

SBP

Sustainable Biomass Partnership

PricewaterhouseCoopers LLP Evaluation of Enviva Pellets Cottondale Compliance with the SBP Framework: Public Summary Report

www.sustainablebiomasspartnership.org



Completed in accordance with the CB Public Summary Report Template Version 1.0

*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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1 Overview

CB Name and contact: PricewaterhouseCoopers LLP, PwC Place, 250 Howe Street, Suite700, Vancouver, B.C., Canada V6C 3S7

Primary contact for SBP: Mike Harris, Practice Leader, 604-806-7711, mike.harris@ca.pwc.com

Report completion date: 5/Aug/2016

Report authors: Cheryl Woode, Bruce Eaket, Shawn Ellsworth

Certificate Holder: Enviva Pellets Cottondale, 2500 Green Circle Parkway, Cottondale, Florida, United States 32431

Producer contact for SBP: Shawn Cook, Cottondale, FL, United States, 1-850-227-4345, shawn.cook@envivabiomass.com

Certified Supply Base: Primary feedstock for the Cottondale regional supply base includes counties in north western Florida, south eastern Alabama, and south western Georgia. Secondary feedstock supply base includes counties in Alabama, Florida, Georgia, Mississippi, and South Carolina in the Southeast United States of America.

SBP Certificate Code: SBP-03-05

Date of certificate issue: 6/Feb/2017

Date of certificate expiry: 5/Feb/2022

Indicate where the current audit fits within the certification cycle				
Main (Initial) Audit	First Surveillance Audit	Second Surveillance Audit	Third Surveillance Audit	Fourth Surveillance Audit
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2 Scope of the evaluation and SBP certificate

Certification scope: Production of wood pellets, for use in energy production, at Enviva Pellets Cottondale and transport to the Panama City Port Authority for storage, aggregation, vessel loading and shipping.

SBP certificate: SBP-03-05

3 Specific objective

The primary objectives of the assessment were:

- Collecting assessment information;
- Confirming that information and comparing it to the Sustainable Biomass Partnership (SBP) Standards 1,2,4,5, (V1.0) (the “Standards”), the Client’s documented processes and public documents, and PwC’s requirements (the “Requirements”);
- Generating assessment findings; and
- Preparing the Assessment report and SBP Public Summary.

4 SBP Standards utilised

4.1 SBP Standards utilised

The following SBP Standards were utilized:

- Standard 1: Feedstock Compliance Standard. Version 1.0. 26 March 2015
- Standard 2: Verification of SBP – Compliant Feedstock. Version 1.0. 26 March 2015
- Standard 4: Chain of Custody. Version 1.0. 26 March 2015
- Standard 5: Collection and Communication of Data. Version 1.0. 26 March 2015

The above Standards can be accessed or requested from SBP at the following website:
www.sustainablebiomasspartnership.org

4.2 SBP-endorsed Regional Risk Assessment

Not applicable - No SBP endorsed Regional Risk Assessment was used for this assessment.

5 Description of Biomass Producer, Supply Base and Forest Management

5.1 Description of Biomass Producer

Enviva Holdings, LP (“Enviva”) was founded in 2004 to develop a cleaner energy alternative to fossil fuels and it has become a significant producer of wood pellets. Enviva currently owns and operates six plants that are located in the south eastern United States and that produce about 2.3 million metric tons of wood pellets annually. Pellets are delivered primarily to power plants in the United Kingdom and Europe that previously were fuelled by coal, enabling them to significantly reduce their carbon emissions.

The Cottondale wood pellet production facility is located in northwest Florida, USA. Enviva’s Cottondale facility began production in April, 2008, and was acquired by Enviva Partners, LP as part of the acquisition of Green Circle Bioenergy, Inc. in January, 2015. The facility employs more than 100 people including technicians, engineers and operators and has a production capacity of 700,000 metric tons per year. Pellets produced at this plant are transported by rail to Panama City Port Authority, in Panama City, FL, for export to European utilities.

5.2 Description of Biomass Producer’s Supply Base

Enviva operates the Enviva Pellets Cottondale mill located in northwest Florida, USA. The supply base area includes 47 counties in Florida, 67 counties in Alabama, 145 counties in Georgia, 23 counties in Mississippi and 13 in South Carolina. The entire Cottondale supply base encompasses 295 counties and 41,742,577 hectares.

Cottondale procures all of their fiber from primary and secondary sources from the defined supply base area. Their internal fiber procurement group is responsible for the implementing the voluntary standards including the Sustainable Forestry Initiative® (SFI) Fiber Sourcing and Chain of Custody (CoC) Standards, the Programme for the Endorsement of Forest Certification (PEFC™) CoC Standards, the Forest Stewardship Council™ (FSC) CoC and Controlled Wood Standards and the SBP Standards. Feedstock is sourced primarily direct from the forest in the form of roundwood or wood chips from primary suppliers, all of whom are vetted and qualified prior to delivering. Fiber cannot be delivered to the mill until a contract is signed with the supplier. The contract requires suppliers to use trained loggers during harvest, follow Best Management Practices (BMP’s) for water quality, and to avoid controversial sources of fiber, such as illegal logging, wood harvested in violation of traditional and civil rights, wood harvested in forests where high conservation values are threatened by management activities, wood harvest in forests being converted to plantations or non-forest use, and wood from forests in which genetically modified trees are planted. Enviva foresters confirm trained logger status and ensures that loggers delivering fiber maintain their continuing education as required. Enviva uses forest residues, such as tree tops, limbs, deformed trees and any other wood produced during harvested that is otherwise unacceptable to other wood users in the area. Enviva does not use sawlogs in the production of pellets, nor does the plant use any construction debris, treated wood, or post-consumer material.

Enviva 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.

Additional detail is provided in the Cottondale Supply Base Report (SBR), which can be found on their website at the following address: <http://www.envivabiomass.com/sustainability/> .

5.3 Detailed description of Supply Base

The primary supply area contains approximately 252.1 million metric tons of standing timber inventory and is approximately 55% pure pine or pine overstory with a hardwood understory, 25% HW and the remaining mixed forests. At the Cottondale facility, pine sources make up 78.1% of the feedstock and hardwood species comprise the remaining 21.9%.

The total annual volume of primary feedstock procured by Cottondale is approximately 700,000 metric tonnes. Approximately 70% of the primary feedstock is not certified to the SBP-approved Forest Management Scheme and the remaining 30% is from SBP-approved Forest Management Scheme.

The total annual volume of secondary feedstock procured by Cottondale is approximately 350,000 metric tonnes. None of the secondary feedstock is from SBP-approved Chain of Custody (CoC) Systems.

The total annual volume of tertiary feedstock is 0% of the total.

Enviva intends on using the “SBP Compliant” claim for finished pellets, therefore a Supply Base Evaluation (SBE) and the associated Risk Assessment are required.

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

5.3 Chain of Custody system

Enviva has a management system and documented procedures that are fully capable of determining feedstock compliance. Enviva is utilizing the Program for the Endorsement of Certification Chain of Custody system already in place to track SBP compliant and SBP controlled feedstock. All wood fiber is tracked through the process from the District of Origin through the mill to the final bill of sale.

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

6 Evaluation process

6.1 Timing of evaluation activities

Evaluation Activity	Date / Location	Persons Involved	Approx. Duration
Pre-Assessment / Document Review	August 6, 2015. Off-site from PwC's office.	Cheryl Woode, SBP Team Leader, PwC	6 hours
PwC Stakeholder Consultation	October 5 – November 5, 2015. Off-site from PwC's office.	Cheryl Woode, SBP Team Leader, PwC Bruce Eaket, SBP Lead Auditor, PwC	2 hours
Initial Assessment	February 25, 2016. On-site in Cottondale, Florida, Supplier Interviews and Panama City Port Authority.	Cheryl Woode, SBP Team Leader, PwC Allison Gratz, Director of Sustainability, Enviva Don Grant, Regional Manager, Sustainability and Certification, Enviva Mickey Knapp, Assistant Procurement Manager, Enviva Alan Jaye, Procurement Manager, Enviva Shawn Cook, Sustainability Forester, Enviva Brian Nola, Director Southeast Logistics, Enviva 3 Purchase Stumpage Tracts, 1 Secondary Supplier	10 hours
PwC Stakeholder Conference Call	June 21, 2016	Bruce Eaket, SBP Lead Auditor, PwC Cheryl Woode, SBP Team Leader, PwC	1 hour
Audit Closure and PwC Certification Decision	August 5, 2016. Off-site from PwC's office.	Bruce Eaket, SBP Lead Auditor, PwC James Lucas, Qualified SBP Lead Auditor, PwC Peer Reviewer Shawn Ellsworth, Qualified SBP Lead Auditor, PwC Peer Reviewer Mike Harris, PwC Certification Decision Maker, PwC Practice Leader	8 hours

6.2 Description of evaluation activities

PwC completed the initial SBP assessment in four phases, with the most significant phase being the on-site assessment.

Pre-Assessment / Document Review (DRR):

The purpose of the DRR Assessment was to evaluate if the requirements of the Standards had been met, in particular those requirements that must be documented. In addition, PwC evaluated the Chain of Custody process/management system to ensure that it had been through a complete Plan-Do-Check-Act (PDCA) cycle; including internal audit and management review or that these activities have been scheduled to occur prior to the Initial Assessment. Enviva completed their SBE Risk Assessment with significant reliance on their existing management systems and procedures designed to meet the voluntary standards discussed above and applicable laws and regulations. Time during this phase of the assessment was focused on

reviewing the SBP requirements that are unique from the other standards, such as Greenhouse Gas (GHG) data and collection and the SBE.

Initial Assessment:

PwC conducted the Initial Assessment on-site at the Cottondale facility through observations, reviewing records and conducting interviews with staff and management. A thorough review of the CoC processes, GHG data and collection, and fiber input and output were conducted. Critical control points such as the log/wood chip weigh station, quality testing lab, control room, and rail loadout were included in the Assessment. PwC also observed Cottondale's monitoring system for supplier's sustainable forest management practices being implemented at three of their primary fiber suppliers.

Additionally, PwC conducted a site visit to the Panama City Port Authority. Pellets produced at Cottondale will be transported by rail to Panama City Port Authority for storage, handling and export to customers. A thorough review of the CoC processes, GHG data and collection, and storage and handling of the pellets was conducted.

PwC Stakeholder Consultation:

PwC received comments from stakeholders which is further discussed below in Section 6.3 of this Public Summary.

Audit Closure and PwC Certification Decision:

PwC held a closing meeting at the end of the Initial Assessment. The PwC team leader prepared working papers including protocols/checklists and evidence of conformance that was reviewed by a peer lead auditor. The complete file was then reviewed by the PwC Practice Leader who made the final PwC certification decision.

6.3 Process for consultation with stakeholders

Enviva completed two stakeholder consultations for its initial SBP certification audit for the Cottondale Supply Base Evaluation. 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 any data or resources they believed would help properly complete the Supply Base Evaluation based on the Indicators in Standard #1. Two comments were received. Enviva's second consultation was completed between January 8 and February 2, 2016 as a result of the non-conformity raised by PwC regarding Locally Applicable Verifiers (LAVs) during the mid-Atlantic on-site audits. This consultation focused on the LAVs used to support the risk designations for the Cottondale Supply Base Evaluation. Interested stakeholders were asked to comment on the LAVs Enviva chose and their applicability to certain indicators in Standard #1. Enviva received one set of comments from one stakeholder.

Enviva combined the stakeholder procedures, comments received, and responses into one publically available document ENV-SBP-07 Stakeholder Consultation which is available on their website, <http://www.envivabiomass.com/wp-content/uploads/ENV-SBP-07-Stakeholder-Consultation.pdf>.

PwC conducted its 30-day stakeholder consultation in October 5 – November 5, 2015 prior to the on-site audit. PwC used the stakeholder list that Enviva used in its consultation and stakeholders were informed of the consultation via email and/or mail. The list included 149 organizations in total: 7 Academic, 7 Consultants, 57 ENGOS, 1 Forestry Consultant, 17 Government, 18 Industry Organizations, 5 Landowners, 5 Landowner Associations, 4 Loggers, 12 Sawmill or Wood Industries, 1 Sawmill or Wood Industry/Landowner, 3 Trade Associations, 12 Wood Suppliers. These stakeholders were invited to comment on the Supply Base Evaluation process.

Relevant stakeholders for Enviva's Southampton, Northampton, Ahoskie, Amory, Wiggins and Cottondale facilities were included in the PwC consultation as the SBEs were completed concurrently for each of the mills. In response to a finding raised during the on-site audit, Enviva conducted a second stakeholder

consultation in January to February 2016 to seek comments on the LAV development process. PwC then conducted an additional consultation on June 21, 2016 to evaluate whether stakeholder responses were adequately addressed by Enviva. Stakeholders had the opportunity to present their points of view to the auditor(s) in confidence. The results of the stakeholder consultation is described in section 7.5 below.

7 Results

7.1 Main strengths and weaknesses

This summary of strengths and weaknesses should be read in conjunction with the summary of the SBE Risk Assessment in Section 8 and the summary of the Initial Assessment findings in Section 10 of this public summary. The strength of Enviva's SBP program is their integration of the SBP requirements with their existing fiber procurement management system and procedures designed to meet the requirements of applicable laws and regulations in the Supply Base Area (SBA) and the requirements of voluntary standards including SFI/PEFC/FSC CoC, FSC Controlled Wood and SFI Fiber Sourcing. As a result of operating in a region that has a well-established forest products industry and existing laws and regulations that align with the majority of the SBP requirements and the commitment to other voluntary standards, Enviva and their staff have developed a strong knowledge of local forestry industry practices conducted through the SBA and have a good awareness of the suppliers operating in the region.

Enviva has documented procedures to address risks in their supply base evaluation. During the Mid-Atlantic assessment PwC noted non-conformities and opportunities for improvement for additional systems and procedures to reduce the risk of procuring both primary fiber and secondary fiber from forests and other areas with high conservation value in the Supply Base. Consequently, Enviva created the Enviva Forest Conservation Fund, revised their fiber sourcing procedures, including the district of origin procedure for secondary feedstock purchases from sawmills in the form of sawdust, shavings, or other waste products from the milling process. Secondary suppliers are required to complete a District of Origin (DOO) data request sheet providing Enviva with information on the source of their fiber, knowledge of their supply base, certification status, and species purchased. Supply bases for secondary suppliers are incorporated into Enviva's overall supply base and mapped accordingly. Each supplier's catchment area is compared to the Supply Base Evaluation (SBE) to identify any known areas of risk that may be present. Each supplier receives a map of their supply base, feedback on any areas of risk that are identified, and a list of mitigation measures appropriate to their operations. Secondary suppliers are encouraged to share this information with their producers and landowners. Furthermore, Enviva may choose to cease deliveries from a supplier which refuses to provide the necessary data to properly include their supply area in our risk assessment.

With this information, in addition to internal expertise and knowledge of the location of the supplier's 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 routine checks 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.

PwC audited these new procedures at the Cottondale assessment and concluded that Enviva has the organizational capability to systematically meet the performance objectives and the requirements of the SBP Standards based on the elements of the SBP Standards that were tested.

7.2 Rigour of Supply Base Evaluation

Enviva has developed a detailed SBE including a clear description of their Supply Base Area. The geographical scope of the SBE are the counties in north western Florida, south eastern Alabama, and south western Georgia for primary feedstock and counties in Alabama, Florida, Georgia, Mississippi, and South Carolina in the Southeast United States of America for secondary feedstock to ensure that fiber is not received from outside the SBE scope area.

The SBE was developed internally by qualified personnel using credible third party data sources and their existing management and monitoring systems implemented to meet other voluntary standards and designed to ensure compliance with applicable laws and regulations.

Risk was designated low for all core Indicators, with the exception of 1 Indicator which was designated as specified risk. However subsequent to the initial SBP audit, Enviva developed additional controls and mitigation measures to reduce the Indicator to low risk.

PwC has reviewed the SBE process and conclude that it meets the SBP standard requirements.

7.3 Compilation of data on Greenhouse Gas emissions

During the initial on-site assessment PwC:

- Confirmed the greenhouse gas (GHG) sources for feedstock input from the forest, production at the facility, transportation to the port and storage and handling at the port;
- Reviewed how the input data was measured;
- Conducted interviews with operations personnel on the overview of the operations at the facility, historical operations, changes to operations, procedures and processes used to maintain the facility, and procedures and processes used to ensure data quality;
- Where appropriate, we obtained a sample of records to support the evidence provided in these interviews;
- Reviewed procedures and records on how and when emissions were calculated; and
- Inquired about controls on data collection and records.

PwC concluded that Enviva Pellets Cottondale has the competency to analyse and accurately report the required data on Greenhouse Gas emissions.

7.4 Competency of involved personnel

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

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

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

7.5 Stakeholder feedback

PwC launched their initial stakeholder consultation from October 5 – November 5, 2015 off-site from PwC's Vancouver office. The stakeholder consultation was inclusive for all Enviva's operating facilities, Southampton, Northampton, Ahoskie, Wiggins, Amory and Cottondale. PwC then conducted an additional

consultation on June 21, 2016 to evaluate whether stakeholder responses were adequately addressed by Enviva. Stakeholders had the opportunity to present their points of view to the auditor(s) in confidence.

PwC received the following relevant comments from stakeholders about the forest management and fiber sourcing of raw material for Enviva’s operating facilities in Ahoskie, NC, Garysburg, NC, Franklin, VA, Amory, MS, Cottdale, FL, and Wiggins, MS.

Stakeholder Comments:	PwC Follow-up Action
1. Enviva wood pellet sourcing - concerns with Enviva operations in bottomland hardwood forests; and concerns that Enviva is sourcing trees from High Conservation Value Forests.	PwC raised a major non-conformity during the mid-Atlantic audit for Enviva’s Southampton, Northampton and Ahoskie facilities. As a result, Enviva created the Enviva Forest Conservation Fund and revised their fiber sourcing procedures for primary and secondary feedstock. These new fiber sourcing procedures have been implemented by each BP, including Cottdale.
2. Enviva sourcing whole trees and classifying it as ‘Forest Residue’.	The comment was forwarded to Enviva who recognizes that this definition is broad and vaguely worded. However, at the time of mid-Atlantic audit Enviva’s product classifications aligned with SBP’s definitions. As these programs mature, Enviva has the proper tracking systems in place to ensure proper reporting against product definitions, as defined by SBP.
3. Risk determined by Enviva is not sufficient.	The mid-Atlantic SBE was revised to increase the risk rating of 4 indicators, while the Cottdale SBE was revised to increase the risk rating of 1 indicator. However, mitigation measures have been taken to address the specified risks in the initial SBEs.
4. Insufficient Stakeholder Consultation - Enviva did not appear to adhere to Stakeholder Consultation requirements for the SBE as outlined in the SPB standard (“Standard 2: Verification of SBP-compliant feedstock”).	PwC raised this as a major non-conformity during the mid-Atlantic audit for Southampton, Northampton and Ahoskie facilities. As a result, Enviva conducted a second stakeholder consultation in January 2016 for all Enviva’s operating facilities to seek comments on the LAV development process.
5. Air permits and equipment at Enviva's facilities may be a factor in the high percentage of hardwood used in pellet production.	PwC requested copies of air permits from Enviva and verified that Enviva BPs are operating within the annual thresholds and are therefore in compliance.
6. Receiving fiber from clearcut bottomland hardwoods and concerns regarding identifying and protecting features and species of exceptional value, and the maintenance of existing ecosystem functions in the forest.	Enviva identified indicator 2.2.4 as "specified risk" in the Cottdale SBE and implemented the associated mitigation measures including the improvements to their primary and secondary fiber procurement programs to reduce the risk to low.
7. Given the high conservation value associated with bottomlands, consider designating procurement from these forests as specified risk.	Enviva identified indicator 2.2.4 as "specified risk" in the Cottdale SBE and implemented the associated mitigation measures including the improvements to their primary and secondary fiber procurement programs to reduce the risk to low.

<p>8. Enviva's biomass sourcing does not provide verifiable reductions in greenhouse gas emissions, primarily because of the "new hardwood harvesting" that is only being conducted by landowners because of the biomass market and not the sawlog market.</p>	<p>Addressed during the assessment, but a finding was not generated. PwC's conclusion after interviewing landowners in the region is that the landowner decision to harvest their lands is predominantly based on the sawlog component of their forests and the current sawlog markets.</p>
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7.6 Preconditions

PwC issued two preconditions to Enviva Pellets Cottondale during this evaluation. There were no non-conformities issued during the assessment; however, Enviva Cottondale should post the final SBR to their website and Enviva should sign the SBP Trademark License Agreement before a certificate can be issued.

8 Review of Biomass Producer’s Risk Assessments

PwC assessed risk for the indicators using the guidance in Section 11 of the SBP Framework Standard 2: Verification of SBP-compliant Feedstock and evaluated risk at both the regional and the individual forest level. When completing their Risk Assessment, Enviva primarily relied on their existing management and monitoring systems implemented to meet other voluntary standards and designed to ensure compliance with applicable laws and regulations. As a result of Enviva’s Risk Assessment approach, PwC was able to assess risk for the indicators using a desk review of the documents referenced in the Risk Assessment, as well as interviewing staff and suppliers and observing Enviva’s BMP compliance monitoring system being applied at three supplier harvesting locations during the on-site portion of the SBP 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 an independent third party. Enviva identified one indicator which has “specified risk”; however, via associated mitigation measures and controls Enviva subsequently designated the indicator as “low risk”.

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

Indicator	Risk rating (Low or Specified)		Indicator	Risk rating (Low or Specified)	
	Producer	CB		Producer	CB
1.1.1	Low	Low	2.3.3	Low	Low
1.1.2	Low	Low	2.4.1	Low	Low
1.1.3	Low	Low	2.4.2	Low	Low
1.2.1	Low	Low	2.4.3	Low	Low
1.3.1	Low	Low	2.5.1	Low	Low
1.4.1	Low	Low	2.5.2	Low	Low
1.5.1	Low	Low	2.6.1	Low	Low
1.6.1	Low	Low	2.7.1	Low	Low
2.1.1	Low	Low	2.7.2	Low	Low
2.1.2	Low	Low	2.7.3	Low	Low
2.1.3	Low	Low	2.7.4	Low	Low
2.2.1	Low	Low	2.7.5	Low	Low
2.2.2	Low	Low	2.8.1	Low	Low
2.2.3	Low	Low	2.9.1	Low	Low
2.2.4	Low	Low	2.9.2	Low	Low
2.2.5	Low	Low	2.10.1	Low	Low
2.2.6	Low	Low			
2.2.7	Low	Low			
2.2.8	Low	Low			
2.2.9	Low	Low			
2.3.1	Low	Low			
2.3.2	Low	Low			

9 Review of Biomass Producer's mitigation measures

The following mitigation measures were taken to address the specified risks in the initial SBE.

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

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:** The biodiversity values of these 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 totalling 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 Imperilled 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 Imperilled Species that includes guidelines for protecting the gopher tortoise.

Overall, PwC has concluded that the identification and mitigation measures for this indicator are reasonably designed to address the identified risks and Enviva is monitoring the effective implementation. Enviva monitors the effectiveness through continual harvest inspections of roundwood and wood chips from primary suppliers and the rigorous district of origin process with all sawmill and wood industry suppliers of secondary feedstock.

10 Non-conformities and observations

No Non-conformities or Opportunities for Improvement were raised during the evaluation.

11 Certification decision

PwC has concluded that the Enviva Pellets Cottondale has the organizational capability to systematically meet the performance objectives and the requirements of the Standards based on the evaluation process described in Section 6 of this public summary. PwC's Practice Leader recommends certification of Enviva Pellets Cottondale as of August 5, 2016. The next assessment should be completed prior to February 25, 2017.