version 1.0: published 26 March 2015

Annex 1: Detailed Findings for Supply Base Evaluation Indicators

	Indicator
1.1.1	The Biomass Producer's Supply Base is defined and mapped.
Finding	Enviva's Southampton mill supply base area is determined through information gathering efforts as outlined in an internal Feedstock Compliance Implementation Manual and includes counties from the coastal plains to the piedmont regions of North Carolina and Virginia. Data is entered into computer programs and are reviewed annually to ensure the appropriateness. Enviva maintains Forest Stewardship Council (FSC) and Programme for the Endorsement of Forest Certification (PEFC) Chain of Custody (CoC) certifications for its pellet mills. These certifications track fiber through the supply chain, while also ensuring unwanted sources of fiber do not enter the supply chain.
Means of Verification	a. ENV-COC-02 CS Procedure b. ENV-COC-03 CS Risk Assessment
Evidence Reviewed	Internal region supply area map.
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	Indicator
1.1.2	Feedstock can be traced back to the defined Supply Base.
Finding	All fiber sources are tracked to the county level, at a minimum, through contracts with individual vendors/producers. All suppliers are required to sign agreements prior to delivering fiber to the Southampton mill. An internal software program is employed by the procurement staff to capture appropriate data. Enviva delivery documents linked to supply agreements are generated prior to delivery of feedstock and the district of origin and other essential information is captured and maintained. Enviva maintains FSC and PEFC CoC certifications for its pellet mills. These certifications track fiber through the supply chain, while also ensuring unwanted sources of fiber do not enter the supply chain.
Means of Verification	a. ENV-SFIS-01 Certified Sourcing Implementation Manual b. ENV-COC-01 Implementation Manual c. ENV-COC-02 CS Procedure d. ENV-COC-03 CS Risk Assessment e. Pellet Wood Contract f. Track & Trace
Evidence Reviewed	Internal documents to set up individual supplier and tract information, payment invoices, District of Origin forms and Chain of Custody procedure manuals.
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	Indicator
1.1.3	The feedstock input profile is described and categorised by the mix of inputs.
Finding	Southampton tracks purchased and consumed material by product type (roundwood, wood chips, residuals, etc.) and general species groupings of softwood or hardwood. Wood fiber is stored at the mill site by product/species and input verified by monthly inventory processes. Certified wood fiber inputs coming into the mill site are mingled with other fiber and all are considered "controlled". Potential wood fiber species information is verified through an internal Spec-Check process. Enviva maintains FSC and PEFC CoC certifications for its pellet mills. These certifications track fiber through the supply chain, while also ensuring unwanted sources of fiber do not enter the supply chain. Enviva is third party certified to the Sustainable Forestry Initiative (SFI) Fiber Sourcing Standard.
Means of Verification	a. ENV-COC-01 Implementation Manual b. ENV-COC-02 CS Procedure c. ENV-COC-03 CS Risk Assessment d. FSC US Controlled Wood National Risk Assessment – DRAFT (v0.1) e. Pellet Wood Contract f. Mill specific Monthly Wood Excel g. Spec-Check database
Evidence Reviewed	Internal fiber contracts, policy and procedures, internal tracking software.
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	Enviva uses contractual language requiring vendors/producers to declare they have legal rights to access and harvest wood fiber delivered to its Southampton mill. Enviva does appropriate due diligence to ensure wood fiber is only purchased from reputable known sources. Enviva uses sources such as the Illegal Logging Portal to assess the likelihood of illegal logging activity in the supply area.
Means of Verification	a. ENV-SFIS-01 Certified Sourcing Implementation Manual b. ENV-COC-01 Implementation Manual c. ENV-COC-02 CS Procedure d. ENV-COC-03 CS Risk Assessment e. Pellet Wood Contract f. Enviva Sustainability Policy g. AHEC Legality Study
Evidence Reviewed	Internal documents to set up individual supplier and tract information, payment invoices, District of Origin forms and Chain of Custody procedure manuals.
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	Enviva has a Controlled Sources Risk Assessment System in place to ensure legality requirements within the supply base are met. The company is committed to legal compliance and does not procure wood from any areas where suspected legality issues exist. Appendix C of ENV-COC-03 contains Data for compliance with EUTR.
Means of Verification	a. ENV-SFIS-01 Certified Sourcing Implementation Manual b. ENV-COC-01 Implementation Manual c. ENV-COC-02 CS Procedure d. ENV-COC-03 CS Risk Assessment e. Enviva Sustainability Policy f. Pellet Wood Contract g. AHEC Legality Study
Evidence Reviewed	Internal documents to set up individual supplier and tract information, payment invoices, District of Origin forms and Chain of Custody procedure manuals.
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	Enviva requires agreements with all suppliers verifying that all relevant timber fees and taxes are paid.
Means of Verification	a. ENV-SFIS-01 Certified Sourcing Implementation Manual b. ENV-COC-03 CS Risk Assessment c. Pellet Wood Contracts d. Harvesting Contracts
Evidence Reviewed	Internal documents to set up individual supplier and tract information, payment invoices, District of Origin forms and Chain of Custody procedure manuals.
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	There are no CITES listed tree species within the Southampton supply base and no wood fiber is imported from outside the south eastern region. Existing policies declare that Enviva will avoid being directly or indirectly involved in the purchase of raw material that is violation of CITES.
Means of Verification	a. ENV-COC-01 Implementation Manual b. ENV-COC-02 CS Procedure c. ENV-COC-03 CS Risk Assessment d. Enviva Sustainability Policy
Evidence Reviewed	Internal documents, policies and procedures
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	In the US, land use and tenure questions have long been decided and in the southeast there are no indigenous people groups with controversial traditional or civil rights to forestlands. Enviva has a Controlled Sources Risk Assessment System in place to ensure operations do not violate traditional or civil rights. Existing policies declare that Enviva will avoid being directly or indirectly involved in the violation of traditional and human rights. The Southampton fiber supply areas are not designated within a country or district that is a source of conflict timber.
Means of Verification	a. ENV-COC-01 Implementation Manual b. ENV-COC-02 CS Procedure c. ENV-COC-03 CS Risk Assessment d. Enviva Sustainability Policy
Evidence Reviewed	Federal and state laws, fiber agreements/contracts.
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	Enviva uses credible third party data and sources to identify HCV areas, utilizes trained loggers who are trained to recognize T&E and assesses all stumpage tracts for HCV areas. In the US, Federal and State legislation such as the Endangered Species Act and the Clean Water Act are policed effectively. Enviva, and its third-party suppliers, require through contracts, that 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 and its third party suppliers will not contract with companies exhibiting poor performance. Enviva sends yearly correspondence to all suppliers with verbiage explaining our commitment to protect HCV areas and our expectation they will comply with our desires. In addition, the US has a strong network of protected areas through its National Park System, National & State forests, designated wildlife refuges and the US Fish and Wildlife Service. Enviva engaged the US Endowment for Forestry and Communities to evaluate the mid-Atlantic 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.
Means of Verification	a. ENV-SFIS-01 Certified Sourcing Implementation Manual b. ENV-COC-01 Implementation Manual c. ENV-COC-02 CS Procedure d. ENV-COC-03 CS Risk Assessment e. Enviva Sustainability Policy f. FSC High Conservation Values mapping tool g. FSC US Controlled Wood National Risk Assessment DRAFT h. Data Basin web mapping tool i. The Nature Conservancy j. Enviva Forest Conservation Fund k. Enviva Forest Conservation Program HCV Tract Approval process
Evidence Reviewed	Internal map generated from data collected from above.
Risk Rating	☐ **Low Risk** X **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	The Enviva Forest Conservation Fund website contains information regards each bottomland forest type. Enviva has committed five million dollars over a ten year period to fund conservation efforts targeting these forest types. The fund is administered by the US Endowment for Forestry and Communities. Using the additional data and partnership with the US Endowment for Forestry and Communities the risk of not properly identifying high conservation value areas is “low”.

	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	Enviva purchases primary feedstock through two means; supplier/vendor purchased tracts and Enviva stumpage purchase tracts. 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. Enviva purchases a de minimis amount of primary feedstock through a stumpage purchase program in which Enviva holds a harvest agreement with a landowner and employs a contractor to harvest the tract. Harvest contractors are contractually bound to support Enviva's HCV efforts on Enviva purchased stumpage sites. In both cases, 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 mid-Atlantic supply region 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. If Enviva determines harvesting is not the best outcome for the tract then Enviva will not purchase fiber from that location.
Means of Verification	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
Evidence Reviewed	External data sources, internal policies and procedures, fiber agreements/contracts.
Risk Rating	☐ **Low Risk** **X Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	Primary Material All stumpage and 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 & Tertiary Fiber Enviva sources fiber from a number of sawmills and wood industry suppliers at all of their mills. In the mid-Atlantic region, there are both secondary and tertiary suppliers which may supply either hardwood or pine residuals to Enviva. Enviva has gathered data from all its residual suppliers and has mapped their supply base within their mid-Atlantic Supply Base Evaluation (SBE), through a rigorous district of origin process with all saw mill and tertiary suppliers that collects specific information such as; catchment radius, raw material species, certification information and other related information. This information is collected through the Residual Supplier Reporting Form (see example in Appendix I). The supplier's responses are mapped and compared to Enviva's mid-Atlantic Supply Base Evaluation to ensure Enviva has included the area with its supply base. Each supplier is provided a map depicting the counties within their catchment area that may contain high conservation value areas and information regarding each high conservation value type. Suppliers are encouraged to share this educational information with their suppliers. 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 mid-Atlantic region, 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 tertiary 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): o Enviva maintains a valid PEFC DDS that excludes controversial sources from the supply chain o 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." o If Enviva identifies any sources of fiber that are out of compliance with the DDS Enviva will eliminate them from the supply chain.

	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	Information concerning cover type as well as other pertinent information is collected to ensure Enviva complies with its commitment to not drive conversion. Contracts require adherence to this policy and standard supplier correspondence also highlights the necessity to avoid these sources.
Means of Verification	a. ENV-SFIS-01 Certified Sourcing Implementation Manual b. ENV-COC-02 CS Procedure c. ENV-COC-03 CS Risk Assessment
Evidence Reviewed	Internal procedures.
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	Enviva, and its third-party suppliers, require through contracts, that 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.
Means of Verification	a. ENV-SFIS-01 Certified Sourcing Implementation Manual b. Pellet Wood Contract c. Track & Trace

	d. ENV-COC-01 Implementation Manual e. ENV-COC-02 CS Procedure f. ENV-COC-03 CS Risk Assessment
Evidence Reviewed	Internal policies and procedures, fiber agreements/contracts and field audits.
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	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. USDA and NRCS programs also strengthen compliance and improve water quality. The USFS provides GIS data that generates a map depicting the importance of forests to overall drinking water quality.
Means of Verification	a. Clean Water Act b. Chesapeake Bay Watershed Initiative c. USFS GIS data d. ENV-SFIS-01 Certified Sourcing Implementation Manual e. Track & Trace Program f. ENV-COC-03 CS Risk Assessment g. State BMP Manuals and BMP monitoring data
Evidence Reviewed	Internal policies and procedures, field audit forms, fiber contracts.
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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 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. Known areas of concern are; mesophytic cove sites, late succession bottomland hardwood sites, native longleaf pine savannahs and specifically. Enviva's partnership with the US Endowment for Forestry and Communities identified four bottomland forest types of concern; Cypress-tupelo swamps, Atlantic white cedar, Pocosins and Carolina bays.
Means of Verification	a. ENV-SFIS-01 Certified Sourcing Implementation Manual b. Wood Pellet Contract c. Harvesting Contracts d. Track & Trace Program e. State specific Natural Heritage Area web sites f. ENV-COC-01 Implementation Manual g. ENV-COC-02 CS Procedure h. ENV-COC-03 CS Risk Assessment i. State restoration programs
Evidence Reviewed	Internal policies and procedures, field audit forms, fiber contracts, NC Forestry BMP, VA Forestry BMP, Track & Trace
Risk Rating	☐ **Low Risk** X **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	Contractual requirements for the use of BMP's mitigate most all of the above concerns. Track & Trace is used as a sampling method for field verification. All supplier or Enviva stumpage 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. The policy has been communicated to suppliers, Track & Trace provides field verification. The Enviva Forest Conservation Fund will provide $5mm to protect thousands of acres of these eco-system types. While each of these four 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 and special care must be used in assessing each tracts potential. Using the additional data, implemented processes and partnership with the US Endowment for Forestry and Communities the risk of not having adequate controls and procedures to ensure key habitats are conserved is "low".

	Indicator
2.2.4	The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b).
Finding	Enviva's supply area includes the following specified risks related to biodiversity as indicated in the FSC US Controlled Wood National Risk Assessment DRAFT; montane longleaf pine, karst habitats, red cockaded woodpecker and gopher tortoise. Enviva's partnership with the US Endowment for Forestry and Communities identified four bottomland forest types of concern; Cypress-tupelo swamps, Atlantic white cedar, Pocosins and Carolina bays.
Means of Verification	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
Evidence Reviewed	FSC US Controlled Wood National Risk Assessment DRAFT,FSC CoC, PEFC CoC, Enviva Risk Assessment Summary, SFI Fiber Sourcing, NC Forestry BMP, VA Forestry BMP, Track & Trace, internal documents and agreements/contracts.
Risk Rating	☐ **Low Risk** X **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	FSC US Controlled Wood National Risk Assessment DRAFT provides mitigation measures for many of these biodiversity concerns and Enviva has adopted these mitigation measures. Enviva engaged the US Endowment for Forestry and Communities to develop science-based working group to develop enhanced forestry practices for working bottomland forests. The working group will recommend specific additional measures to define and protect sensitive areas which Enviva will incorporate into its wood supply practices. Enviva has implemented the Enviva Forest Conservation Program High Conservation Tract Approval process for all Enviva controlled and supplier tracts. Tracts with potential biodiversity concerns must be evaluated using this tool to ensure Enviva does not compromise its commitment to protect special places. Enviva has adopted these mitigation measures and the partnership with the US Endowment for Forests and Communities will provides additional control measure indicator to ensure the chance of procuring fiber from an area of biodiversity concern is a "low risk".

	Indicator
2.2.5	The Biomass Producer has implemented appropriate control systems and procedures for verifying that the process of residue removal minimises harm to ecosystems.
Finding	The 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 and its third party suppliers will not contract with companies exhibiting poor performance.
Means of Verification	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
Evidence Reviewed	Track & Trace, internal documents and agreements/contracts
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	Indicator
2.2.6	The Biomass Producer has implemented appropriate control systems and procedures to verify that negative impacts on ground water, surface water and water downstream from forest management are minimised (CPET S5b).
Finding	The 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 in order to address soil quality. SFI Fiber Sourcing also requires that Company annually conduct and use BMP monitoring information to maintain rates of conformance to best management practices and to identify areas for improved performance.
Means of Verification	a. Clean Water Act b. Chesapeake Bay Watershed Initiative c. USFS GIS data d. ENV-SFIS-01 Certified Sourcing Implementation Manual e. Track & Trace Program f. ENV-COC-03 CS Risk Assessment g. State BMP Manuals and BMP monitoring data
Evidence Reviewed	Internal policies and procedures, fiber contracts and field audits
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	In the US, state and federal forest practices laws and other legislation that cover forestry operations, such as the Clean Air Act, EPA regulations, Forestry acts, and FIFRA are all drawn up within a dynamic democratic system, subject to free comment by all stakeholders. State best management practices also address forest practices that may adversely affect air quality.
Means of Verification	a. Federal & State Regulatory web sites b. State best management practice manuals and monitoring data
Evidence Reviewed	Internal policies and procedures, fiber contracts and field audits
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	In the US, there is a strong legal framework for the use of pesticides, enforced effectively through the EPA, and penalties exist for non-compliance. This includes application by licensed operators only for the intended uses on the label and periodic inspections. The vast majority of Enviva's primary fiber comes from non-industrial private landowners (NIPFs). Enviva has conducted internal research to assess the use of chemicals, and found application rates are low for NIPFs, and are more for replanting and site establishment than for pest management.
Means of Verification	a. See EPA website for regulation of forest chemicals under FIFRA. b. U. S. Environmental Protection Agency web site c. U. S. Environmental Protection Agency's Office of Water web site d. Animal and Plant Health Inspection Service or APHIS web site e. Wood Pellet Contract f. Harvesting Contracts
Evidence Reviewed	Internal policies and procedures, fiber contracts and field audits
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	Enviva's SFI Fiber Sourcing Program requires suppliers to adhere to all applicable laws and regulations. Contracts require adherence to all applicable laws and regulations. Enviva monitors compliance to removal of trash and other garbage through its Track & Trace Program. State BMPs require the removal of garbage and all contracts require the use of BMPs.
Means of Verification	a. ENV-SFIS-01 Certified Sourcing Implementation Manual b. Track & Trace Program c. Pellet Wood Contract d. Harvest Contracts e. State BMP Manuals and monitoring data
Evidence Reviewed	Internal policies and procedures, fiber contracts and field audits
Risk Rating	X **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	The 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.
Means of Verification	a. USFS FIA web site b. National State Foresters web site c. ENV-SFIS-01 Certified Sourcing Implementation Manual d. ENV-COC-03 CS Risk Assessment e. Enviva mid-Atlantic Region Growth/Drain data
Evidence Reviewed	Internal policies and procedures, fiber contracts and field audits, growth/drain analysis
Risk Rating	X **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	Indicator
2.3.2	Adequate training is provided for all personnel, including employees and contractors (CPET S6d).
Finding	Enviva conducts in-depth internal training for all responsible staff and requires logging contractors that work directly for the company to be current in an SFI SIC approved training program. The SFI Fiber Sourcing Program requires a trained person to be on the ground on each harvest site. Enviva's staff have achieved educational levels appropriate with their specific job duties.
Means of Verification	a. ENV-SFIS-01 Certified Sourcing Implementation Manual b. ENV-COC-01 Implementation Manual c. ENV-COC-02 CS Procedure d. Logger Training web sites e. Pellet Wood Contract f. Harvesting Contract g. Staff training documentation
Evidence Reviewed	Internal policies and procedures, fiber contracts and field audits
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	Indicator
2.3.3	Analysis shows that feedstock harvesting and biomass production positively contribute to the local economy, including employment.
Finding	Based upon a recent State wide Assessments, the forests of the Southeast provide a number of economic and societal benefits such as manufacturing, employment, recreation, aesthetics, and environmental protection. To ensure that the forests can meet the current and future economic, ecological, cultural, and recreational demands placed on them, managers must focus their efforts to address changing landowner objectives, parcelization and fragmentation, current and emerging markets, forest regulation, critical habitats, and cultural/recreational concerns. Enviva, LP employs approximately 96 people at Southampton. Supplying the feedstock requires about 77 various harvesting crews and saw mills. Local contractors are used in maintaining the mills providing hundreds of spin-off jobs.
Means of Verification	a. National State Forester web site b. ENV-COC-03 CS Risk Assessment
Evidence Reviewed	Employment data, State wide Assessments
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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 US Forest Service and State Forest Services undertake research into forest health, their research results are available. The 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. For instance, fiber sourced from thinning allows landowners to achieve future benefit in higher value timber sales, which in turn supports reforestation in the region. The SFI Fiber Sourcing Program requires Program Participants to individually or with other participate research related to forest health issues.
Means of Verification	a. ENV-SFIS-01 Certified Sourcing Implementation Manual b. ENV-COC-02 CS Procedures c. ENV-COC-03 CS Risk Assessment d. USFS websites e. State Forest Service web sites f. Track & Trace
Evidence Reviewed	Internal policies and procedures, field audits, third party data
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	Indicator
2.4.2	The Biomass Producer has implemented appropriate control systems and procedures for verifying that natural processes, such as fires, pests and diseases are managed appropriately (CPET S7b).
Finding	The 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 and help with pest management by keeping forest healthy.
Means of Verification	a. USFS FIA web site b. National State Foresters web site c. ENV-SFIS-01 Certified Sourcing Implementation Manual d. ENV-COC-03 CS Risk Assessment
Evidence Reviewed	External data, internal documents and Track & Trace
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	There is a low perception of corruption related to the granting or issuing of harvesting permits and other areas of law enforcement related to harvesting and wood trade. Enviva's Track & Trace Program ensure we have the appropriate information to ensure we can prevent material from illegal harvests. All contracts require legal ownership before delivery. Risk assessments for the wood supply areas concluded Low Risk for "Illegally Harvested Wood."
Means of Verification	a. ENV-SFIS-01 Certified Sourcing Implementation Manual b. ENV-COC-01 Implementation Manual c. ENV-COC-03 CS Risk Assessment d. Track & Trace Program e. AHEC Legality Study
Evidence Reviewed	External data, internal documents and Track & Trace
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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 US is an industrial nation that does not have people groups dependent on a particular site or resource for basic human need. Further, federal and State legislation governs Native Americans and their rights are strictly enforced. Because Enviva and its supplier's source from private forestlands there are no issues related to traditional use or tenure rights. Public lands are required to engage with stakeholders of all kinds to ensure harvests maintain the forest as a public good, including working with Native Americans. Enviva also has a formal process for receiving and responding to public inquiries, particularly those that potentially relate to practices that appear to be inconsistent with existing certification requirements.
Means of Verification	a. Federal and State laws and statutes b. Enviva Sustainability Policy c. ENV-COC-01 Implementation Manual d. Annual Supplier Correspondence e. ENV-COC-CS Risk Assessment f. AHEC Legality Study
Evidence Reviewed	External data, internal documents and annual supplier correspondence.
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	The US is an industrial nation that does not have people groups dependent on a particular site or resource for basic human need. Enviva, and its third-party suppliers, require through contracts, that 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 and its third party suppliers will not contract with companies exhibiting poor performance.
Means of Verification	a. Federal and State web sites b. ENV-SFIS-01 Certified Sourcing Implementation Manual c. ENV-COC-01 Implementation Manual d. ENV-COC-02 CS Procedure e. ENV-COC-03 CS Risk Assessment f. Annual Supplier Correspondence g. Track & Trace Program
Evidence Reviewed	External data, internal documents and Track & Trace, annual supplier correspondence.
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	In the US, Federal and State legislation regarding worker health and safety is monitored by the Occupational Safety and Health Administration (OSHA) which provides good protection and strong recourse if safety protocols are breached. Enviva, and its third-party suppliers, require through contracts, that all suppliers of raw material adhere to all applicable laws and regulations. Enviva and its third party suppliers will not contract with companies exhibiting poor performance.
Means of Verification	a. Federal and State web sites b. ENV-SFIS-01 Certified Sourcing Implementation Manual c. ENV-COC-01 Implementation Manual d. ENV-COC-02 CS Procedure e. ENV-COC-03 CS Risk Assessment f. Annual Supplier Correspondence
Evidence Reviewed	External data, internal documents, fiber contracts and annual supplier correspondence.

Risk Rating	X **Low Risk**	☐ **Specified Risk**	☐ **Unspecified Risk at RA**
Comment or Mitigation Measure			

	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	U.S. law clearly specifies rights to collective bargaining and freedom of association. All contracts contain verbiage requiring suppliers to conform to all applicable laws and annually Enviva sends suppler correspondence requiring its suppliers to comply with all labor laws.
Means of Verification	a. Federal and State web sites b. Enviva Supplier correspondence c. ENV-COC-01-Implementation Manual d. ENV-COC-03 Controlled Wood Risk Assessment e. AHEC Legality Study
Evidence Reviewed	External data, internal documents, fiber contracts and annual supplier correspondence.
Risk Rating	X **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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 United States has comprehensive laws prohibiting the use of child labor or violating citizen's rights. Enviva's PEFC Due Diligence Risk Assessment was verified to show "There is no evidence of child labor or violation of ILO Fundamental Principles and Rights at work taking place in forest areas in the district concerned."
Means of Verification	a. Federal and State web sites b. ENV-COC-01 Implementation Manual c. ENV-COC-03 Controlled Wood Risk Assessment
Evidence Reviewed	External data, internal documents, fiber contracts and annual supplier correspondence.
Risk Rating	X **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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 United States has comprehensive laws prohibiting the use of child labor or violating citizen's rights. From the AHEC Legality Study: "We come to the conclusion that wood procured in the study area can be considered Low Risk of violating traditional and civil rights. This conclusion is based on the determination that there is no UN Security Council ban, there is no evidence of prolific child labor, there is no evidence that ILO Fundamental Principles are not respected, and there are recognized and equitable processes in place to resolve conflicts of substantial magnitude."
Means of Verification	a. Federal and State web sites b. ENV-COC-01 Implementation Manual c. ENV-COC-03 Controlled Wood Risk Assessment
Evidence Reviewed	External data, internal documents, fiber contracts and annual supplier correspondence.
Risk Rating	X **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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 United States has comprehensive laws prohibiting the use of child labor or violating citizen's rights. Enviva's PEFC Due Diligence Risk Assessment was verified to show "There is no evidence of child labor or violation of ILO Fundamental Principles and Rights at work taking place in forest areas in the district concerned."
Means of Verification	a. Federal and State web sites b. ENV-COC-01 Implementation Manual c. ENV-COC-03 Controlled Wood Risk Assessment d. AHEC Legality Study
Evidence Reviewed	External data, internal documents, fiber contracts and annual supplier correspondence.
Risk Rating	X **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	The United States has comprehensive laws prohibiting the use of child labor or violating citizen's rights. Enviva's PEFC Due Diligence Risk Assessment was verified to show "There is no evidence of child labor or violation of ILO Fundamental Principles and Rights at work taking place in forest areas in the district concerned."
Means of Verification	a. Federal and State web sites b. ENV-COC-01 Implementation Manual c. ENV-COC-03 Controlled Wood Risk Assessment d. AHEC Legality Study
Evidence Reviewed	External data, internal documents, fiber contracts and annual supplier correspondence.
Risk Rating	X **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	The US Occupational Health and Safety Organization is responsible for implementing, monitoring and enforcing worker health and safety laws and regulations. Enviva complies with all applicable laws and regulation and requires its suppliers to do the same. The SFI Fiber Sourcing Standard requires Program Participants to adhere to health and safety laws. Enviva contractually requires all suppliers of raw material adhere to all applicable laws and regulations. Enviva and its third party suppliers will not contract with companies exhibiting poor performance. Enviva has safety manuals in place for both mill workers and field foresters. Enviva also has an in-depth safety program in place at each mill to prevent accidents and share best practices amongst sites. OSHA records of reportable injuries and rates are publicly available.
Means of Verification	a. OSHA web site b. ENV-SFIS-01 Certified Sourcing Implementation Manual c. ENV-COC-01 Implementation Manual d. ENV-COC-03 Controlled Wood Risk Assessment e. Enviva Employee Handbook f. Pellet Wood Contract g. Harvesting Contracts
Evidence Reviewed	External data, internal documents, Enviva Employee Handbook, fiber contracts and annual supplier correspondence.
Risk Rating	X **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	While current BMP's are structured to allow selective harvesting within a wetland, guidelines are in place to protect wetland function and minimize site impacts during harvest. BMP's specifically do not allow forestry activities to alter the hydrologic conditions or drainage patterns of wetlands. By limiting harvest size and requiring leave trees and Streamside Management Zones within the wetland, BMP's work to maintain the carbon sink values associated with wetlands. The use of innovative harvesting techniques such as mat or shovel logging utilize concentrated skid trails and "mats" of felled wood to minimize ground disturbance during wetland harvest. It is common practice for logging slash to be left on site during wetland harvest and natural regeneration of the wetland takes place fairly quickly after harvest.
Means of Verification	a. ENV-SFIS-01 Certified Sourcing Implementation Manual b. ENV-COC-01 Implementation Manual c. ENV-COC-02 CS Procedure d. ENV-COC-03 CS Risk Assessment e. Annual Supplier Correspondence f. Track & Trace Program g. Dr. Virginia H Dale stakeholder email
Evidence Reviewed	External data, internal documents, fiber contracts and annual supplier correspondence, Track & Trace
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	Healthy and vigorously growing forests are efficient at capturing and storing atmospheric carbon, but older mature forests, while maintaining large carbon stores, have very low rates of additional carbon sequestration. If natural mortality is allowed to occur in these mature forests, they can actually become carbon emitters and lose the benefit of stored carbon. The harvest of forest resources from such stands provides a mechanism for capturing and utilizing stored carbon. Sustainable forest management practiced at the landscape level provides a mosaic of forest stands from young to old and maintains carbon sequestration potential of the forests
Means of Verification	a. Forest Inventory Analysis Data b. *Maximizing carbon storage through sustainable forestry management* (http://www.woodforgood.com/assets/Downloads/AHEC%20Carbon%20Storage%20through%20Forest%20Management.pdf) c. Supplement to Journal of Forestry (Oct/Nov 2011) (http://www.safnet.org/documents/JOFSupplement.pdf) d. Recommendations on Biomass Neutrality e. Ecological objectives can be achieved with wood derived bioenergy (peer reviewed letter)
Evidence Reviewed	External data
Risk Rating	X **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	Indicator
2.10.1	Genetically modified trees are not used
Finding	There are no commercial uses of Genetically Modified Organisms (GMO's) inside the Enviva LP supply area. Enviva communicates its desire to avoid these source annually to its suppliers.
Means of Verification	a. ENV-COC-01 Implementation Manual b. ENV-COC-03 Controlled Wood Risk Assessment c. Annual Supplier Correspondence
Evidence Reviewed	Internal documents, fiber contracts and annual supplier correspondence.
Risk Rating	X **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

Annex II

Enviva Stakeholder Consultation

Overview & Results

Background

In 2015 & 2016, Enviva initiated two stakeholder consultations to receive input for its SBP certification process. Both were conducted via email, with emails sent to over 160 individuals representing state agencies, universities, ENGOs, forest product companies, local community groups, and more. Each consultation was open for 30 days. Enviva set up a separate email account to manage the consultations, and monitored it daily for questions or comments. Enviva also set up a separate webpage on its website for each consultation as well that contained all the same information as the email and had a downloadable comment form.

Response to Stakeholder Comments

Consultation 1

The first consultation was held from August 15th, 2015 – September 15, 2015 and was based on SBP Standard #1: Feedstock Compliance Standard. During Consultation 1, Enviva asked interested stakeholders to provide us with any data or resources they believed would help us properly complete our Supply Base evaluation based on the Indicators in Standard #1. We received two comments. They are below in their entirety, along with Enviva's responses.

Comment 1

Indicator Number (i.e. 1.1.1)	Indicator Description (i.e. The BP Supply Base is defined and mapped)	Enviva Response
Not Given	Not Given	
Relevant SBE Area(s) (list Mill Location(s))	Cottondale, FL; Garysburg, NC ; and Wiggins, MS	
Comment	Key driver of U.S. pellet demand, and thus US pellet production and export (including Enviva at above locations) is the Renewable Energy Directive of the European EU. Our belief is that market forces, not government mandates and incentives (such as the EU) should determine the use of wood and wood residuals for products and for renewable energy, in both domestic and international markets. As a result, the EU policies are currently distorting U.S. wood supply for existing pulp, paper and wood products mills in the U.S. "There has already been an impact on demand for wood feedstocks in the U.S. South, and this demand is expected to increase over the next 5 to 10 years." "The supply of timber is also relatively price inelastic in the short run, indicating that the quantity supplied will not increase proportionately with increases in prices. This means that the market will be slow to adjust to rapid increases in the demand for timber used for renewable energy. This will likely lead to some type of leakage or displacement in the market in the short run; i.e., either demand will be med by imports from another region or	This comment is not directly related to Standard #1 which is a supply base evaluation of Enviva's feedstock supply. Any discussion of markets or pricing is beyond the scope of SBP Standard #1. However Enviva recognizes that definitions of raw material type can vary depending on the market context and forests are harvested for a variety of "products." Because forests harvesting is driven by the demand for sawtimber, additional material generated from those harvests can be classified as "harvest residuals."

	country, or mill production will be reduced due to the high feedstock prices." (USDA Forest Service—see source note below). According to a FORISK Consulting article-- "How can global demand for wood pellets affect local timber markets in the U.S. South" , the emerging pellet industry in the U.S. South relies on pulpwood sized roundwood (54 percent of total wood consumption) and manufacturing residuals (45 percent) as its basic raw materials. Building off the demand projections, Forisk expects pine pulpwood use at pellet plants in the South to increase from 4.9 million tons in 2014 to 16.9million tons by 2019 – an increase of 245 percent. The "heat map" in the Forisk article shows the stumpage price changes due to pellet plant wood use specific to various areas throughout the U.S. South which includes the relevant areas of Enviva mills listed above. (FORISK Consulting- see source note below) As Enviva proceeds with its supply base evaluation, it would seem appropriate to clarify that its feedstock is not "residuals" of waste from the woods but rather a feedstock from roundwood pulpwood which is part of the demand impact as noted in both the Forest Service study as well as the FORISK article.	Enviva will ensure raw material fiber classification is consistent with SBP definitions.
Supporting Evidence	U.S. Forest Service USDA General Technical Report SRS-202, December 2014 FORISK Consulting, "How can global demand for wood pellets affect local timber markets in the U.S. South" http://www.forisk.com/blog/2015/06/02/how-can-global-demand-for-wood-pellets-affect-local-timber-markets-in-the-u-s-south/	

Comment 2

Indicator Number (i.e. 1.1.1)	**Indicator Description (i.e. The BP Supply Base is defined and mapped)**	**Enviva Comments**
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	
Relevant SBE Area(s) (list Mill Location(s))	All mills	
Comment	*The following paragraphs are taken directly from Dale et al. (2015), which is cited below.* Renewable, biomass-based energy options can reduce the climate impacts of fossil fuels. However, it is complicated to calculate the effects on greenhouse gases, and thus on climate, of using wood for energy (Miner et al. 2015). As demand for wood increases, net forest area typically expands (Miner et al. 2014). Indeed, forest area and carbon stocks in the US have increased along with rising wood demand since the 1950s (Zhang et al. 2015). Even on intensively managed, industry-owned timberland, carbon stocks are essentially stable (Heath et al. 2010). While a spike in demand	This report supports many risk determinations in the Enviva Risk Assessments, including: • Forest markets support landowners decisions to keep their forests as forest and can increase forest area • Using wood for bioenergy can have positive GHG reductions over time • Forest carbon inventories are increasing year over year • SFM supports other forest values at the landscape level

	for forest biomass could briefly increase harvesting rates, evidence to date indicates that harvest surges are temporary and are followed by expanding forest area (Lubowski et al. 2008; Galik and Abt 2015). There is, of course, a need for diligence to ensure that other forest values such as water quality, biodiversity, and scenic and recreational values are maintained (Evans et al. 2013), which is why sustainable forest management is emphasized in the EPA draft Framework. Furthermore, forests require attentive monitoring and interventions such as periodic harvesting or controlled burns, to avoid or minimize impacts from disturbance such as catastrophic fires, insects, and pathogens. Managed forests provide benefits to neighboring landscapes by limiting the intrusion of these disturbances and thereby enhancing other ecosystem services (Malmsheimer et al. 2011). A robust body of research confirms that forests that are sustainably managed for wood products and energy are associated with long-term reductions in atmospheric carbon dioxide (CO2) emissions (Miner et al. 2014; Ter-Mikaelian et al. 2015). The primary debate about the use of sustainably produced biomass for energy revolves around the timing of mitigation benefits, not whether they exist (Helin et al. 2013; Marland et al. 2013; Buchholz et al. 2014). Timing is related to many factors, including the response of landowners to increased demand for wood, forest growth and mortality rates, combustion efficiencies, and fate of the carbon in unutilized biomass. Currently, in places without bioenergy markets, much wood is disposed by burning or left to decompose, releasing greenhouse gases and thereby affecting climate without providing energy benefits (Figure 1). Under these and many other conditions, net benefits from the use of wood for energy can begin accruing immediately or within a few decades of harvest, especially in scenarios with fast-growing trees and where there is strong response of landowners (e.g., increased planting and more investment in active	

	management via monitoring, thinning, and removal of residues following harvest) (Miner et al. 2014; Ter-Mikaelian et al. 2015). On the other hand, where landowner investment response is lacking or omitted from the analysis, or where large or slow-growing trees are involved, additional time may be required to achieve net benefits (Ter-Mikaelian et al. 2015). Because the benefits of bioenergy vary with time, analysts and policy makers need to be clear about the time horizon for analysis. The selected temporal window is largely a policy issue that should be informed by the particular context and an understanding of the dynamic warming effects of greenhouse gases such as CO2. The Intergovernmental Panel on Climate Change concluded that, for CO2, long-term cumulative emissions are likely to drive peak global temperatures, not short-term emissions trajectories (IPCC 2013). While there are uncertainties about "tipping points," the social value of limiting long-term cumulative CO2 emissions is widely acknowledged as are the benefits of more intensive management to accelerate sequestration and to increase the amount of wood available to substitute for fossil fuels and for other materials (e.g., framing and floors for buildings) that require large quantities of fossil fuel to produce. Forest biomass for bioenergy can provide an important contribution toward mitigating climate change (Cowie et al. 2013) and increasing the land area sustainably managed as forest.	
Supporting Evidence	Dale VH, Kline KL, Marland G, Miner RA. 2015. Ecological objectives can be achieved with wood-derived bioenergy. Frontiers in Ecology and the Environment 13(6):297-299. *Papers cited in Dale et al. (2015):*	

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IPCC (Intergovernmental Panel on Climate Change). 2013. Climate change 2013: the physical science basis. Contributions of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel

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Lubowski RN, Plantinga AJ, and Stavins RN. 2008. What drives land-use change in the United States? A national analysis of landowner decisions. Land Econ 84: 529–50.

Malmsheimer RW, Bowyer JL, Fried JS, et al. 2011. Managing forests because carbon matters: integrating energy, products, and land management policy. J Forest 109: S7–S48.

Marland G, Buchholz T, and Kowalczyk T. 2013. Accounting for carbon dioxide emissions. J Ind Ecol 17: 340–42.

Miner RA, Abt RC, Bowyer JL, et al. 2014. Forest carbon accounting considerations in US bioenergy policy. J Forest 112: 591–606.

Ter-Mikaelian MT, Colombo SJ, and Chen JX. 2015. The burning question: does forest bioenergy reduce carbon emissions? A review of common misconceptions about forest carbon accounting. J Forest 113: 57–68.

Zhang FM, Chen JM, Pan YD, et al. 2015. Impacts of inadequate historical disturbance data in the early twentieth century on modeling recent carbon dynamics (1951–2010) in conterminous US forests. J Geophys Res–Biogeo 120: 549–69.

Consultation 2

Enviva's second consultation was completed between January 8 and February 2, 2016. This consultation focused on the Locally Applicable Verifiers (LAVs) used to support the risk designations in our Supply Base Evaluation. Interested stakeholders were asked to comment on the LAVs Enviva chose and their applicability to certain indicators in Standard #1. We receive one set of comments from one stakeholder.

Below is the set of comments and our responses in their entirety. Note: To save space, we deleted any criteria that we not commented on, along with any worksheets that did not contain any comments.

LAV	SBP Criteria Addressed		Comments on LAV Applicability to Criteria	Other Comments	EVA Comments
FSC/PEFC Chain-of-Custody Certification	2.1.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that forests and other areas with high conservation value in the Supply Base are identified and mapped. (FSC HVC-2)	The risk assessment carried out by Bureau Veritas for Enviva's FSC CoC certification and Controlled Wood assessment is deficient and the findings do not reflect accurate information on the level of risk associated with the following: 1) Forest management activities in the relevant level (eco-region, sub-eco-region, local) do not threaten eco-regionally significant high conservation values; 2) A strong system of protection (effective protected areas and legislation) is in place that ensures survival of the HCVs in the eco-region (sub-eco-region, local), and 3) There is no net loss and no significant rate of loss (<0,5 % per year) of natural forests and other naturally wooded ecosystems such as savannah takong place in the eco-region in question. Most forestland in the Southeast lacks adequate mandatory regulations. More than 80% of forests are privately owned and logging operations are conducted with few restrictions and little oversight. Practices such as large-scale clearcutting, old-growth logging, wetland logging and the conversion of natural forests to plantations are mostly unregulated and are often practiced in sensitive habitats with little protection for species. (See NRDC Fact Sheet, "The Truth About the Biomass Industry: How Wood Pellet Exports Pollute Our Climate and Damage Our Forests," 2014, http://www.nrdc.org/energy/wood-pellet-biomass-pollution.asp; NRDC Report, "In the U.S. Southeast, Natural Forests Are Being Felled to Send Fuel Overseas," 2015, http://www.nrdc.org/energy/southeast-biomass-exports.asp; and "Forestry Bioenergy in the Southeast United States: Implications for Wildlife Habitat and Biodiversity," National Wildlife Federation, Merrifield, VA, 275p. https://www.southernenvironment.org/uploads/pages/file/biomass/nwf_exec_summary.pdf http://www.nwf.org/pdf/Conservation/NWF_Biomass_Biodiversity_Final.pdf). In addition, Pine plantations have expanded steadily, from very little in the 1950s to more than 30 million acres in the late 1990s. Pine plantations now account for about 16 percent of all timberland in the South. As of 2010, 82% of the Coastal Plain forest type – where pellet facilities are concentrated – was comprised of planted pine. The area of plantations is forecasted to grow from 32 million acres to 43 million acres. This growth in plantations is mostly occurring at the expense of naturally regenerated pine forests – where declines are projected to be the greatest throughout the US South. (See “The Southern Forest Futures Project: Technical Report” by David N. Wear and John G. Greis. August, 2013. Chapter 5. http://www.srs.fs.fed.us/pubs/gtr/gtr_srs178.pdf).	Late successional bottomland hardwood forests (Southeast and Mississippi Alluvial Valley) are located within Enviva's sourcing area. These forest types are identified by the FSC draft NRA as Priority Forest Types (PFTs) with specified risk (5.3.3) - and yet, are not noted as such in Bureau Veritas' Risk Assessment. The assessment needs to be revised to reflect these in order to be consistent with the draft NRA. With that said, all bottomland hardwood forests across Enviva's sourcing region should be reflected as PFTs with specified risk given their inherent HCVs and treated as such in Enviva's corresponding CoC, Controlled Wood program, Sustainability Policy and Track and Trace program. All bottomland hardwood forests should be fully protected and put off-limits to harvesting for biomass.	The publically available risk assessment document is not the full risk assessment which the CB reviews. It is only a summary of conclusions. Further, the DRAFT FSC NRA, is just that, a draft, and currently no FSC member is required to assess their activities against it. Enviva has proactively used it for its SBP certification because it was created by credible, conservation-minded organizations, based on the best available data. Therefore, this comment is invalid for 2.1.1, because our current FSC company risk assessment was created before the DRAFT was available, and as stated before, it is currently not required for FSC. However, the full SBP risk assessment does contain both TNC and FSC maps as to ID areas of HCV, which is what this crtierion requires.

Enviva maintains FSC and/or PEFC CoC certification for its pellet mills. These certifications track fiber through the supply chain, while also ensuring unwanted sources of fiber do not enter the supply chain. FSC CoC PEFC CoC Enviva FSC Risk Assessment Public Summary	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.	See comment above		The definition referenced in 5.3.3 of the Draft FSC NRA is specific to the "SE and Mississippi Alluvial Valley" and also states that "late successional" are lands that are *at least* 80 years old. The FSC NRA map (http://foreststewardshipcouncil.s3.amazonaws.com/index.html) does not include HCV2 sites in our Mid-ATL operating sites. In our Wiggins supply area, which is the only area that would fall into the geographcial requirement & uses HW from pure HW stands, less than 5% of the tracts supplying that mill over the last 18 months could be considered bottomlands. Further, they were all under 40 years of age. Enviva knows this through our robust Track & Trace program which collected details regarding source tracts and is third-party audited. Last the control measures for these forests (page 28) does not prohibit clearcutting, only requires that "a commensurate quantity & quality of BL HWs are being recruited in 80+ age class...[and] hydrology is maintained."
	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 of 2008	See comment above		Enviva has only sourced fiber since 2010 in our operating regions. There is very low risk that fiber sourced by Enviva meets the definition of sourcing from plantations as many stands are replanted after harvest, but this does not make them a "plantation." Enviva maintains geo spatial and FIA data of its operating areas and can assess on an on-going basis the risk for forest loss. In all our operating areas forest inventories continue to increase, as do forested acres in many operating areas.

LAV	SBP Criteria Addressed		Comments on LAV Applicability to Criteria	Other Comments	EVA Comments
SFI Fiber Sourcing Certification All of Enviva's pellet mills maintain SFI Fiber Sourcing Certification. This certification provides an assurance that uncertified fiber comes from responsibly managed forests via the use of trained loggers, supplier outreach, implementation and monitoring of Best Management Practices, and more. SFI Fiber Sourcing Standard	1.3.1	The Biomass Producer has implemented appropriate control systems and procedures to ensure that feedstock is legally harvested and supplied and is in compliance with EUTR legality requirements.	An overarching concern with the SFI Certified Sourcing label and Fiber Sourcing Standard is that they do not require source forests to meet the SFI Forest Management Standard – or much of anything else. The due diligence system also does not apply to environmentally-damaging forestry practices that are legal in many countries, including the US and Canada. Examples include—but are not limited to: the conversion of forests to plantations and even non-forest land uses; the logging of threatened and endangered species habitats; the logging of old growth forests in regions where they are now rare; road construction and logging in those forest landscapes that are still mostly ecologically intact; and the use of GMO trees.		While the commentor is correct that US laws may not prevent the issues he/she is concerned with, this does not mean that Enviva, either on its own or through its SFI Fiber Sourcing certificaiton does not have a system in place to ensure that we and those we do business with obey all applicable laws and regulations, which is what EUTR compliance addresses. SFI Section 3 (Fiber Sourcing) Objectives 11 and 12 address illegal logging and conflict timber, while, Objective 4 requies program participants to obey all laws and to take measures to ensure that suppliers obey all laws. Enviva does this through contracts and on-going monitoring of our suppliers.
	2.1.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that forests and other areas with high conservation value in the Supply Base are identified and mapped. (FSC HVC-2)	As stated above, the due diligence system for the SFI Fiber Sourcing Standard does not apply to environmentally-damaging forestry practices that are legal in many countries, including the US and Canada. Examples include—but are not limited to: the conversion of forests to plantations and even non-forest land uses; the logging of threatened and endangered species habitats; the logging of old growth forests in regions where they are now rare; road construction and logging in those forest landscapes that are still mostly ecologically intact; and the use of GMO trees.		The SBP criteria related to mapping. SFI Fiber Sourcing Indicator 1.1.b requies program participants to perform landscape assessments (which needs mapping to do correctly). As stated previously, Enviva has used TNC ecoregion maps and the Draft FSC NRA to assess out supply regions. SFI also maintains a Policy on GMOs, even though there are no commercially applicable GMO trees available for use in the US.
	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). (HVC-4)	See above.		Objective 2 requires adherence to BMPs, which address water and soil quality. It also requires us to contractually obligate our suppliers to use BMPs. Further, SFI companies invest heavily in logger training which includes BMPs and soil issues. Company wide, over 95% of Enviva's primary fiber is delivered from harvest operations overseen by trained loggers. Further, SFI FIber Sourcing requires landowner and supplier outreach and communication on issues of importance, including T&T species, conservation, forest management planning, wildlife and more.
	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)	See above.		SFI invests heavily in trained loggers. As part of their training, loggers understand protections for T&E species, special sites, and forests of exceptional conservation value. Further, landscape planning and other parts of Objective 1 require program participants to understand their supply area, the mosaic of forest types and protected areas, and how their fiber procurement affects the landscape. Further, SFI FIber Sourcing requires landowner and supplier outreach and communication on issues of importance, including T&T species, conservation, forest management planning, wildlife and more.

	2.2.4	The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b). (HVC 1)	The SFI Fiber Sourcing Standard provides no tangible assurance that biodiversity values are protected or restored in source forests in North America and globally; both new and existing standard language is wholly process-based and does not require any particular actions or outcomes for source forests. The standard includes new language pertaining to biodiversity conservation in North America. However, the indicators leave the goals, content, and outcomes of purchasing companies' biodiversity programs entirely at the companies' discretion, and no in-the-forest outcomes are required.		SFI invests heavily in trained loggers. As part of their training, loggers understand protections for T&E species, special sites, and forests of exceptional conservation value. Further, landscape planning and other parts of Objective 1 require program participants to understand their supply area, the mosaic of forest types and protected areas, and how their fiber procurement affects the landscape. Further, SFI FIber Sourcing requires landowner and supplier outreach and communication on issues of importance, including T&T species, conservation, forest management planning, wildlife and more.
	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 minimized (CPET S5b). (HVC 4)	The SFI Sourcing Standard does not require any particular level of BMP compliance in the source forests. The standard does require that companies sourcing in North America monitor suppliers' use of BMPs, evaluate the use of BMPs across their sourcing areas more generally, and use the results to identify areas for "improved performance." However, no thresholds are included for unacceptable levels of performance, and no specific actions or outcomes are required for "improved performance," not even discussions with suppliers, much less the exclusion of fiber from non-compliant sources from companies' procurement programs.		Objective 2 requires adherence to BMPs, which address water and soil quality. It also requires us to contractually obligate our suppliers to use BMPs. Further, SFI companies invest heavily in logger training which includes BMPs and soil issues. Company wide, over 95% of Enviva's primary fiber is delivered from harvest operations overseen by trained loggers

LAV	SBP Criteria Addressed		Comments on LAV Applicability to Criteria	Other Comments	EVA Comments
FSC US DRAFT National Risk Assessment	2.1.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that forests and other areas with high conservation value in the Supply Base are identified and mapped. (FSC HVC-2)	Unfortunately, There is no specific requirement in the FSC US draft NRA for all inputs to be traceable to the FMU level. Some HCV values can only be identified at the FMU level (e.g., HCV 1 - Species Diversity, HCV 3 - Ecosystems and Habitats and HCV 4 - Critical Ecosystem Services). Furthermore, the FSC's "Risk Designation" for "Identified Priority Habitat in Critical Biodiversity Areas" (as defined by the TNC Webmap) only considers species that are federally listed as threatened or endangered, which omits many species of conservation concern.	Late successional bottomland hardwood forests (Southeast and Mississippi Alluvial Valley) are located within Enviva's sourcing area. These forest types are identified by the FSC draft NRA as Priority Forest Types (PFTs) with specified risk (5.3.3) - and yet, are not noted as such in Bureau Veritas' Risk Assessment. The assessment needs to be revised to reflect these in order to be consistent with the draft NRA. With that said, all bottomland hardwood forests across Enviva's sourcing region should be reflected as PFTs with specified risk given their inherent HCVs and treated as such in Enviva's corresponding CoC, Controlled Wood program, Sustainability Policy and Track and Trace program. All bottomland hardwood forests should be fully protected and put off-limits to harvesting for biomass.	There is no requirement under any standard to address all indicators at every FMU level. FSC and SBP understand this is not feasible and such have implemented "risk assessments." Enviva has proactively used the Draft FSC NRA for its SBP certification because it was created by credible, conservation-minded organizations, based on the best available data. Therefore, this comment is invalid for 2.1.1, because our current FSC company risk assessment was created before the DRAFT was available, and as stated before, it is currently not required for FSC. However, the full SBP risk assessment does contain both TNC and FSC maps as to ID areas of HCV, which is what this crtierion requires. All bottomland forests are not HCVs and so "ceasing" harvesting is an invalid comment.

In 2015 FSC US released its first draft of its National Risk Assessment (NRA). The NRA Is expected to be completed in and mandatory as a part of FSC CoC certification in 2016. Enviva has adopted the draft NRA as the basis for its SBP Supply Base Evaluation, because the NRA was performed by credible organizations (NCASI, NatureServe, TNC), identifies areas of specified risk and suggests mitigation measures for those risks. It is comprehensive to the entire US, including all of Enviva's operating areas.	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.	As noted above, there is no specific requirement in the FSC US draft NRA for all inputs to be traceable to the FMU level. In the absence of this information, it is difficult, if not impossible, to identify and address potential threats to HCVs from management activities at the forest level.	See Comment above.	There is no requirement under any standard to address all indicators at every FMU level. FSC and SBP understand this is not feasible and such have implemented "risk assessments." Enviva has proactively used the Draft FSC NRA for its SBP certification because it was created by credible, conservation-minded organizations, based on the best available data. Therefore, this comment is invalid for 2.1.1, because our current FSC company risk assessment was created before the DRAFT was available, and as stated before, it is currently not required for FSC. However, the full SBP risk assessment does contain both TNC and FSC maps as to ID areas of HCV, which is what this crtierion requires. All bottomland forests are not HCVs and so "ceasing" harvesting is an invalid comment.
FSC US NRA Documents	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 of 2008	The FSC Draft NRA acknowledges that conversion of natural forests to plantations does occur in the U.S. and warrants specific consideration within the Controlled Wood Due Diligence System. And yet, conversion is not noted as a specified risk in Bureau Veritas' Risk Assessment. In the absence of noted risk, appropriate control systems would not likely be required by the certifier or be included in standard audit processes under the Controlled Wood Standard.		Enviva has only sourced fiber since 2010 in our operating regions. There is very low risk that fiber sourced by Enviva meets the definition of sourcing from plantations as may stands are replanted after harvest, but this does not make them a "plantation." Enviva maintains geo spatial and FIA data of its operating areas and can assess on an on-going basis the risk for forest loss. In our operating areas forest inventories continue to increase, as do forested acres in many operating areas.

FSC US NRA Maps of HCVs	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)	As noted above, there is no specific requirement in the FSC US draft NRA for all inputs to be traceable to the FMU level. In the absence of this information, it is difficult, if not impossible, to identify some HCVs (e.g., critical habitat for endemic or rare species) that need to be conserved or set aside in their natural state.	See Comment above.	See comments above

LAV	SBP Criteria Addressed		Comments on LAV Applicability to Criteria	Other Comments	EVA Comments
Enviva Fiber Contracts	1.3.1	The Biomass Producer has implemented appropriate control systems and procedures to ensure that feedstock is legally harvested and supplied and is in compliance with EUTR legality requirements.	Forestry on private land in the region is conducted without restrictions or regulations of many forestry practices that are damaging to sensitive ecosystems. See NRDC Fact Sheet, http://www.nrdc.org/energy/files/wood-pellet-biomass-pollution-FS.pdf. Also see previous comments regarding inadequate requirements in the FSC NRA and Controlled Wood Standard.		Forest harvesting in US does indeed have to meet many federal and state requirements during harvest. Examples, include the Clean Water Act, the Endangered Species Act, and may regulations around operational H&S. While the commentor is correct that US laws may not prevent the issues he/she is concerned with, this does not mean that Enviva, either on its own or through its SFI Fiber Sourcing certificaiton, or other programs and policies in place does not have a system in place to ensure that we and those we do business with obey all applicable laws and regulations, which is what EUTR compliance addresses. SFI Section 3 (Fiber Sourcing) Objectives 11 and 12 address illegal logging and conflict timber, while, Objective 4 requies program participants to obey all laws and to take measures to ensure that suppliers obey all laws. Enviva does this through contracts and on-going monitoring of our suppliers.
In order to deliver wood to an Enviva mill, all suppliers must sign a contract which requires adherence to all BMPs, adherence to all laws, including environmental and social laws, and that they will not deliver fiber from controversial sources as defined by FSC and PEFC.	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). (HVC-4)	See above		SFI Objective 2 requires adherence to BMPs, which address water and soil quality. It also requires us to contractually obligate our suppliers to use BMPs. Further, SFI companies invest heavily in logger training which includes BMPs and soil issues. Company wide, over 95% of Enviva's primary fiber is delivered from harvest operations overseen by trained loggers. Through SFI and our internal Track & Trace Program, Enviva has a robust monitoring program to ensure complaince with BMPs.

	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 minimized (CPET S5b). (HVC 4)	See above		Objective 2 requires adherence to BMPs, which address water and soil quality. It also requires us to contractually obligate our suppliers to use BMPs. Further, SFI companies invest heavily in logger training which includes BMPs and soil issues. Company wide, over 95% of Enviva's primary fiber is delivered from harvest operations overseen by trained loggers. Through SFI and our internal Track & Trace Program, Enviva has a

LAV	SBP Criteria Addressed		Comments on LAV Applicability to Criteria	Other Comments	EVA Comments
Enviva Sustainability Policy Enviva's Sustainability Policy describes our commitment to being an industry leader in sustainability. Sustainability Policy	2.1.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that forests and other areas with high conservation value in the Supply Base are identified and mapped. (FSC HVC-2)	As noted in earlier sections, Enviva's Sustainability Policy - and its reliance on FSC Controlled Wood Standard/NRA as well as BMP's does not provide adequate assurance for verifying that forests and other areas with high conservation value in the Supply Base are identified and mapped.	Late successional bottomland hardwood forests (Southeast and Mississippi Alluvial Valley) are located within Enviva's sourcing area. These forest types are identified by the FSC draft NRA as Priority Forest Types (PFTs) with specified risk (5.3.3) - and yet, are not noted as such in Bureau Veritas' Risk Assessment. The assessment needs to be revised to reflect these in order to be consistent with the draft NRA. With that said, all bottomland hardwood forests across Enviva's sourcing region should be reflected as PFTs with specified risk given their inherent HCVs and treated as such in Enviva's corresponding CoC, Controlled Wood program, Sustainability Policy and Track and Trace program. All bottomland hardwood forests should be fully protected and put off-limits to harvesting for biomass.	A sustainabilty policy is a broad commitment to meeting key sustainability requirements and implementing our own goals as a company. It is one part of the over company-wide commitment and implementation of the SBP program. Obviously taking the statements as themselves in the policy will not address these idicators as a whole, but they support our efforts by publically commiting us to meeting specific requirements.
	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.	Same as above.		See Above
	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 of 2008	Same as above.		See Above
	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 minimize them.	Same as above.		See Above
	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). (HVC-4)	Same as above.		See Above
	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)	Same as above.		See Above
	2.2.4	The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b). (HVC 1)	Same as above.		See Above

	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 minimized (CPET S5b). (HVC 4)	Same as above.		See Above
	2.9.1	Feedstock is not sourced from areas that had high carbon stocks in January 2008 and no longer have those high carbon stocks.	Same as above.		See Above

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Best Management Practices Implementation The use of BMPs is mandatory to deliver fiber to Enviva mills. Enviva monitors suppliers to ensure proper BMP implementation and also relies on state inspections and other publically available data and research to evaluate the use of BMPs in our operating areas. AL BMPs	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.	Forestry on private land in the region is conducted without restrictions or regulations of many forestry practices that are damaging to sensitive ecosystems. Best Management Practices or other voluntary programs, which are for the most part not binding and have been widely documented to allow damage to ecosystems. See NRDC Fact Sheet, http://www.nrdc.org/energy/files/wood-pellet-biomass-pollution-FS.pdf.		SFI Objective 2 requires adherence to BMPs, which address water and soil quality. It also requires us to contractually obligate our suppliers to use BMPs. Even in areas where BMPs are considered "voluntary" our contracts and certifications mandate their use. Further, SFI companies invest heavily in logger training which includes BMPs and soil issues. Company wide, over 95% of Enviva's primary fiber is delivered from harvest operations overseen by trained loggers. Many reports as listed on this sheet show that SE wide, BMP implementation is high. Some states (Florida) have Wildlife BMPS that are implemented and other states have biomass BMPs as well.
	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 minimize them.	See comment above.		As part of the comment above, soil and water impacts are included in BMPs.
	2.2.4	The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b). (HVC 1)	See comment above.		SFI Objective 2 requires adherence to BMPs, which address water and soil quality. It also requires us to contractually obligate our suppliers to use BMPs. Even in areas where BMPs are considered "voluntary" our contracts and certifications mandate their use. Further, SFI companies invest heavily in logger training which includes BMPs and soil issues. Company wide, over 95% of Enviva's primary fiber is delivered from harvest operations overseen by trained loggers. Many reports as listed on this sheet show that SE wide, BMP implementation is high. Some states (Florida) have Wildlife BMPS that are implemented and other states have biomass BMPs as well.

FL BMPs	2.2.5	The Biomass Producer has implemented appropriate control systems and procedures for verifying that the process of residue removal minimizes harm to ecosystems.	See comment above.		Objective 2 requires adherence to BMPs, which address water and soil quality. It also requires us to contractually obligate our suppliers to use BMPs. Further, SFI companies invest heavily in logger training which includes BMPs and soil issues. Company wide, over 95% of Enviva's primary fiber is delivered from harvest operations overseen by trained loggers. Many reports as listed on this sheet show that SE wide, BMP implementation is high. Some states (Florida) have Wildlife BMPS that are implemented and other states have biomass BMPs as well.
GA BMPs	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).	See comment above.		Water and soil quality are ecosystem services which are covered by BMPs.
MS BMPs					
NC BMPs					
VA BMPS					
Water Quality and BMP's - NC					
Water Quality and BMP's - VA					
Water Quality and BMP's - MS					
BMP Survey - FL					
BMP Survey - GA					
BMP Survey - AL					
BMP's LA					
Wetlands Regulation Center					
NCASI					
NASF Water Quality Study					

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Federal Laws & Regulations	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)	Forestry on private land in the region is conducted without restrictions or regulations of many forestry practices that are damaging to sensitive ecosystems. Federal laws, such as the Clean Water Act (CWA), Endangered Species Act (ESA), or the Migratory Bird Treaty Act may apply to forestry operations in the region. However, their application to specific forest practices can be uncertain and inconsistent across ecosystems. Current protections under the CWA are not comprehensive. First, there is significant ambiguity about which streams and wetlands are covered by the law. For example, the U.S. Environmental Protection Agency (EPA) acknowledged that "isolated" waters—waters without a surface water connection to other surface waters and are intrastate and non-navigable—have effectively not been protected under the law since 2001. Second, even if a body of water is protected, discharges of dredged or fill material associated with "normal" silviculture operations associated with forestry, which are not specifically identified in the law, are typically exempt from permitting. The CWA contains a similar exemption for construction or maintenance of forest roads where they are constructed in accordance with Best Management Practices (which themselves are inconsistently applied/monitored and have been shown to not effectively mitigate impacts). Finally, in the spring of 2013, the U.S. Supreme Court upheld the EPA's interpretation of its industrial stormwater regulation to exclude discharges of runoff from logging roads from the pollution discharge permitting program. The ESA applies only to animals or plants that are listed as threatened or endangered and only to projects that might harm these species (excluding rare and vulnerable species where increased protection could avoid pushing them over the edge requiring a future T/E listed status). Some of the most important protections included in the statute only apply on federal lands or in instances where a federal permit (such as a wetland permit under the CWA) is required, obligating federal agencies to consult with Fish and Wildlife Service before taking any action that might harm a listed species. Permits or consultations that allow logging to go forward under the ESA are obtained only on a case by case basis and mitigation practices are tailored to the specific species in question. Thus, even where ESA is triggered, damaging practices such as logging of old growth or wetland forests may continue as long as they do not impact the particular endangered or threatened species in question.		The CWA is in fact heavily regulated. As the resources on the BMP worksheet shows, BMPs, which are the way logging operations conform to the CWA have high rates of implementation. Further, in many states, state foresters inspect many, if not all, harvesting operations for BMP compliance. These include appropriate buffers along streams and rivers, stream crossings, road building, and water management and protection. SFI invests heavily in trained loggers. As part of their training, loggers understand protections for T&E species, special sites, and forests of exceptional conservation value. While the commentor may argue that these laws do not address all his/her concerns, it is inaccurate to say that there are not laws that address private forestry. Further, it is untrue that all wetland logging or clearcutting is permanently damaging to forests. For example, in many areas of the US there is a lack of early successional forestry and edge areas in which much wildlife flourish.
There are many Federals regulations that govern forestry practices in the US. All Enviva suppliers and operations must adhere to all laws. U. S. Fish & Wildlife Service home page U.S. F&WS Endangered Species	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 minimized (CPET S5b). (HVC 4)	See comment above.		See above

National Wetlands Inventory Center
U. S. Environmental Protection Agency home page
U. S. Environmental Protection Agency's Office of Water home page

U. S. EPA – Endangered Species

U. S. EPA - Wetlands page
U. S. Geographical Survey home page
U. S. Army Corp of Engineers home page
Code of Federal Regulations
U.S.D.A. Forest Service
National Soil Survey Center
U.S.D.A. Southern Research Station
Natural Resources Conservation Services

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State Laws and Programs In addition to Federal laws, states have additional local laws and regulations that govern forest management which must be adhered to. AL DEM AL Forestry Commission FL Forest Strategy	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)	A common misconception is that forestry in the Southeastern United States is strictly regulated to ensure responsible harvesting and safeguarding of sensitive ecosystems. In reality, forestry on private land in the region is conducted with few restrictions and little oversight. Practices such as large-scale clearcutting, old-growth logging, wetland logging, and the conversion of natural forests to plantations are mostly unregulated and are often practiced in sensitive habitats with little protection for species. Laws and regulations in the Southeast do not prevent wood pellet manufacturers from harvesting live trees and damaging the forest's future carbon storage capacity. Current practices are creating a large and growing carbon debt by removing trees that would otherwise continue to grow and sequester carbon dioxide (CO_2). Premature second harvests, before trees have fully regrown, are likely to exacerbate this carbon debt problem. While laws and regulations vary by state, they do not prevent reharvest of forestlands before the age when on-site carbon storage would recover to the levels associated with non-harvest. Moreover, there are no requirements to limit the amount of timber cut or to replant areas that have been cut. Forestry on private land in the region is also conducted without restrictions or regulations of many forestry practices that are damaging to sensitive ecosystems. Best Management Practices or other voluntary programs, which are for the most part not binding and have been widely documented to allow damage to ecosystems. Across all southern states, there are no state laws specifically regulating private forest areas. Most also lack regulations requiring notification before cutting, regeneration after cutting, and management planning. Virginia, North and South Carolina, Mississippi and Louisiana, do not have laws to regulate some of the most damaging practices, such as clearcutting and wetland logging, and none have imposed limits on the cumulative impact of logging operations. None of the states have laws or regulations that protect old growth and endangered forests. Likewise, none have laws that would prevent the conversion of natural forest ecosystems to plantations—a practice that typically includes extensive use of chemical herbicides that can contaminate waterways and threaten aquatic biodiversity.		The CWA is in fact heavily regulated. As the resources on the BMP worksheet shows, BMPs, which are the way logging operations conform to the CWA have high rates of implementation. Further, in many states, state foresters inspect many, if not all, harvesting operations for BMP compliance. These include appropriate buffers along streams and rivers, stream crossings, road building, and water management and protection. SFI invests heavily in trained loggers. As part of their training, loggers understand protections for T&E species, special sites, and forests of exceptional conservation value. While the commentor may argue that these laws do not address all his/her concerns, it is inaccurate to say that there are not laws that address private forestry. Further, it is untrue that all wetland logging or clearcutting is permanently damaging to forests. For example, in many areas of the US there is a lack of early successional forestry and edge areas in which much wildlife flourish. Last, FIA data show that inventories, which are good proxies for carbon stocks are increasing in all our operating regions. It is a misconception that pellet production is a strong driver of harvesting, especially when a recent NAFO report showed that only 4% of total volume harvested is used for pellets.
	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 minimized (CPET S5b). (HVC 4)	See comment above.		See above

FL Forest Service
FL DEP
GA Forest Strategy
GA Sustainability Report
GA Natural Heritage Program
GA Forestry Commission
GA EPD
LA Forestry Commission
MS Forestry Commission
MS DEQ
NC Forestry Laws
NC DENR
VA DOF
VA DEQ

LAV	SBP Criteria Addressed		Comments on LAV Applicability to Criteria	Other Comments	EVA Comments
TNC Ecoregions and other priority maps In addition to the FSC Draft NRA, Enviva uses credible data published by TNC to assess ecoregions and other areas within the supply base. TNC Geodatabase	2.1.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that forests and other areas with high conservation value in the Supply Base are identified and mapped. (FSC HVC-2)	FSC's draft NRA does not adequately cover all areas of forests with HCVs. It does not, for example recognize all bottomland hardwoods - forests that contain critical habitat for many threatened, endangered, rare, endemic and migratory species. TNC maps provide more granularity, but should be used in combination with other scientifically credible sources. Maps alone do not represent an adequate control system unless the identified areas are delineated and incorporated into a forest level chain of custody (not just at the supply region level).		There is no data to support the notion that all bottomland forests and high conservation value. Enviva uses the credible data from TNC and FSC to ID HCVs that are affected by forestry.
	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.	Same comment as above.		See above
	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)	Same comment as above.		See above
	2.2.4	The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b). (HVC 1)	Same comment as above.		See above

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Enviva Track & Trace Enviva maintains an in-house fiber tracking system which collects data on the source tracts which supply our mills with roundwood and in-woods chips. We collect GPS coordinates, and data on forest type, stand age, harvest type, % of volume going to be delivered to Enviva, and more. Our Track & Trace program has been independently verified as having robust data collection procedures. Enviva uses the data from Track & Trace to accurately describe our source forests.	2.1.1	The Biomass Producer has implemented appropriate control systems and procedures for verifying that forests and other areas with high conservation value in the Supply Base are identified and mapped. (FSC HVC-2)	As noted in earlier sections, Enviva's Sustainability Policy - and its reliance on FSC Controlled Wood Standard/NRA as well as BMP's does not provide adequate assurance for verifying that high conservation value forests, threats from management and conversion in the Supply Base are identified and mapped. Given the lack of rigor in the foundation for identifying threats and HCV forests, the Track and Trace system cannot represent an appropriate control system or procedure. The fundamental requirements around defining and identifying threats and HCVs must be corrected in order for the Track and Trace system to be effective.		Regardless of the ID'ed HCV, which the commentor disagrees with the data from TNC and FSC, Enviva has the ability to track fiber to its source and ensure we are not sourcing unwanted fiber through our T&T program. This comprehensive system collects and monitors data on source tracks, in addition to supplier conformance with our procurement policies (i.e. BMPs, legality). We understand detailed attributes of our source tracts and can validate that we are meeting our sustainability goals.
	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.	Same comment as above.		See above
	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 of 2008	Same comment as above.		See above
	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 minimize them.	Same comment as above.		See above
	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)	Same comment as above.		See above
	2.2.4	The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b). (HVC 1)	Same comment as above.		See above

	2.2.5	The Biomass Producer has implemented appropriate control systems and procedures for verifying that the process of residue removal minimizes harm to ecosystems.	Same comment as above.		See above
	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 minimized (CPET S5b). (HVC 4)	Same comment as above.		See above