SBP

Sustainable Biomass Partnership

Supply Base Report for Enviva Cottondale

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Version 1.2
June 2016

NOTE:

This template, v1.2, is effective as of the date of publication, that is, 23 June 2016. Template v1.1 may still be used for those audits undertaken prior to 23 June 2016 and where the certificate is issued to Certificate Holders before 1 October 2016.

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

Document history

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Contents

1 Overview

Producer name: Enviva Holdings LP

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

Geographic position: Enviva Pellets Cottondale, Florida

N 30.739187, W-85.391074

Primary contact: Shawn Cook
2500 Green Circle Parkway
Cottondale, FL 32431
shawn.cook@envivabiomass.com
850-227-4345

Company website: http://www.envivabiomass.com/

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Name of CB: PricewaterhouseCoopers LLP

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SBP Endorsed Regional Risk Assessment: NA

Weblink to 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 the Enviva Pellets Cottondale mill located in northwest Florida, USA. The catchment area for primary feedstock at this facility includes north western Florida, south eastern Alabama, and south western Georgia. The supply base area for secondary feedstock includes counties in Alabama, Florida, Georgia, Mississippi, and South Carolina in the Southeast United States of America. Table 1 illustrates that the entire Cottondale supply base area encompasses 295 counties and 41,742,577 hectares.

Figure 1. Cottondale Supply Base

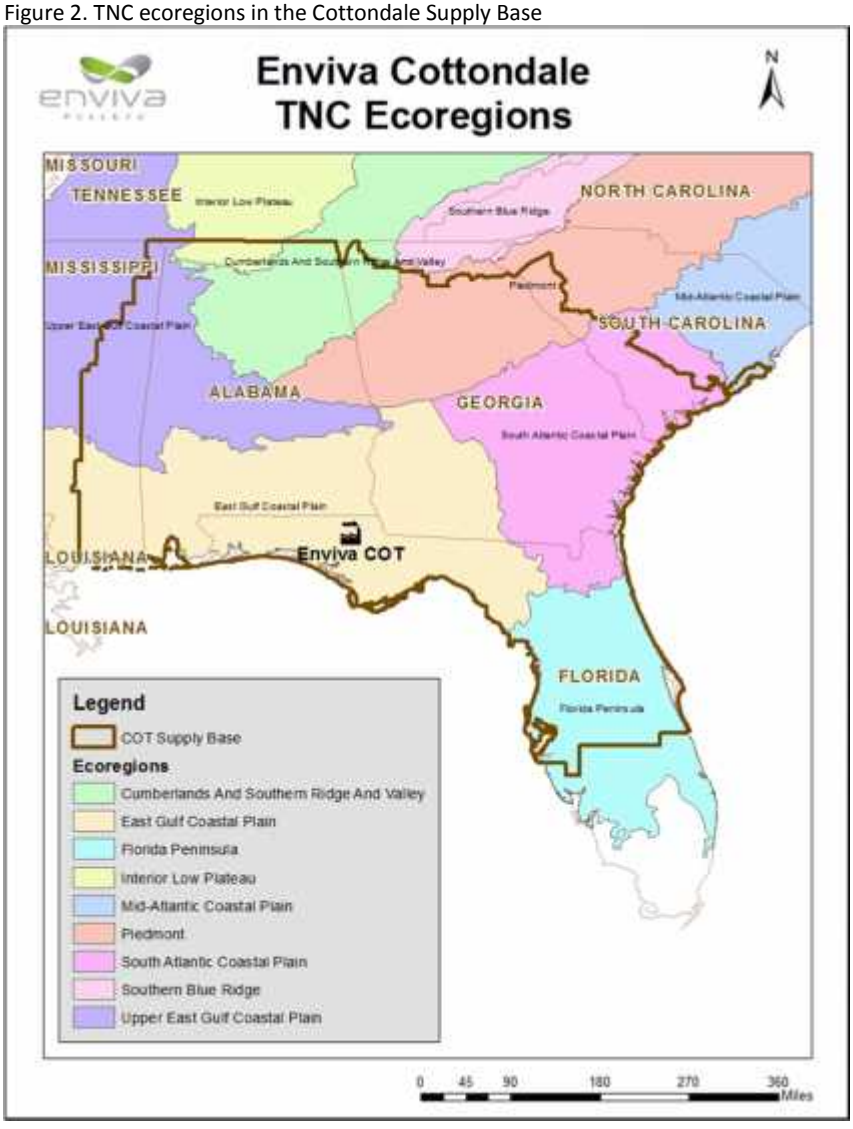
Table 1. Cottondale Supply Base by State, County, and Hectare

State	Counties	Hectares
Alabama	67	13,118,030
Florida	47	8,806,477
Georgia	145	14,006,137
Mississippi	23	3,609,925
South Carolina	13	2,202,008
	295	41,742,577

Ecoregions

The Cottondale supply base extends from the lower gulf coast, to the lower Atlantic coast, and north into the southern Appalachians and encompasses portions of the following The Nature Conservancy (TNC) ecoregions: East Gulf Coastal Plain, Florida Peninsula, Interior Low Plateau, Mid-Atlantic Coastal Plain, Piedmont, Cumberlands and Southern Ridge and Valley, South Atlantic Coastal Plain, Southern Blue Ridge, and Upper East Gulf Coastal Plain (The Nature Conservancy, 2015).

Figure 2. TNC ecoregions in the Cottondale Supply Base



Forest cover-types and growth/drain ratios

The average primary feedstock catchment area radius for Cottondale is 117 km. This area contains 2.6 million hectares of forested land. The supply base for secondary has an average radius of 472 km. The entire supply base of 41.7 million hectares contains 29 million hectares of forested land, and has an annual growth to drain ratio of 1.49:1 for all species, 1.69:1 for hardwood, and 1.45:1 for pine (US Department of Agriculture Forest Service, 2016). A positive growth to drain ratio indicates that forest growth exceeds harvest removals.

In the Gulf region of the U.S. south, total pine inventory has increased 2.1% annually since 2000 (Forest2Market Inc., 2015). Based on the most recent data from the US Forest Service Forest Inventory Analysis (FIA), Table 3 shows the increase of timberland area across the states covered by the supply base in recent years (US Department of Agriculture Forest Service, 2016).

Table 2. U.S. South Gulf Region inventory 2000 – 2014

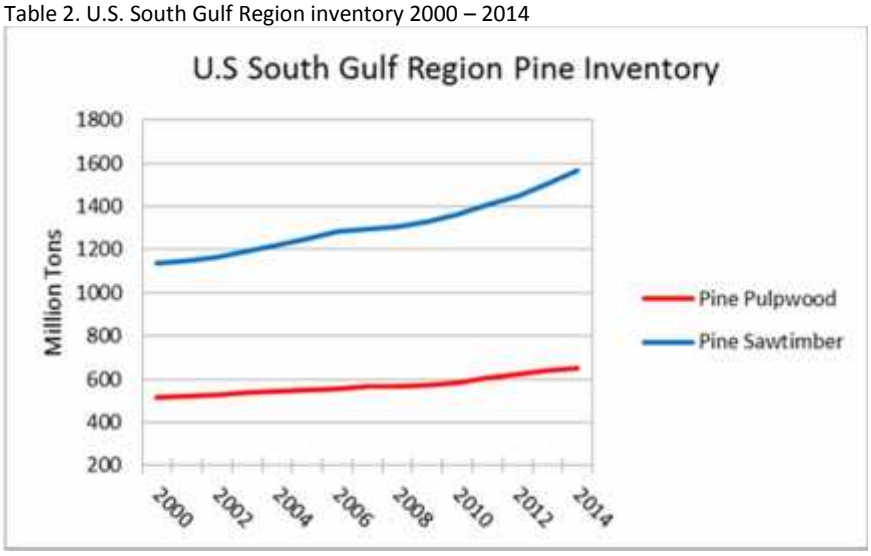
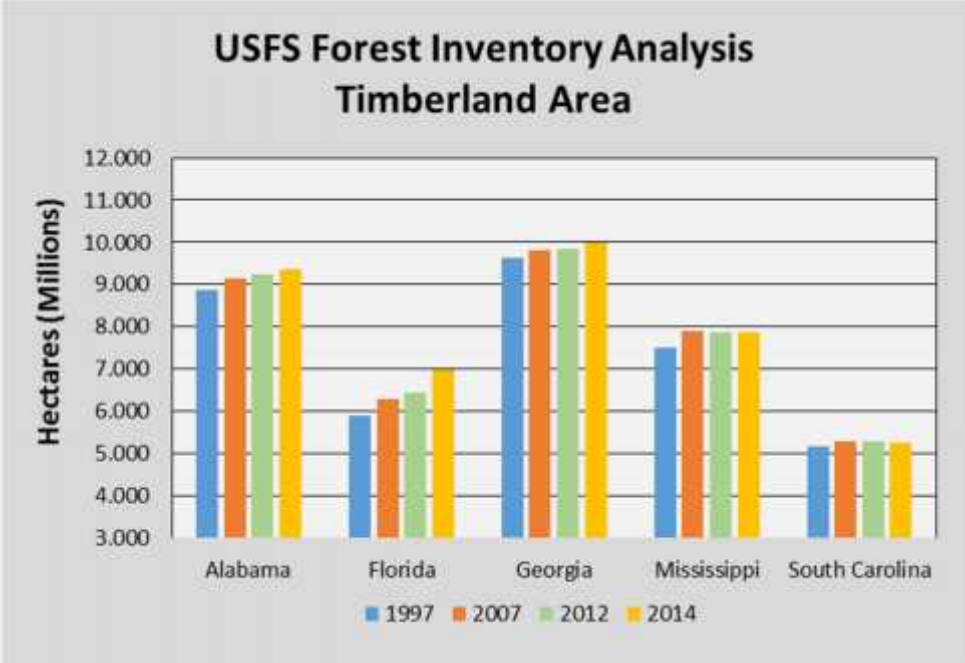


Table 3. US Forest Service Timberland area 1997-2014 (State-wide Basis)



The forest in the supply base consists primarily of southern yellow pine and mixed hardwood species. Forest species composition for each state within the supply base is described in Table 4 (US Department of Agriculture Forest Service, 2014).

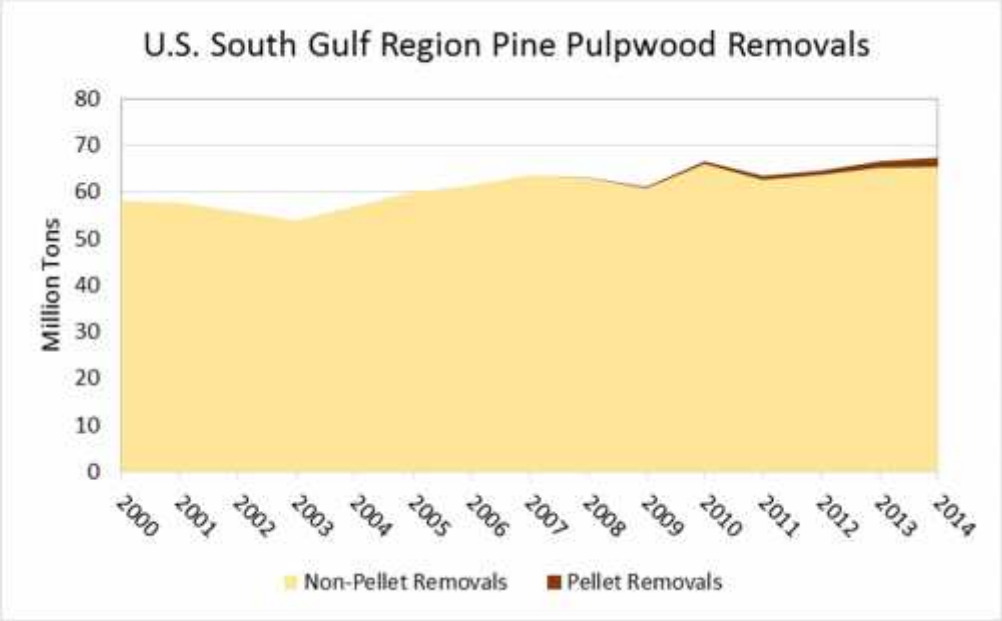
Table 4. Species Composition by State (State-wide Basis)

State	Forested Area (Ha)	Pine	Pine/Hwd	Hardwood	Other
Alabama	9,359,121	42%	13%	31%	14%
Florida	6,982,060	43%	9%	16%	32%
Georgia	10,007,244	45%	11%	26%	18%
Mississippi	7,863,376	42%	11%	26%	21%
South Carolina	5,250,450	48%	11%	22%	19%

Operating Scale

Enviva provides a market for low value forest products produced during harvests of higher-value timber. Removals of both pine and hardwood for pellet export in the region comprised only 3.88% of total harvest volume during 2014 (Forest2Market Inc., 2015). Primary harvesting activity and wood consumption in the southern US is driven by saw-timber markets with a total estimate of removals for the pellet industry comprising only 0.09% of the total pine inventory and 0.06% of the total hardwood inventory. In 2014, total wood consumption by all markets in the south accounted for 3.3% of total forest inventory (Forest2Market Inc., 2015).

Table 5. U.S. South Gulf Region Pine Pulpwood Removals 2000 – 2014.



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 within 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 (Longleaf Alliance, 2016). Enviva's use of material from longleaf stand thinnings or other harvest residuals supports the commercial viability of the species and encourages landowners to restore and continue to manage longleaf stands. Enviva does not source from natural longleaf stands that are being converted to another forest type.

Further, Enviva maintains a third party certified risk assessment (due diligence system) which satisfies the Programme for the Endorsement of Forest Certification™ (PEFC) and the 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 at the Cottondale facility appear 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

General forest management practices vary by landowner and location within the supply base and are conducted on both pine and hardwood sites. Most hardwood stands are naturally regenerated after harvest with little additional management taking place until the next harvest. 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. Pine stands are both naturally regenerated and planted after harvest. Planted pine management includes various regimes designed to produce a variety of forest products. Typical management scenarios include a thinning between age 9 and 14, and a final harvest occurring between age 25 and 35. Pine management intensity depends on landowner objectives and resources, and could include

additional treatments, and/or additional thinning. Overall, though many pine stands are established by planting 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. This non-merchantable hardwood understory may be used by Enviva Cottondale, if there is no other outlet for the material.

Ownership, Land Use and Certification

Forest ownership patterns within the supply base are typical for the southern US, with the highest percentage of the forest owned by private landowners. Based on data obtained from the United States Forest Service Forest Inventory and Analysis program, forest land ownership categories for each state in the supply base are presented in table 6 (US Department of Agriculture Forest Service, 2014). The majority land use in the area is some form of agriculture or forestry. Land use data for the supply base was derived from the United States Department of Agriculture Major Land Use report, and is presented in table 7 (US Department of Agriculture Economic Research Service, 2007). Major forest certification schemes such as the American Tree Farm System® (ATFS), Sustainable Forestry Initiative® (SFI®) and Forest Stewardship Council™ (FSC) have program participants within the supply base. From the states within the supply base 3.8 million hectares are SFI® certified, 4.2 million hectares are ATFS certified, and .15 million hectares are FSC certified (Forest2Market Inc., 2016).

Table 6. Forest Land Ownership by State (State-wide Basis)

State	Forested Area (Ha)	Federal	State/Local	Private
Alabama	9,359,121	4%	2%	94%
Florida	6,982,060	15%	20%	65%
Georgia	10,007,244	7%	3%	90%
Mississippi	7,863,376	9%	2%	89%
South Carolina	5,250,450	8%	4%	88%

Table 7. Land Use by State (State-wide Basis)

State	Total Area (Ha)	Cropland	Pasture	Forest	Urban	Other
Alabama	13,142,571	10%	8%	69%	4%	9%
Florida	13,966,915	8%	16%	45%	12%	19%
Georgia	14,997,650	12%	3%	66%	7%	12%
Mississippi	12,148,663	19%	7%	65%	2%	7%
South Carolina	7,798,292	10%	4%	66%	6%	14%

Regional Socio-economic Conditions

Annually the forest products industry in Florida generates over $16 billion in revenue impacts and provides over 80,000 jobs (Florida Forestry Association, 2016). The mean hourly wage for the farming, fishing and forestry occupational group in Florida in 2015 was $11.58, compared to the United States average of $12.67 for this same group (US Department of Labor, 2016). Forestry related industries are a leading economic driver in many rural counties in northern Florida, providing employment opportunities for loggers, foresters, consultants, truck drivers and mill workers. Enviva Cottondale provides opportunities for local residents to gain employment and currently employs approximately 90 people. As part of the wood procurement process, Enviva Cottondale accepts raw material deliveries from over 125 independent loggers and contract haulers, and purchases secondary feedstock in the form of sawdust and shavings from 25 mills within the region, which according to a recent study, creates almost 250 indirect jobs in the region.

Further, employees at the Enviva COT plant, on average, earn wages that are almost 35% higher than other comparable jobs in the area. The same study found that Enviva Cottondale's total direct and indirect economic contribution to the region is over $240 million dollars (Chmura Economics and Analytics, 2016).

Pellet Feedstock Profile

Primary feedstock is sourced direct from the forest in the form of roundwood or wood chips from 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.

As Enviva Cottondale's supply comes mainly from commercial pine operations, there isn't any significant volume of fiber from forests typically managed in 40-year or longer rotations. Table 8 specifies the characteristics of each feedstock type. SBP Compliant feedstock originates within the defined supply base and meets all relevant SBP standards as demonstrated by the Supply Base Evaluation (SBE).

Table 8. Cottondale Feedstock Profile

Feedstock Type	Receipts	SBP Compliant	Certified Source	Pine	Hardwood
Primary	67.7%	100%	30%	68%	32%
Secondary	32.3%	100%	0%	100%	0%

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 Cottondale received feedstocks from the following sources, by volume[1]:

[1] During this time period, 44% 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, and upland hardwood).

- 34.2% was made up of residues supplied by sawmills and wood industries.
- 24% 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.
- 37.8% 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.
- 1.3% 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.
- 2.7% 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. At the Cottondale mill, Enviva only accepts wood from tracts in which the logger has completed and maintains training through a SFI-approved trained logger program. 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.

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.

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, to ensure it is SBP-Compliant.

2.2 Actions taken to promote certification amongst feedstock supplier

Enviva is third party certified in two of the major chain of custody systems (PEFC™ & SFI). Enviva also maintains certification under the SFI Fiber Sourcing Program. SFI Fiber Sourcing requires Enviva to promote sustainable forestry activities and forest certification to our suppliers and landowners. Our staff are actively involved in the Florida SFI Implementation Committee, which is a group of SFI certified companies that work together to enhance on-the-ground forestry operations in Florida.

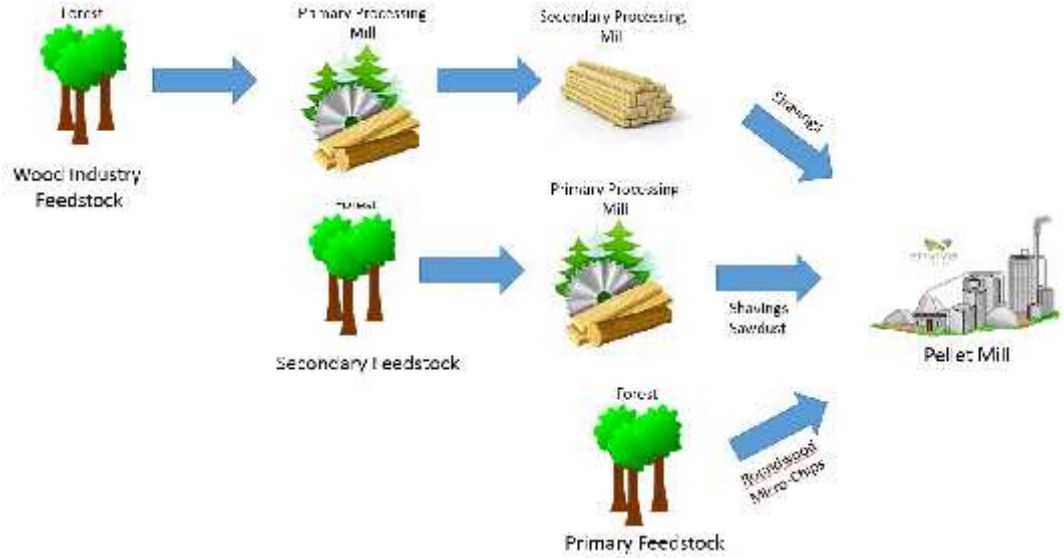
Enviva actively pursues feedstock from certified sources to encourage those landowners to maintain and expand their certified holdings. Enviva foresters are active in the Alabama and Florida Forestry Associations and the Florida committee of the American Tree Farm System, both of which promote forest sustainability and certification.

2.3 Final harvest sampling programme

As Enviva Cottondale's supply comes mainly from commercial pine operations, there isn't any significant volume of fiber from forests typically managed in 40-year or longer rotations.

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

Figure 3. Cottondale Feedstock Flow Chart



2.5 Quantification of the Supply Base

Supply Base

a. Total Supply Base area (ha): 41,742,577 with 70% of that area forested.

b. Tenure by type (ha): (From averages presented in table 4) (US Department of Agriculture Forest Service, 2014)

Table 9. Forest Land Ownership Summary (Supply Base Basis)

Supply Base Hectares	Federal	State/Local	Private
41,742,577	3,327,176	2,604,119	35,811,282
	8%	6%	86%

c. Forest by type (ha): Temperate forest type comprise the entire 41,742,577ha

d. Forest by management type (ha): (US Department of Agriculture Forest Service, 2014)
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.

Table 10. Species Composition Summary (Supply Base Basis)

Supply Base Hectares	Pine	Pine/Hwd	Hardwood	Other
41,742,577	18,172,252	4,677,915	10,540,244	8,352,167
	44%	11%	25%	20%

e. Certified forest by scheme (ha): (e.g. hectares of FSC or PEFC-certified forest) (Forest2Market Inc., 2016).

Table 11. FSC, SFI®, ATFS Hectares by State (State-wide Basis)*

State	FSC	SFI®	ATFS
Alabama	2,458	1,169,488	1,250,834
Florida	49	453,780	425,713
Georgia	0	1,005,259	1,208,351
Mississippi	140,037	779,233	768,903
South Carolina	2,952	439,806	539,283

**Some areas may be double-counted due to dual certifications*

Feedstock

f. Total volume of Feedstock: >1,000,000 metric tonnes

g. Volume of primary feedstock: >1,000,000 metric tonnes

h. List percentage of primary feedstock (g), by the following categories. Subdivide by SBP-approved Forest Management Schemes:
- Forest Stewardship Council: 0.0%
- American Tree Farm System (Program for the Endorsement of Forest Certification): 14.6%
- Sustainable Forestry Initiative®: 7.8%
- Not certified to an SBP-approved Forest Management Scheme: 77.6%

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

Softwood		
Loblolly pine (*Pinus taeda*)		
Longleaf pine (*Pinus palustris*)		
Pond Pine (Pinus serotina)		
Slash Pine (*Pinus elliottii*)		
Sand Pine (Pinus clausa)		
Hardwood		
Black Cherry (Prunus serotina)		Red Maple (Acer rubrum)
Black Gum *(Nyssa sylvatica)*		River Birch (Betula nigra)
Blackjack Oak (Quercus marilandica)		River Oak (Casuarina cunninghamiana)
Black Oak (Quercus velutina)		Shumard Oak (Quercus shumardii)
Black Walnut (Juglans nigra)		Southern Magnolia *(Magnolia grandiflora)*
Cherry Bark Oak (Quercus pagoda)		Southern Red Oak *(Quercus flacata)*
Chinkapin Oak (Quercus muehlenbergii)		Sugar Maple (Acer saccharum)
Hackberry (Celtis occidentalis)		Swamp Bay *(Persea palustris)*
Hickory (Carya spp.)		Swamp Chestnut Oal (Quercus michauxii)
Holly (Ilex opaca)		Sweet Bay *(Magnolia virginia)*
Laurel Oak *(Quercus laurifolia)*		Sweet Gum *(Liqaidambar styraciflua)*
Live Oak (Quercus virginiana)		Sycamore (Plantanus occidentalis)
Northern Red Oak (Quercus rubra)		Water Oak *(Quercus nigra)*
Overcup Oak (Quercus lyrata)		Water Tupelo *(Nyssa aquatic)*
Pecan (Carya illinoensis)		White Oak *(Quercus alba)*
Persimmon (Diospyros virginiana)		Willow Oak (Quercus phellos)
Post Oak (Quercus stellata)		Yellow Poplar (Liridendron tulipifera)
Red Bay *(Persea borbonia)*		

j. Volume of primary feedstock from primary forest: 0.0 metric tonnes

k. List percentage of primary feedstock from primary forest (j), by the following categories. Subdivide by SBP-approved Forest Management Schemes:
   - 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 feedstock: 32% of the total feedstock sourced is delivered as sawdust or shavings, with 100% being pine. 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 completed	SBE not completed
X	☐

Enviva has chosen to complete an SBE to ensure all of the raw material purchased by its facilities is SBP-compliant feedstock. Enviva has implemented procedures to address determination of origin, Supply Base Report (SBR) development and credibility, management systems and operations as well as procedures for handling comments or complaints. There currently is no SBP-endorsed Regional Risk Assessment (RRA) in the United States. The Cottondale SBE was independently reviewed by R.S. 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 completed a SBE in order to ensure that all material is SBP-compliant. Enviva's SBE includes the sources of primary material, in addition to secondary material as well. The Enviva SBE in conjunction with conformance to the SBP Chain of Custody Standard provides confidence that the products produced by Enviva are SBP-compliant.

Enviva has implemented policies and procedures appropriate to the size and scale of its operations to satisfy the requirements of SBP-compliant feedstock. 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 this conclusion 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 process 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 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 Data Sheet

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 R.S. Berg & Associates. The Cottondale Supply Base Evaluation identified one criterion as a "specified risk"; however, via associated mitigation measures Enviva can subsequently designate all indicators as "low risk" for the Cottondale facility.

4.4 Results of Supplier Verification Programme

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 one criteria which has a "specified risk," however via associated mitigation measures Enviva can subsequently designate this indicators as "low risk."

4.5 Results of Supplier Verification Programme

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

4.6 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 a well-qualified and knowledgeable staff fully 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. Thus, with implementation of all programs and procedures Enviva has in place, all feedstocks are considered SBP-compliant.

5 Supply Base Evaluation Process

The entire Cottondale supply base for all feedstock sources (primary and secondary) was assessed as part of the Supply Base Evaluation. This area consists of 41,742,577 ha and includes 295 counties located in Alabama, Mississippi, Florida, Georgia, and South Carolina. Data from Enviva's internal monitoring programs is 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 developed a comprehensive map of its supply base by county (See figure 1).

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 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 to identify where the highest 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 shapefiles, and the Databasin web mapping tool. Results from the stakeholder consultation were considered and incorporated if relevant to the SBE. The supply base evaluations were completed internally by qualified individuals and peer reviewed by R.S. 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 the third party certified SFI Fiber Sourcing program to facilitate field sampling in order to ensure on the ground BMP conformance and responsible harvesting. As described earlier, Enviva used the DOO data provided by its secondary suppliers to ensure their raw materials were also incorporated into the SBE and that their material meets the SBP Feedstock Standard.

6 Stakeholder Consultation

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.

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

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

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
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
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
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

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

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 two of the major forestry certification systems (PEFC & SFI®) which sufficiently support of the SBP criteria. 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 pending proprietary Track & Trace program will be third-party certified to ensure credibility in our data collection. Cottondale is located within 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 of the HCV portions of its Chain of Custody (CoC) systems such as the FSC US Controlled Wood Risk Assessment – DRAFT (v 0.1), FSC's High Conservation Area Mapping tool, The Nature Conservancy website and various GIS data shapefiles and the Databasin web mapping tool.

Table 12. Overview of results from the risk assessment of all Indicators (prior to implementation of 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	

Indicator	Initial Risk Rating		
	Specified	Low	Unspecified
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	

2.2.4	X		
2.2.5		X	
2.2.6		X	
2.2.7		X	
2.2.8		X	
2.2.9		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 Due Diligence System (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

The evidence from the NRA, Enviva's SFI® Fiber Sourcing Program, PEFC Chain of Custody Due Diligence System, and robust District of Origin processes ensures all indicators can be categorized as "low risk" or "specified risk". There is no need for supplier site visits to determine risk levels for any indicator.

8.3 Conclusions from the Supplier Verification Programme

NA

9 Mitigation Measures

Enviva identified one indicator that had "specified risk" and required mitigation measures. As a result of implementation of the mitigation measures, all indicators are considered "low risk." The results are detailed below.

9.1 Mitigation measures

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: Primary feedstock is sourced from the Florida Panhandle HCV1 critical biodiversity area located in southeast Alabama, southwest Georgia, and northwest Florida. Secondary feedstock is sourced from 3 HCV1 critical biodiversity areas in the Southeast U.S. All of these areas have been defined as "specified risk" for High Conservation Values within the FSC US Controlled Wood National Risk Assessment – DRAFT (v0.1). These areas include the Southern Appalachians in central Alabama, Central Florida in north central Florida, and the Florida Panhandle in northwest Florida, southwest Georgia and southeast Alabama. Additionally the Gopher Tortoise is federally protected through the U.S. Endangered Species Act in certain areas of southern Mississippi, Alabama, and Louisiana (Figure 4).

Mitigation Measures:

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

Southern Appalachians HCV1

- **Aquatic Habitats:** Exceptional aquatic biodiversity including fish, mussels, snails, crayfish, and amphibians are abundant in the Southern Appalachians. The Cahaba River watershed is the focal point of this habitat, but the richness of biodiversity extends out to the numerous smaller watercourses in the area as well.
  - **Specified Risk:** Sedimentation from roads during forest operations is a threat to biodiversity in this area.
  - **Mitigation Measures:** Silvicultural BMP's provide protection to waterbodies during road construction, maintenance, and other aspects of forestry operations. Components of Logger training classes including BMP's, threatened and endangered species awareness, and identification of special sites help increase recognition and protection of these critical areas.

- **Glades Habitat:** The Glades consist of limestone and sandstone outcrops in Central Alabama that have a high density of rare plant species.

- **Specified Risk:** These biodiversity values of areas are potentially harmed when the value of the Glades is not recognized during harvest activities.
- **Mitigation Measures:** The biodiversity values associated with the Glades should be considered when planning ramps and skid trails prior to harvest. Components of Logger training classes include BMP's, threatened and endangered species, and identification of special sites.

- **Montane Longleaf Pine:** This area occurs in the rolling topography on the outside edge of the Coastal Plain and is similar to other Longleaf Pine ecosystems that provide a wide range of biodiversity values closely associated with native plant diversity. These open stands with abundant native groundcover provide optimal habitat for the Red-Cockaded Woodpecker and the Gopher Tortoise. The historical presence of fire in this area defined the range of Longleaf Pine and created the Montane Longleaf Pine ecosystem. As the population of this area increased and fire was withheld from the forest, the Longleaf ecosystem began a sharp decline to 3% of its original range.
  - **Specified Risk:** Further loss of this habitat could harm the species that depend upon this ecosystem.
  - **Landscape Level Mitigation Measures:** A variety of federal, state, and private entities have led the push for Longleaf reforestation and ecosystem restoration in the southeast United States. A strong market for Longleaf Pine products is an essential component of any successful Longleaf reforestation effort. The Longleaf Alliance is the regional leader in Longleaf Pine management and restoration and they recognize that markets are an important catalyst for their objectives "Current markets make longleaf management more attractive than ever" (Longleaf Alliance, 2016).
  - **Mitigation Measures:** When harvesting operations occur in and around Longleaf ecosystems, procedures are in place to protect those species closely associated with this habitat. Protection of the Red-Cockaded Woodpecker exist in the form of the U.S. Endangered Species Act. Logger training programs also educate producers in the identification and protection of threatened and endangered species and HCV areas.

Florida Panhandle HCV1

- **Longleaf Pine:** The Florida Panhandle is within the natural range of Longleaf Pine. The rich biodiversity associated with the Longleaf Pine ecosystem is a key component of this assessment of high conservation value. The open stands and abundant native groundcover present in the Longleaf ecosystem provide optimal habitat for the Red-Cockaded Woodpecker and the Gopher Tortoise. The historical presence of fire in this area defined the range of Longleaf Pine and created the Longleaf ecosystem. As the population of this area increased and fire was withheld from the forest, the Longleaf ecosystem began a sharp decline to 3% of its original range.
  - **Specified Risk:** Further loss of this habitat could harm the species that depend upon this ecosystem.
  - **Landscape Level Mitigation Measures:** A variety of federal, state, and private entities have led the push for Longleaf reforestation and ecosystem restoration in the Florida panhandle. A strong market for Longleaf Pine products is an essential component of any successful Longleaf reforestation effort. The Longleaf Alliance is the regional leader in Longleaf Pine management and restoration and they recognize that markets are an important catalyst for their objectives "Current markets make longleaf management more attractive than ever" (Longleaf Alliance, 2016). There several large landowners within the panhandle area that have focused their management efforts on Longleaf Pine ecosystem restoration. The Apalachicola National Forest located in Liberty and Leon counties contains over 470,000 acres that are managed primarily to foster Longleaf growth. There are 4 state forest in the area totaling over 250,000 acres that include longleaf restoration among their multi use objectives. The Nature Conservancy is currently restoring longleaf on over

6,000 acres in Liberty County on the Apalachicola Bluffs and Ravines Preserve. The Gulf Coastal Plain Ecosystem Partnership (GCPEP) is a partnership of 11 landowners in the western Florida Panhandle and south central Alabama developed to restore longleaf ecosystems on over 1 million acres. In addition to these specific efforts, the U.S. government Conservation Reserve Program (CRP) is a cost share program that encourages private landowners to plant Longleaf Pine.

- **Tract Level Mitigation Measures:** When harvesting operations occur in and around Longleaf ecosystems, procedures are in place to protect those species closely associated with this habitat. Protection of the Red-Cockaded Woodpecker exist in the form of the U.S. Endangered Species Act, and in 2014 Florida adopted the Forestry Wildlife Best Management Practices for State Imperiled Species that includes guidelines for protecting the gopher tortoise. Components of Logger training classes including threatened and endangered species awareness, and identification of special sites help increase recognition and protection of these critical areas.

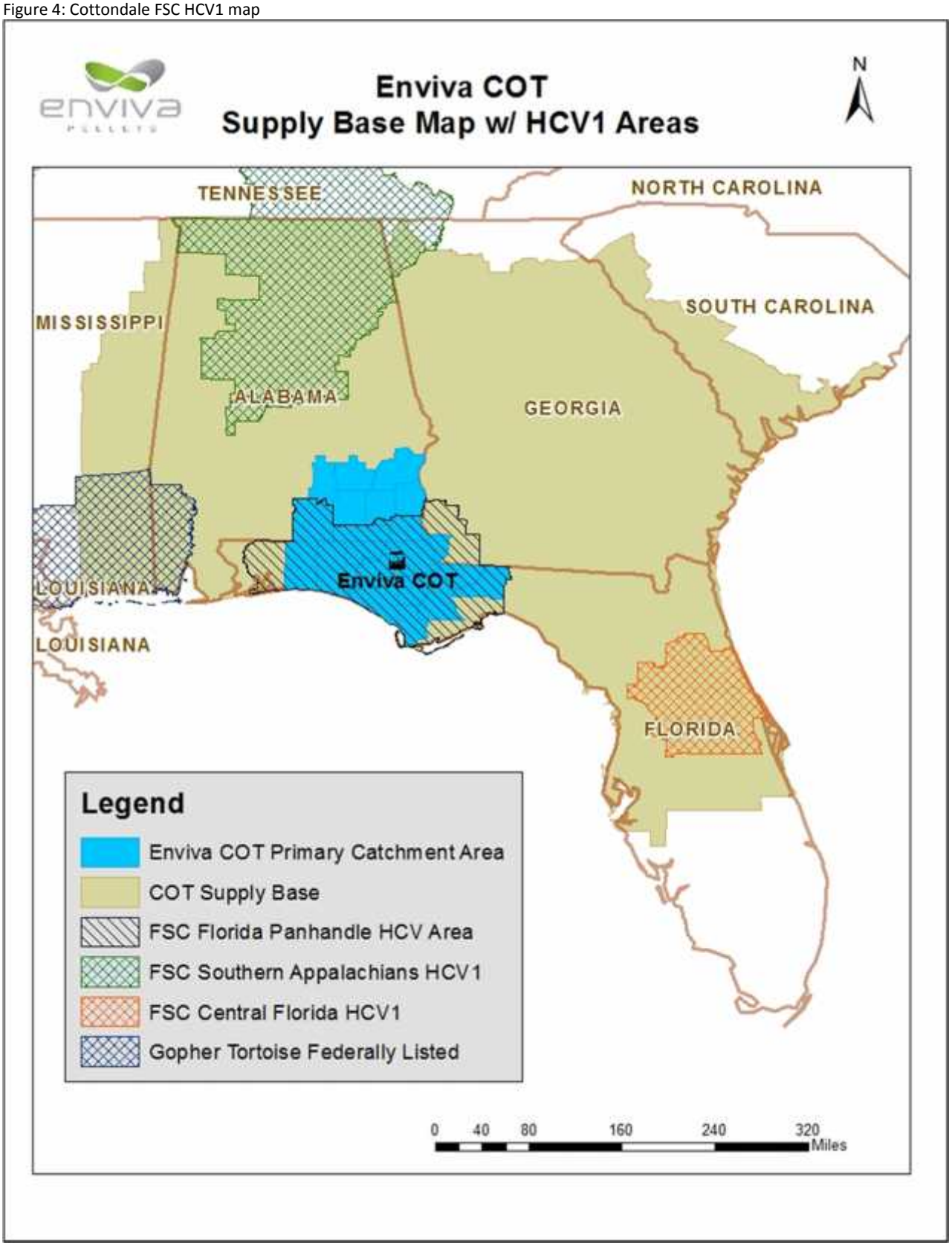
- **Apalachicola Bay/River System:** Biodiversity for this area is driven by aquatic species such as reptiles, amphibians, and mussels.
  - **Specified Risk:** The main threat from forest management activities is sedimentation of the river system.
  - **Mitigation Measures:** BMP's designed to protect water quality also protect the species associated with aquatic habitats. BMP compliance is required by contract for all Enviva suppliers, and BMP training is a key element in logger training programs.

- **Steephead Ravines:** There is a wide diversity of species including rare, threatened, and endangered species associated with the Steephead Ravines located along the Apalachicola River system due to the heterogeneity of the site conditions and the microclimates found there. This area contains the southernmost range of many northern species.
  - **Specified Risk:** These biodiversity values of areas are potentially harmed when the value of the ravines are not recognized during harvest activities.
  - **Landscape Level Mitigation Measures:** In Liberty County, the Apalachicola Bluffs and Ravines Preserve is a 6,000 acre area that has been established especially for protecting these areas.
  - **Tract Level Mitigation Measures:** These areas are associated with the Apalachicola River System and protected by existing BMPs. BMP compliance is required by contract for all Enviva suppliers, and BMP training is a key element in logger training programs.

Central Florida

- **Pine Flatwoods Habit:** This area is similar to other native pine ecosystems such as Longleaf Pine that provide a wide range of biodiversity values closely associated with native plant diversity.
  - **Specified Risk:** Further loss of this habitat could harm the species that depend upon this xeric upland ecosystem.
  - **Mitigation Measures:** When harvesting occurs in and around this habitat, consideration of biodiversity values should be made prior to placing landings or ramps in Xeric uplands. Protection for the Red-Cockaded Woodpecker exist in the form of the U.S. Endangered Species Act, and in 2014 Florida adopted the Forestry Wildlife Best Management Practices for State Imperiled Species that includes guidelines for protecting the gopher tortoise.

Figure 4: Cottondale FSC HCV1 map



9.2 Monitoring and outcomes

Enviva has issued a policy statement to all suppliers in order to ensure that feedstock delivered to our mill meets our expectations with regards to sustainability and the SBP requirements. Enviva employs contractual mechanisms, an SFI® Fiber Sourcing Program, and PEFC and SFI® Chains of Custody Programs, to ensure conformance and monitoring. All States within the supply base have BMP compliance reports readily available to monitor compliance.

Enviva maintains a rigorous district of origin process for all suppliers of secondary feedstock that collects catchment radius, raw material species, certification status and other specific information related to the source of their fiber. The supplier's responses are mapped and compared to Enviva's Cottondale Supply Base Evaluation to ensure Enviva has included the area within its supply base. Each supplier will receive a map depicting the counties within their catchment area that may contain high conservation value areas, feedback on any areas of risk that are identified, and a list of mitigation measures appropriate to their operations. Enviva suppliers are encouraged to share this educational information with their suppliers.

Enviva monitors Longleaf Pine habitats at the landscape level from a variety of sources. The Longleaf Alliance maintains a variety of publications useful for monitoring Longleaf Pine restoration efforts in this area. One of the most comprehensive sources for information about on-the-ground restoration activities is the Longleaf Partnership Council's annual Range-wide Accomplishment Report (Longleaf Partnership Council, 2014). Information from these sources will be monitored annually to determine if any changes to Enviva's risk rating for HCV values within Longleaf Pine ecosystems are necessary.

Existing procurement policies, BMP's, and landscape level protections all provide evidence to justify lowering the FSC risk level associated with HCV1 habitats in the Southern Appalachians, Central Florida, and Florida Panhandle areas to a SBP "low risk" level.

10 Detailed Findings for Indicators

See Annex 1

11 Review of Report

11.1 Peer review

As stated previously, the Cottondale SBE was independently peer-reviewed by R.S. Berg and Associates. . R. S. Berg & Associates, Inc. has more than thirty five years of 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 certified SFI Fiber Sourcing Program and PEFC and SFI® Chain of Custody programs. 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:	***Shawn Cook***	***Sustainability Forester***	***July 19,2016***
	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***	***Vice President and Chief Sustainability Officer***	***July 26, 2016***
	Name	**Title**	**Date**
Report approved by:	***Thomas Meth***	***Executive Vice President for Sales and Marketing***	***July 26, 2016***
	Name	**Title**	**Date**
Report approved by:	***John Keppler***	***Chief Executive Officer***	***July 26, 2016***
	Name	**Title**	**Date**

10 Updates

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

13.1Significant changes in the supply base

13.2 Effectiveness of previous mitigation measures

13.3 New risk rating and mitigation measures

13.4 Actual figures of feedstock over the previous 12 months

13.5 Projected figures of feedstock over the next 12 months

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Appendix I: District of Origin documentation

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 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 these 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

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 Cottondale: 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

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Annex 1: Detailed Findings for Supply Base Evaluation Indicators

	Indicator
1.1.1	The Biomass Producer's Supply Base is defined and mapped.
Finding	The Enviva Cottondale supply base area is determined through information gathering efforts as outlined in an internal Feedstock Compliance Implementation Manual and includes counties in Alabama, Florida, Georgia, Mississippi, and South Carolina. Data is entered into computer programs and is reviewed annually to ensure the appropriateness.
Means of Verification	a. COT-COC-03 Controlled Sources Risk Assessment b. COT-COC-02 Controlled Sourcing Procedure c. ENV-COC-05 Secondary Supplier District of Origin Procedure
Evidence Reviewed	Internal region supply area map and District of Origin procedure.
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 Cottondale 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.
Means of Verification	a. COT-COC-03 Controlled Sources Risk Assessment b. COT-COC-02 Controlled Sourcing Procedure c. ENV-COC-o5 Secondary Supplier District of Origin Procedure d. Supplier Agreements
Evidence Reviewed	Internal documents to set up individual supplier and tract information, payment invoices, District of Origin forms and 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	Enviva Cottondale tracks purchased and consumed material by product type (roundwood, in-wood chips, residuals, etc.) and general species groupings of softwood or hardwood. Wood fiber is stored at the mill site 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".
Means of Verification	a. COT-COC-03 Controlled Sources Risk Assessment b. COT-COC-02 Controlled Sourcing Procedure c. FSC US Controlled Wood National Risk Assessment d. Yard Boss/Report Boss Database
Evidence Reviewed	Internal fiber contracts, policy and procedures, internal tracking software
Risk Rating	X **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 Enviva mill sites. 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. COT-COC-03 Controlled Sources Risk Assessment b. COT-COC-02 Controlled Sourcing Procedure c. Supplier Agreements d. Enviva Sustainability Policy
Evidence Reviewed	Internal documents to set up individual supplier and tract information, payment invoices, District of Origin forms and procedure manuals.
Risk Rating	X **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. COT-COC-03 Controlled Sources Risk Assessment contains evidence for compliance with EUTR.
Means of Verification	a. COT-COC-03 Controlled Sources Risk Assessment b. COT-COC-02 Controlled Sourcing Procedure
Evidence Reviewed	Internal documents to set up individual supplier and tract information, payment invoices, District of Origin forms and 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 contracts from all suppliers verifying that all relevant timber fees and taxes are paid.
Means of Verification	a. COT-COC-03 Controlled Sources Risk Assessment b. COT-COC-02 Controlled Sourcing Procedure c. Supplier Agreements
Evidence Reviewed	Internal documents to set up individual supplier and tract information, payment invoices, 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 Cottondale 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. COT-COC-03 Controlled Sources Risk Assessment b. 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 Cottondale wood and fiber supply area is not designated within a country or district that is a source of conflict timber.
Means of Verification	a. COT-COC-03 Controlled Sources Risk Assessment b. 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 threatened and endangered species 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 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. The Cottondale supply base was compared to the draft FSC US Controlled Wood National Risk Assessment to identify the presence of High Conservation Value Forest at the county level within the supply base.
Means of Verification	a. COT-COC-03 Controlled Sources Risk Assessment b. COT-COC-02 Controlled Sourcing Procedure c. COT-SFIS-01 Certified Sourcing Implementation Manual e. ENV-COC-o5 Secondary Supplier District of Origin Procedure d. Enviva Sustainability Policy e. FSC US Controlled Wood National Risk Assessment f. COT-SFI-14 BMP monitoring Form
Evidence Reviewed	Internal maps generated data collected from above.
Risk Rating	☒ **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	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	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 and uses third party databases to ID any areas of potential concern. Where data indicates that a G-1 or G-2 species or community 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. Harvesting contractors are trained in the use of state BMP's and harvest sites are monitored for implementation. The catchment radius of each secondary supplier will be used to create a supply base map by county for that supplier. This information will be compared to known maps of High Conservation Value areas or other environmentally important areas to determine the presence of such areas within the supply base. If these areas are found within the supply base, Enviva, LP will notify the supplier and provide a copy of the map showing these areas and share a fact sheet outlining critical species and habitats that exist within each area. Enviva will not work with a secondary supplier who fails to provide this information.
Means of Verification	a. COT-COC-03 Controlled Sources Risk Assessment b. COT-COC-02 Controlled Sourcing Procedure c. COT-SFIS-01 Certified Sourcing Implementation Manual f. ENV-COC-0~~0~~5 Secondary Supplier District of Origin Procedure d. Enviva Sustainability Policy e. FSC US Controlled Wood National Risk Assessment f. COT-SFI-14 BMP monitoring Form g. State BMP sites Alabama BMP, Florida BMP, Georgia BMP, Mississippi BMP, South Carolina BMP
Evidence Reviewed	Internal policies and procedures, fiber contracts, District of Origin procedure
Risk Rating	**X Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

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	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. United States Forest Service Forest Inventory and Analysis (FIA) figures covering the regions where Enviva Cottondale's supply base lies indicate that the growth of the forest generally exceeds removals.

Means of Verification	a. COT-COC-03 Controlled Sources Risk Assessment b. COT-COC-02 Controlled Sourcing Procedure
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 requires 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, threatened and endangered species, identification of special sites, and more.
Means of Verification	a. COT-SFIS-01 Certified Sourcing Implementation Manual b. COT-COC-02 Controlled Sourcing Procedure c. COT-COC-03 Controlled Sources Risk Assessment d. Supplier Agreements e. BMP Manuals and Compliance Reports Alabama BMP, Florida BMP, Georgia BMP, Mississippi BMP, South Carolina BMP f. COT-SFI-14 BMP monitoring Form
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
2.2.2	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. COT-SFIS-01 Certified Sourcing Implementation Manual b. COT-COC-02 Controlled Sourcing Procedure c. COT-COC-03 Controlled Sources Risk Assessment d. Supplier Agreements e. BMP Manuals and Compliance Reports Alabama BMP, Florida BMP, Georgia BMP, Mississippi BMP, South Carolina BMP
Evidence Reviewed	Internal policies and procedures, field audit forms, fiber contracts
Risk Rating	X **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 Cottondale supply base was compared to HCV2 Intact Forest Landscapes and HCV3 Roadless Areas within the FSC US Controlled Risk Assessment - DRAFT. Intact Forest Landscapes are located within the supply base, but all are within land owned by the United States Fish and Wildlife Service. Roadless Areas are located within the supply base, but these areas are all within United States Forest Service ownership. Special Management Zones (SMZ) defined and protected by Florida BMPs are key wildlife habitat.
Means of Verification	a. COT-SFIS-01 Certified Sourcing Implementation Manual b. COT-COC-02 Controlled Sourcing Procedure c. COT-COC-03 Controlled Sources Risk Assessment d. Supplier Agreements e. BMP Manuals and Compliance Reports Alabama BMP, Florida BMP, Georgia BMP, Mississippi BMP, South Carolina BMP, Florida Wildlife BMPs f. SFI Informational Packet
Evidence Reviewed	Internal policies and procedures, field audit forms, fiber contracts,
Risk Rating	X **Low Risk** ☐ **Specified Risk** ☐ **Unspecified Risk at RA**
Comment or Mitigation Measure	

	Indicator
2.2.4	The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b).
Finding	Primary feedstock was sourced from the Florida Panhandle HCV1 critical biodiversity area located in southeast Alabama, southwest Georgia, and northwest Florida. Secondary feedstock is sourced from 3 HCV1 critical biodiversity areas in the Southeast U.S. All of these areas have been defined as "specified risk" for High Conservation Values within the FSC US Controlled Wood National Risk Assessment – DRAFT (v0.1). These areas include the Southern Appalachians in central and northern Alabama, Central Florida in north central Florida, and the Florida Panhandle. Additionally the Gopher Tortoise is federally protected through the U.S. Endangered Species Act in certain areas of southern Mississippi, Alabama, and Louisiana.
Means of Verification	a. COT-SFIS-01 Certified Sourcing Implementation Manual b. COT-COC-02 Controlled Sourcing Procedure c. COT-COC-03 Controlled Sources Risk Assessment d. ENV-COC-05 Secondary Supplier District of Origin Procedure e. BMP Manuals and Compliance Reports Alabama BMP, Florida BMP, Georgia BMP, Mississippi BMP, South Carolina BMP f. SFI Informational Packet
Evidence Reviewed	FSC US Controlled Wood National Risk Assessment DRAFT, internal documents and contracts, District of Origin forms and procedure manuals
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 each of these biodiversity concerns. Enviva has adopted these mitigation measures and shared them with suppliers resulting in an assessment of "low risk" for this indicator.

	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. All purchased stumpage tracts where Enviva has direct responsibility for the harvest must undergo multiple field audits during all phases of the harvest to ensure BMP compliance and ecosystem protection. SFI® standards also require that a sample of gatewood tracts receive field audits each year. State BMP foresters are available to conduct courtesy field audits upon request to verify harvesting performance. Enviva will not contract with companies exhibiting poor performance.
Means of Verification	a. COT-SFIS-01 Certified Sourcing Implementation Manual b. COT-COC-02 Controlled Sourcing Procedure c. COT-COC-03 Controlled Sources Risk Assessment d. BMP Manuals and Compliance Reports Alabama BMP, Florida BMP, Georgia BMP, Mississippi BMP, South Carolina BMP
Evidence Reviewed	Internal documents and 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. All States within the supply base have BMP compliance reports readily available to monitor compliance.
Means of Verification	a. COT-SFIS-01 Certified Sourcing Implementation Manual b. COT-COC-02 Controlled Sourcing Procedure c. COT-COC-03 Controlled Sources Risk Assessment d. BMP Manuals and Compliance Reports Alabama BMP,Florida BMP, Georgia BMP, Mississippi BMP, South Carolina BMP

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
Evidence Reviewed	Internal policies and procedures, fiber contracts and field audits State of Florida: http://www.freshfromflorida.com/Divisions-Offices/Florida-Forest-Service/Wildfire/Prescribed-Fire State of Alabama: http://www.forestry.state.al.us/BurnPermitLaw.aspx?bv=1&s=1 State of Georgia: http://www.gfc.state.ga.us/forest-management/prescribed-fire/ State of Mississippi: http://www.mfc.ms.gov/wildfirecontrol.php State of South Carolina: http://www.state.sc.us/forest/fire.htm
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. Enviva is not involved in any type of chemical application on privately owned timberlands. Integrated Pest Management in forest stands is largely controlled by proper forest management and maintaining vigorous tree growth.
Means of Verification	a. U. S. Environmental Protection Agency web site b. BMP Manuals and Compliance Reports Alabama BMP, Florida BMP, Georgia BMP, Mississippi BMP, South Carolina BMP

	c. Florida Environmental Law Manual
Evidence Reviewed	Internal policies and procedures, fiber contracts and field audits http://bugwood.org/pestcontrol/pfpm.html
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. State BMPs require the removal of garbage and all contracts require the use of BMPs.
Means of Verification	a. COT-SFIS-01 Certified Sourcing Implementation Manual b. Supplier Agreements c. BMP Manuals and Compliance Reports Alabama BMP, Florida BMP, Georgia BMP, Mississippi BMP, South Carolina BMP
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
2.3.1	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	A recent Forest2Market report concluded that in 2014 the total wood consumption for all markets in the south was only 3.3% of total forest inventory. 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. COT-SFIS-01 Certified Sourcing Implementation Manual b. COT-COC-02 Controlled Sourcing Procedure c. COT-COC-03 Controlled Sources Risk Assessment

	d. USFS FIA web site e. National State Foresters web site
Evidence Reviewed	Internal policies and procedures, fiber contracts and field audits, growth/drain analysis, Forest2Market study
Risk Rating	☒ **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. COT-SFIS-01 Certified Sourcing Implementation Manual b. COT-COC-02 Controlled Sourcing Procedure c. Logger Training web sites d. Supplier Agreements e. 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 Statewide 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 90 people at the Cottondale facility. Enviva Cottondale accepts secondary feedstock deliveries from 25 mills within the region creating numerous spin-off jobs.
Means of Verification	a. National State Forester web site
Evidence Reviewed	Employment data, Statewide 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 jointly participate in research related to forest health issues. Enviva Cottondale has a program in place to inform landowners about the benefits of sustainable forest management.
Means of Verification	a. COT-SFIS-01 Certified Sourcing Implementation Manual b. COT-COC-03 Controlled Sources Risk Assessment c. SFI Informational Packet d. USFS websites e. State Forest Service web sites AL Forestry Commission, FL Forest Service GA Forestry Commission, MS Forestry Commission, SC Forestry Commission
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. Sustainable forest management promotes healthy forest stands which reduces the impact fires, pests, and diseases.
Means of Verification	a. COT-SFIS-01 Certified Sourcing Implementation Manual b. SFI Informational Packet
Evidence Reviewed	External data, and internal documents
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. 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. COT-SFIS-01 Certified Sourcing Implementation Manual b. COT-COC-03 Controlled Sources Risk Assessment c. COT-COC-02 Controlled Sourcing Procedure
Evidence Reviewed	External data, and internal documents
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. COT-COC-03 Controlled Sources Risk Assessment d. COT-SFI-Fiber Sourcing Procedures
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. Forestry BMPs through the Clean Water Act are designed to protect water resources. Enviva requires 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, threatened and endangered species, identification of special sites, and more. Enviva will not contract with companies exhibiting poor performance. The U.S. has a very low risk of food insecurity.
Means of Verification	a. Federal and State web sites b. COT-COC-03 Controlled Sources Risk Assessment c. COT-SFI-Fiber Sourcing Procedures d. State BMPs Alabama BMP, Florida BMP, Georgia BMP, Mississippi BMP, South Carolina BMP
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
2.6.1	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 requires through contracts, that all suppliers of raw material adhere to all applicable laws and regulations. Enviva will not contract with companies exhibiting poor performance.
Means of Verification	a. Federal and State web sites b. COT-COC-03 Controlled Sources Risk Assessment c. COT-SFI-Fiber Sourcing Procedures d. COT-COC-02 Controlled Sourcing Procedure e. COT-DP-05 Complaints Procedure
Evidence Reviewed	External data, internal documents, fiber contracts and annual supplier correspondence.
Risk Rating	☒ **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. COT-COC-02 Controlled Sourcing Procedure d. COT-COC-03 Controlled Sources Risk Assessment
Evidence Reviewed	External data, internal documents, fiber contracts and annual supplier correspondence. AHEC Legality Study
Risk Rating	☒ **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 U.S. supply areas where Enviva L.P. procures wood material have comprehensive laws prohibiting the use of compulsory 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. COT-COC-02 Controlled Sourcing Procedures c. COT-COC-03 Controlled Sources Risk Assessment
Evidence Reviewed	External data, internal documents, fiber contracts and annual supplier correspondence. AHEC Legality Study
Risk Rating	☒ **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 U.S. supply areas where Enviva L.P. procures wood material have 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. COT-COC-02 Controlled Sourcing Procedures c. COT-COC-03 Controlled Sources Risk Assessment
Evidence Reviewed	External data, internal documents, fiber contracts and annual supplier correspondence. AHEC Legality Study
Risk Rating	☒ **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 U.S. supply areas where Enviva L.P. procures wood material have comprehensive laws prohibiting the violation of 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. COT-COC-02 Controlled Sourcing Procedures c. COT-COC-03 Controlled Sources Risk Assessment
Evidence Reviewed	External data, internal documents, fiber contracts and annual supplier correspondence. AHEC Legality Study
Risk Rating	☒ **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 U.S. supply areas where Enviva L.P. procures wood material have comprehensive laws prohibiting the violation of worker'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. COT-COC-02 Controlled Sourcing Procedures c. COT-COC-03 Controlled Sources Risk Assessment
Evidence Reviewed	External data, internal documents, fiber contracts and annual supplier correspondence. AHEC Legality Study
Risk Rating	☒ **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 contractually requires its suppliers to do the same. The SFI® Fiber Sourcing Standard requires Program Participants to adhere to health and safety laws. Enviva 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. COT-SFI-Fiber Sourcing Procedures c. COT-COC-02 Controlled Sourcing Procedures d. COT-COC-03 Controlled Sources Risk Assessment e. Supplier Agreements
Evidence Reviewed	External data, internal documents, Enviva Employee Handbook, fiber contracts and annual supplier correspondence.
Risk Rating	☒ **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. Supplier Agreements b. BMP Manuals and Compliance Reports Alabama BMP, Florida BMP, Georgia BMP, Mississippi BMP, South Carolina BMP c. COT-SFI-Fiber Sourcing Procedures d. COT-COC-02 Controlled Sourcing Procedures
Evidence Reviewed	External data, internal documents, fiber contracts, and annual supplier correspondence
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. USFS FIA data, b. Ecological objectives can be achieved with wood derived bioenergy (peer reviewed letter), c. SAF Journal of Forestry, d. AHEC article (peer reviewed)
Evidence Reviewed	External data
Risk Rating	✗ **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. COT-COC-03 Controlled Sources Risk Assessment
Evidence Reviewed	Internal documents, fiber contracts and annual supplier correspondence.
Risk Rating	☒ **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):*	

Buchholz T, Prisley S, Marland G, et al. 2014. Uncertainty in projecting GHG emissions from bioenergy. Nat Climate Change 4: 1045–47.

Cowie A, Berndes G, and Smith T. 2013. On the timing of greenhouse gas mitigation benefits of forest based bioenergy. IEA Bioenergy ExCo: 2013:04 www.ieabioenergy.com/publications/on-the-timing-of-greenhouse-gas-mitigation-benefits-of-forest-based-bioenergy. Viewed 31 May 2015.

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FIA (Forest Inventory Analysis). 2012. Forest resources of the United States, 2012. A technical document supporting the 2015 update of the RPA assessment. http://www.srs.fs.usda.gov/pubs/47322. Viewed 23 Jun 2015.

Galik CS and Abt RC. 2015. Sustainability guidelines and forest market response: an assessment of European Union pellet demand in the southeastern United States. GCB Bioenergy; doi:10.1111/gcbb.12273.

Heath L, Maltby V, Miner R, et al. 2010. Greenhouse gas and carbon profile of the US forest products industry value chain. Environ Sci Technol 44: 3999–4005.

Helin T, Sokka L, Soimakallio S, et al. 2013. Approaches for inclusion of forest carbon in life cycle assessment – a review. GCB Bioenergy 5: 475–86.

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

on Climate Change. Cambridge, UK, and New York, NY: Cambridge University Press.

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 publicly 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. The full SBP risk assessment does contain both TNC and FSC maps as to ID areas of HCV, as required by criterion 2.2.1.

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.	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 areas. In our Wiggins supply area, which is the only area that would fall into the geographc 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 note that the control measures for these forests (page 28) does not prohibit clearcutting. Instead they require that "a commensurate quantity & quality of BL HWs are being recruited in 80+ age class...[and] hydrology is maintained."
FSC CoC PEFC CoC Enviva FSC Risk Assessment Public Summary	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, Enviva has 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.		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 our 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 Enviva to monitor suppliers to ensure on-going compliance with BMPs and laws.
	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
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 harvests operations in the US are required to comply with many federal and state requirements. Examples include the Clean Water Act, the Endangered Species Act, and may regulations regarding worker health and safety. 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 robust monitoring program to ensure complaince with BMPs.

LAV	SBP Criteria Addressed		Comments on LAV Applicability to Criteria	Other Comments	EVA Comments
FSC US DRAFT National Risk Assessment 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.	2.1.1	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. However, the full SBP risk assessment does contain both TNC and FSC maps to ID areas of HCV, which is what this crtierion requires. All bottomland forests are not HCVs and so "ceasing" harvesting is not an apprpriate ladnscape level management strategy or outcome.
	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. However, the full SBP risk assessment does contain both TNC and FSC maps to ID areas of HCV, which is what this crtierion requires. All bottomland forests are not HCVs and so "ceasing" harvesting is not an apprpriate ladnscape level management strategy or outcome.

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. Further, the US has a strong infrastructure of National Parks, Forests, and other protected lands that contain HCVs. The lands Enviva sources from are private working forests that have been harvested many times since the 1600's.

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

LAV	SBP Criteria Addressed		Comments on LAV Applicability to Criteria	Other Comments	EVA Comments
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. SE wide, BMP implementation is high. Some states (Florida) have Wildlife BMPS that are implemented and other states have biomass BMPs as well. All Enviva suppliers are also subject to the Endangered Species Act,a
	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. SE wide, BMP implementation is high. Some states (Florida) have Wildlife BMPS that are implemented and other states have biomass BMPs as well. All Enviva suppliers are also subject to the Endangered Species Act,a nd other laws and regulations regarding forest harvesting to ensure habitat for T&E species is maintained.

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. Removal of too much residues from a site could impact BMP compliance and such, forest harvests still leave behind much debris which not only protectes from erosion, but provides wildlife habitat as well. 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

LAV	SBP Criteria Addressed		Comments on LAV Applicability to Criteria	Other Comments	EVA Comments
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.		As the resources on the BMP worksheet show, BMPs, which allow logging operations to conform to the CWA, have high rates of implementation. Further, in many states, state foresters inspect harvesting operations for BMP compliance. These include appropriate buffers along streams and rivers, stream crossings, road building, and water management and protection. SFI also 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. Most bottomland hardwood forests are working forests and have been for decades. Private logging operations still have to follow laws and regulations regarding T&T species and BMPs. There is also research that supports logging in bottomland forests, as it mimcs natural disturbances and allows for regeneration of desireable species. Last, as mentioned before the US has a strong infrastructure of National Parks, Forests, and other protected lands that contain HCVs.
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

LAV	SBP Criteria Addressed		Comments on LAV Applicability to Criteria	Other Comments	EVA Comments
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 (CO2). 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.		BMPs, which allow logging operations to conform to the CWA, have high rates of implementation. Further, in many states, state foresters inspect harvesting operations for BMP compliance. These include appropriate buffers along streams and rivers, stream crossings, road building, and water management and protection. SFI also 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. Most bottomland hardwood forests are working forests and have been for decades. Private logging operations still have to follow laws and regulations regarding T&T species and BMPs. There is also research that supports logging in bottomland forests, as it mimcs natural disturbances and allows for regeneration of desireable species. As mentioned before the US has a strong infrastructure of National Parks, Forests, and other protected lands that contain HCVs. Most bottomland hardwood forests are working forests and have been for decades. Periodic harvests of forest blocks creates a mosaic of age classes which supports wildlife species. 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 Forest2MArket 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

LAV	SBP Criteria Addressed		Comments on LAV Applicability to Criteria	Other Comments	EVA Comments
Enviva Track & Track 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