

PricewaterhouseCoopers LLP Evaluation of Enviva Pellets Sampson 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
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Document history

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1 Overview

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Primary contact for SBP:	Mike Harris, PwC Practice Leader, 604-806-7711, mike.harris@ca.pwc.com
Report completion date:	3/Aug/2016
Report authors:	Cheryl Woode and Bruce Eaket
Certificate Holder:	Enviva Pellets Sampson, 11499 Faison Hwy, Faison, NC 28341, United States
Producer contact for SBP:	Don Grant, Franklin, VA, United States, 1-757-304-5080, don.grant@envivabiomass.com
Certified Supply Base:	Wilmington regional supply base, includes counties from the coastal plains to the piedmont regions of North Carolina, South Carolina and Virginia.
SBP Certificate Code:	SBP-03-04
Date of certificate issue:	31/Jan/2017
Date of certificate expiry:	30/Jan/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 Sampson and transport to the North Carolina State Ports Authority for storage, aggregation, vessel loading and shipping.

SBP certificate: SBP-03-04

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.

Enviva Sampson pellet mill is (Sampson) located near the town of Faison, NC in Sampson County. Sampson mill is scheduled to begin manufacturing operations later in 2016. Its potential annual production volume will be about 500,000 metric tonnes of pellets. Some of the production, sourcing volumes and certified volume percentages are estimated for this reason. Pellets produced at this plant will be transported by truck to North Carolina State Ports Authority, in Wilmington, NC, for export to European utilities.

5.2 Description of Biomass Producer’s Supply Base

Enviva operates 1 mill in its Wilmington region: Enviva Pellets Sampson, NC. The Wilmington supply base area includes 53 counties in Virginia, 90 counties in North Carolina, and 32 counties in South Carolina. The entire Wilmington supply base encompasses 175 counties and 10.8 million hectares of timberland. Sampson procures all of their fiber from primary and secondary sources inside the defined supply base area. Their internal fiber procurement group that has responsibility for the implementation of 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 Sampson 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 399.2 million metric tons of standing timber inventory and is approximately fifty-two percent mixed hardwoods with balance in conifer species. At the Sampson facility, hardwoods will make up an estimated 50% of the feedstock and conifer species are expected to comprise the remaining 50%. Adjustments in the feedstock are expected during the 2016 start-up year as the mill and plant operations find an optimal operating balance.

The total annual volume of primary feedstock procured by Sampson is expected to be approximately 800,000 to 1,000,000 metric tonnes. Approximately 97% of the primary feedstock is not certified to an SBP-approved Forest Management Scheme while the balance of the feedstock is anticipated to originate from an SBP-approved Forest Management Scheme.

The total annual volume of secondary feedstock procured by Sampson is expected to be approximately 88,000 to 110,000 metric tonnes. None of the secondary feedstock is from SBP-approved Chain of Custody (CoC) Systems.

Tertiary sources are not expected to be part of the feedstock supply.

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

5.4 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	May 13, 2016. Off-site from PwC's office.	Cheryl Woode, SBP Lead Auditor, PwC	6 hours
PwC Stakeholder Consultation	May 13 – June 13, 2016. Off-site from PwC's office.	Cheryl Woode, SBP Lead Auditor, PwC	8 hours
Initial Assessment	June 15, 2016. On-site in Faison, North Carolina.	Cheryl Woode, SBP Lead Auditor Allison Gratz, Director of Sustainability, Enviva Don Grant, Manager of Certification, Enviva Kim Cesafsky, Greenhouse Gas Specialist, Enviva Dwight Gerding, Fiber Supply Forester, Enviva Jim Reavis, Regional Manager, Enviva Todd Watson, Fiber Supply Manager, Enviva Phillip Nash, Fiber Supply Associate, Enviva	9 hours
	June 16, 2016. Supplier Interviews and On-site at North Carolina States Port Authority	Cheryl Woode, SBP Lead Auditor Allison Gratz, Director of Sustainability, Enviva Don Grant, Manager of Certification, Enviva Kim Cesafsky, Greenhouse Gas Specialist, Enviva Dwight Gerding, Fiber Supply Forester, Enviva Jim Reavis, Regional Manager, Enviva Todd Watson, Fiber Supply Manager, Enviva Phillip Nash, Fiber Supply Associate, Enviva Chris Wardwell, Director Logistics at North Carolina States Port Authority, Enviva 4 Supplier Interviews	9 hours
PwC Stakeholder Conference Call	June 21, 2016	Bruce Eaket, Qualified SBP Lead Auditor, PwC Cheryl Woode, SBP Lead Auditor, PwC	1 hour
Audit Closure and PwC Certification Decision	August 3, 2016. Off-site from PwC's office.	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 Sampson 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. Since the facility was under construction during the on-site visit, the only critical control point available for assessment was the log/ wood chip weigh station. PwC also observed Sampson's monitoring system for supplier's sustainable forest management practices being implemented at four of their primary fiber suppliers.

Additionally, PwC conducted a site visit to the North Carolina States Port Authority. Pellets produced at Sampson will be transported by truck to North Carolina State Ports Authority for storage, handling and export to customers. Since the Port storage and handling was under construction during the on-site visit, most of the time was spent reviewing the CoC processes and GHG data and collection 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 provided the draft findings to Sampson at the closing meeting of the Initial Assessment. Sampson responded with their root cause/action plans and if appropriate, provided PwC with revised management system procedures and templates, forms, etc. Once the lead auditor accepted Enviva's changes and closed the audit findings, the PwC lead auditor's working papers including protocols/checklists and evidence of conformance 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 Sampson completed a stakeholder consultation from May 6-June 5, 2016 for its initial SBP certification. PwC reviewed the names and organizations that were included in the stakeholder consultation. The list included 54 stakeholders from the supply base area of Virginia, North Carolina and South Carolina – 4 Post-Secondary Education Institutions, 1 Consultant, 23 Environmental Non-Government Organizations, 11 Government, 4 Industry Organizations, 3 Landowners, 1 Landowner Associations, 4 Loggers, 2 Trade Associations, and 5 Suppliers.. PwC followed-up after the closure of the Enviva stakeholder consultation to obtain a summary of any feedback received and the resulting changes to the SBE/Risk Assessment, if applicable. Enviva reported that they had received no feedback during their stakeholder consultation period for the Wilmington Supply Base Evaluation.

PwC conducted its 30-day stakeholder consultation from May 13 – June 13, 2016 prior to the on-site audit of Enviva's Sampson facility. PwC used the stakeholder list that Enviva used in its consultation and stakeholders were informed of the consultation via email and/or mail. Stakeholders were provided a copy of the draft Wilmington Supply Base Evaluation and invited to comment on the Wilmington Supply Base Evaluation process. PwC received 2 letters from stakeholders. Additionally, PwC conducted a consultation over the phone 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 of this Public Summary.

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 during the Sampson 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, with the exception of the nonconformity that was identified which has since been addressed by Enviva and closed by the Lead Auditor.

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 for the Wilmington supply base includes counties from the coastal plains to the piedmont regions of North Carolina, South Carolina and Virginia the United States of America for primary and 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 4 indicators which were 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 Sampson 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 May 13 – June 13, 2016 off-site from PwC's Vancouver office. Additionally, PwC conducted a telephone 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 comments from stakeholders about the forest management and fiber sourcing of raw material from the Wilmington and Mid-Atlantic Supply Base Areas.

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 to the BPs operating in the mid-Atlantic SBE, specifically, Southampton, Northampton and Ahoskie. As a result, Enviva revised their fiber sourcing procedures for primary, secondary and tertiary feedstock and created the Enviva Forest Conservation Fund.
2. Wood from the Wilmington Region using gatewood purchases where wood is purchased at the gate without oversight of where or how the wood was harvested.	PwC audited Enviva's procurement process during the Sampson audit, including Gatewood purchases and concludes that Enviva has proper systems in place to ensure where and how the wood was harvested.
3. Enviva primarily focuses on Gopher tortoise and Red cockaded woodpecker and ignores many other species at risk whom are dependent on bottomland hardwood forest habitat.	PwC shared this comment with Enviva and the Sampson SBE was revised to increase the risk rating of 4 indicators. Mitigation measures address the risk to bottomland hardwood forest habitat.
4. US Federal and State legislation, such as Endangered Species Act and the Clean Water Act, are not sufficient control systems and procedures to meet the requirements of SBP Principle 2.	PwC shared this comment with Enviva and Enviva used a number of LAVs to support either risk determinations or mitigation measures, including: <ul style="list-style-type: none"> • Draft FSC US National Risk Assessment • All applicable Federal & state laws, including environmental laws, and occupational health and safety laws • BMP implementation reports • State Natural Heritage programs • Maps and data regarding high conservation values • Supplier contracts • Residual Supplier Reporting Form • Enviva's Track and Trace program
5. Enviva's engagement in the US Endowment for Forestry and Communities process and the use of its Forest Conservation Program High Conservation Value Tract Approval Process (HCV Tract Approval Process) lack sufficient transparency and clarity regarding fundamental requirements with bottomland forest type policy.	PwC audited Enviva's procurement process during the Sampson audit, including the HCV Tract Approval process for primary feedstock and concludes that Enviva has proper systems in place to ensure where and how the wood was harvested.
6. Enviva has not undertaken a rigorous conservation mapping approach for their supply-chain in this region compared to a major forest products company whom underwent a comprehensive mapping project and consulted extensively with multiple organizations; making use of species richness and other publicly available maps like those generated by the South Atlantic Landscape Conservation Cooperative.	Enviva used various third party data sources for research in the Wilmington supply base, such as: FSC High Conservation Area Mapping tool, The Nature Conservancy website, United States Geological Survey, United States Fish & Wildlife Service, United States Census Bureau and Databasin. Further, Enviva commissioned NatureServe to perform a ranking exercise for priority bottomland areas.

<p>7. Air permits and equipment at Enviva's facilities may be a factor in the high percentage of hardwood used in pellet production</p>	<p>PwC requested copies of air permits from Enviva and verified that Enviva BPs are operating within the annual thresholds and are therefore in compliance.</p>
<p>8. Enviva's own EU Timber Regulation (EUTR) Compliance data indicates that Enviva facilities located within the Wilmington Region rely on between 78 to 100 percent hardwood species for their pellets, depending on the location of the individual pellet facility: Ahoskie (North Carolina) – 78% Hardwood Northampton (North Carolina) – 89% Hardwood Southampton (Virginia) – 100% Hardwood</p>	<p>PwC shared this comment with Enviva and they provided the following response: The actual fiber breakdowns for these mills is: Ahoskie: 71% HW Northampton: 89% HW Southampton: 92% HW Enviva's Track and Trace program provides data at the tract level including what types of forests the fiber originates from. In the first part of 2016*, in the mid-Atlantic region, Enviva's forest sources were the following:</p> <ul style="list-style-type: none"> • Mixed Pine and Hardwood: 56% • Southern Yellow Pine: 20% • Mill & Industry Residues: 14% • Upland Hardwood: 6% • Bottomland Hardwood: 4% • Landscape and Arboricultural Residues: < 1% <p>* During this time period, 15.3% of Enviva's delivered fiber was not covered by the Track & Trace program. This material was applied proportionately to all primary fiber sources (i.e. fiber from landscaping/ urban management and oak-pine, southern yellow pine, upland hardwood, and bottomland hardwood forests).</p>
<p>9. Enviva's data shows that its plants in the Wilmington Region manufacture pellets using species of wetland hardwood trees including Atlantic White Cedar, Cypress, and Tupelo. Documents Enviva filed with the U.S. Securities and Exchange Commission further show that Enviva sources wood from the Wilmington Region using "gatewood" purchases, where wood is purchased at the "gate" of mill without oversight of where or how the wood was harvested. These observed sourcing practices do not comply with the SBP Principles outlined in the Wilmington Region assessment. For example, Enviva's open use of "gatewood" purchases is in direct conflict with Enviva's findings that proper chain of custody ensures a "low risk" of obtaining wood from an unidentifiable or improperly harvested source. Further, clear evidence shows that Enviva is sourcing biomass for its North Carolina and Virginia wood pellet facilities from clearcut bottomland hardwood forests that provide critical habitat to many rare and endangered species, filter freshwater for surrounding communities and act as a buffer against flooding and sea-level rise.</p>	<p>PwC shared this comment with Enviva and they provided the following response: Enviva does not purchase Gatewood in the way the stakeholder defines it. Enviva vets every supplier before entering into a supply agreement. Each supplier must execute a contract agreeing to follow all applicable laws, use BMPs and trained loggers on all harvests. The contract also requires that suppliers submit tract level data for all primary fiber deliveries as required by our Track & Trace program. A new payment contract is set up for each tract of forest a supplier will deliver from to Enviva. Thus, Enviva knows to the GPS location every site of primary fiber that enters our mills.</p> <p>The majority of bottomland hardwood forest stands in the Wilmington supply base area have been harvested for sawtimber production for centuries. In terms of harvest techniques, as explained by the North Carolina Forest Service in its paper entitled <i>Managing and Regenerating Timber in Bottomland Swamps</i> (July 2012), "Implementing a carefully planned and executed swamp timber harvest in a manner that minimizes soil and water impacts has shown to be the practical and viable prescription for forest management in bottomland/cypress swamps." In some instances select cuts may be used for bottomland harvest, however clearcut harvest is the typical management method used in bottomland systems, as "nearly all swamp-adapted tree species require full sunlight to adequately regenerate, thus demanding a removal of the shading overstory" (North Carolina Forest Service, 2012). This harvest technique maximizes the likelihood of regeneration</p>

	<p>of desirable species post-harvest. Many of these existing bottomland hardwood stands have been poorly managed to date, such that appropriate silvicultural treatments such as clearcut embody restoration for these forests and are the best ecological outcome. For more information on bottomland hardwood forests and their silviculture, please see the guide published by The Forest Guild, at http://www.forestguild.org/node/263.</p> <p>Numerous state and Federal water quality regulations also govern forestry activities in swamps and wetlands, The North Carolina South Carolina, and Virginia Department of Forestry describes several forest management guidelines that should be followed when harvesting in bottomland systems. In addition to following best management practices (BMPs) for wetlands as described by the Department of Forestry in these forest types, streamside management zones (SMZs) are always established according to state guidelines. SMZ's are intended to protect water quality, to provide a visual screen, to enhance wildlife/ bird corridors and to provide an additional source of tree seed to enhance regeneration (North Carolina Forest Service, 2012). Enviva audits its suppliers' performance relative to state and Federal regulations and best management practices.</p>
<p>10. Enviva's open, documented, and continued use of wetland and hardwood trees identified in the assessment as "species of outstanding and exceptional value" in the Wilmington Region undermines nearly every "low risk" finding Enviva makes relevant to SBP Principle 2. This evidence includes first-hand reports from harvesters, quoted in the <i>Wall Street Journal</i>, who "sold Enviva several hundred tons of hardwood that his crew clear-cut from a swamp that hadn't been logged for about 100 years." This clear evidence demonstrating substantial risk to sensitive bottomland forests is not addressed in the risk assessment.</p>	<p>PwC shared this comment with Enviva and Enviva provided the following response: The primary fiber Enviva uses is low grade material that other markets such as saw mills will not consume. The value of sawtimber to the landowner can be at least 4 times greater than the fiber Enviva sources, especially in hardwood markets. While Enviva may take some proportion of the volume from a certain tract, the impetus for harvest is the high value sawtimber.</p>
<p>11. The company's operations are also spreading southward in the Wilmington Region. Enviva has begun planning two more facilities in North Carolina's Richmond and Sampson Counties, intensifying the potential impact in the Wilmington Region. Even without additional facilities, the reach of existing pellet mills operating in Virginia extends to every bit of bottomland hardwood forest that isn't under protection (approximately more than 90% across the region). While Virginia has the least bottomland hardwood forest acreage of all the southeastern states, it does contain more than 133,000 acres of bottomland hardwood forests over 80 years old (recognized by the FSC as High Conservation Value in its Controlled Wood National Risk Assessment DRAFT), which are considered the most valuable in terms of habitat, carbon</p>	<p>PwC shared this comment with Enviva and they provided the following response: Enviva expects to use at least 50% pine in the Sampson region. At the Sampson facility Track & Trace was fully implemented from the first deliveries. In the first half of 2016 Sampson's forest sources were the following:</p> <ul style="list-style-type: none"> • Mixed Pine and Hardwood: 26% • Southern Yellow Pine: 67% • Mill & Industry Residues: 0% • Upland Hardwood: 2% • Bottomland Hardwood: 5% • Landscape and Arboricultural Residues: 0% <p>The extent that Sampson is sourcing from bottomland forests is obviously overstated in these comments. The vast majority of the hardwood Sampson sources comes from understory trees from mixed pine and hardwood forests.</p>

storage, and water filtration.	
<p>12. All bottomland forest – including bottomland forests younger than 80 years – provide crucial and interconnected habitat and ecological services that require protection. Enviva’s observed sourcing practices impact the entire range of bottomland hardwood forest in the Wilmington Region, both older and younger than 80 years. Recovery of these sensitive bottomland forests following a clear-cut is highly speculative and uncertain. Enviva’s own assessment rightly acknowledges that bottomland hardwood forest types used by Enviva facilities like Cypress – tupelo swamps and Atlantic white cedar are not regenerating back as expected and deserve special consideration. The complex vertical structure of a mature bottomland system, vital for the highest levels of bird diversity, for example, may never be achieved thanks to even-age management with short rotation periods. Restoring bottomland hardwood forests is challenging because of the time necessary for these forests to mature and because altered flood patterns can reduce the diversity of trees and plants when a forest regenerates. It takes an entire human lifetime to regain the values of a forest that has been cleared under the best of conditions. Even if these forests eventually do recover, in the decades long interim, biodiversity, carbon capture, and all the other benefits of a bottomland forest will be forfeited and the ecological integrity of the site further compromised or in some instances completely lost.</p>	<p>PwC shared this comment with Enviva and they provided the following response: Enviva worked with the US Endowment for Forestry and Communities to evaluate the Wilmington supply base area to identify forest types with potentially high conservation value. After consulting with leading independent academics and environmental organizations, the Endowment identified four specific bottomland priority forest types; Cypress-tupelo swamps, Atlantic white cedar stands, Pocosins and Carolina bays. See the Enviva Forest Conservation Fund website (http://envivaforestfund.org/about-the-enviva-forest-conservation-fund/about-bottomland-forests/) for additional information about these bottomland forest types. Enviva has committed not to source from high conservation value areas that might fall into one of these four categories. While gathering Track & Trace data on specific tracts prior to purchase, the Procurement Forester must evaluate whether there is a risk that the tract might be considered HCV. This assessment is conducted on a site-by-site basis in order to evaluate the condition of the stand and to maximize the likelihood of regeneration of desirable species post-harvest. In this region, the most common priority forest type is cypress tupelo. While all of these four priority types are bottomland hardwood systems, it is important to note that not all bottomland hardwoods have high conservation value, and in fact, the majority of them are working forests that have been managed as timberlands for centuries (North Carolina Forest Service, 2012). 90% of the forests in the Wilmington supply base area are privately owned, meaning that their owners have considerable freedom in choosing how to manage these lands. Markets for timber from working bottomland hardwoods provide an important incentive for landowners to maintain their forests as forests.</p> <p>There is no general consensus, at a site by site level, of what makes a bottomland hardwood stand also a HCV. For example, the Draft US FSC National Risk Assessment, which is the basis for Enviva’s supply base evaluation, defines HCV bottomland hardwood stands as those that are 80 years or older and have the structure and composition of old-growth stands. However, FSC does not physically designate where those forests are found. Other groups may have their own descriptions of precisely what constitutes a HCV bottomland forest, based on their own organizational goals. Some are long-term focused and are interested in ensuring that bottomland hardwood forests are connected on the landscape and are still thriving in light of climate change. Others feel that all bottomland hardwood forests are inherently HCV and should be protected. Because a general consensus does not exist and we do know that most of these forests are appropriately categorized as working forests, Enviva developed its own set of site specific characteristics that</p>

	<p>can help us to determine in a granular fashion, at the site by site level, whether certain stand is actually a HCV tract.</p> <p>Overall, when deciding whether to purchase primary feedstock from a given tract, Enviva's goal is to determine whether that tract will, if harvested, produce a new tract with the same desirable species content that was present before harvest. Indicators that should be considered in this decision include forest type (i.e. whether it is likely one of the four priority forest types), location, species composition, hydrology and water flow, stand age and soil saturation. When assessing a tract for HCVs, Enviva evaluates all of these important characteristics. If there is evidence based on this first level of evaluation that the site may be an HCV bottomland, then the Forester must perform a second level review which includes an on-site assessment, data collection and documentation prior to purchase. At the landscape scale, we endeavor to contribute to a working forest landscape with a diversity of age classes representing bottomland hardwood assemblages which can, over the long and short term, provide wildlife habitat, recreation, buffers for climate change, and other ecosystem services, while still playing a pivotal role in conservation and working forests in the Wilmington supply base area.</p> <p>While Enviva does not source from areas that might be deemed too ecologically sensitive, because we work in landscapes that are nearly all privately owned with many forest products industry actors, we cannot guarantee that the areas that we do not source will remain intact. In order to ensure that these special places can remain so, Enviva created the Enviva Forest Conservation Fund (http://envivaforestfund.org/) to work toward protecting and conserving working forest landscapes in ecologically sensitive bottomland hardwood ecosystems. Enviva has committed five million dollars over a ten-year period to fund conservation efforts targeting these forest types. The fund is administered by the US Endowment for Forestry and Communities and the first round of grant awards, protecting more than 2000 acres of bottomland hardwood forests in NC and VA, were awarded in May 2016. The RFP for the second year of funding was released in November 2016 and proposals are due February 1, 2017.</p> <p><i>Stakeholder engagement on Bottomland/ Wetland Hardwood Forest Management</i></p> <p>Recognizing that the stakeholder community overall has substantial work to do to identify what specifically constitutes HCV, and to understand best practices in bottomland/ wetland hardwood systems, Enviva and the US Endowment co-convened a Bottomland/ Wetland Blue Ribbon Panel stakeholder group in May 2016 to work toward developing a system of best management practices for these priority forest types. More than 45 stakeholders representing academic, NGO, government, and industry groups spent 2.5 days together discussing the state of the</p>
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	<p>art around forest management in bottomland/ wetland hardwood ecosystems. Enviva has released the workshop report from this effort to the public (scroll to the bottom of the page and look for the heading entitled “The Endowment Blue-Ribbon Panel” at http://envivaforestfund.org/about-the-enviva-forest-conservation-fund/), and will continue to engage this stakeholder group in review and evaluation of our sourcing practices going forward.</p>
<p>13. US Federal and State legislation, such as the Endangered Species Act and the Clean Water Act, are not sufficient control systems and procedures to meet the requirements of SBP Principle 2.</p>	<p>PwC shared this comment with Enviva and they provided the following response: Not all bottomlands are high conservation and worthy of preservation. The reality is that the vast majority are working forests that have been harvested multiple times since the 1600s. See description of Enviva HCV Assessment process above for how we determine HCV and whether Enviva feels a specific tract is appropriate to purchase from.</p>
<p>14. 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. As a result, compliance with these laws is not sufficient to show that high conservation value forests are mapped and protected according to SBP Principle 2.</p>	<p>PwC shared this comment with Enviva and they provided the following response: Enviva is certified to the FSC Controlled Wood and SFI Fiber Sourcing Standards which requires that we have contracts in place to ensure the use of BMPs by our suppliers on all source harvests, so for Enviva the use of BMPs are mandatory. Further, we monitor our suppliers through tract audits to ensure on-going compliance.</p>
<p>15. Enviva’s self-assessment of risk also relies upon an argument that, “. . . 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.” However, a report published last year from the National Academy of Sciences highlights a disturbing national conservation priority disconnect: While the nation’s highest concentrations of endemic bird, reptile and tree species diversity are found in the wetland forests of the US Southeast, the majority of protected forests are in the West.</p>	<p>PwC shared this comment with Enviva and they provided the following response: The Enviva Forest Conservation Fund (EFCF) and HCV assessment process go above and beyond our legal obligations; however this does not mean that they are not effective.</p>
<p>16. Enviva’s engagement in the “US Endowment for Forestry and Communities” process and the use of its Forest Conservation Program High Conservation Value Tract Approval Process (HCV Tract Approval Process) lack sufficient transparency and clarity regarding fundamental requirements with a bottomland forest type policy.</p>	<p>PwC shared this comment with Enviva and they provided the following response: See above for a description of Enviva’s HCV Assessment process and EFCF. As stated before, the overwhelming portion of value in the tract for the landowner is in the high value sawtimber that resides on these tracts. Even if Enviva chooses not to source from a specific tract, it is likely that the landowner will still harvest it, as there are still outlets for the high value material. The EFCF cannot protect every tract worthy of protection, but it can facilitate conservation and has provided a forum for dialogue and improved practices regarding bottomland harvesting and management. Enviva will not source fiber from forests being converted to</p>

	non-forest, nor will we source from natural longleaf pine forests being converted to other forest types.
17. Evidence shows that Enviva's harvesting practices in the Wilmington Region will diminish the capability of the forest to act as an effective sink or store of carbon over the long term.	PwC shared this comment with Enviva and they provided the following response: See comment above regarding harvesting practices in bottomlands. Enviva will not source from a tract where assessment shows that regeneration will not have a high likelihood of being successful.
18. Studies show that using pellets manufactured from wood harvested using Enviva's observed practices in the Wilmington Region will result in over at least two times the overall carbon emissions of continuing to burn coal.	PwC shared this comment with Enviva and they provided the following response: Carbon accounting is not applicable to Standard #1. Enviva does not source fiber from tracts being converted to non-forest, so even if a tract is harvested, it will continue to grow trees that will sequester carbon over the long-term.
19. The Enviva assessment fails to demonstrate 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. Old growth forests are also valuable carbon sinks, and should be protected as such.	PwC shared this comment with Enviva and they provided the following response: The primary fiber Enviva uses is low grade material that other markets such as saw mills will not consume. The value of sawtimber to the landowner can be at least 4 times greater than the fiber Enviva sources, especially in hardwood markets. While Enviva may take some proportion of the volume from a certain tract, the impetus for harvest is the high value sawtimber.
20. Enviva's new initiative fails to put some of our most ecologically sensitive and valuable forests including oak and ash swamps, black gum swamps, non-riverine hardwood swamps and longleaf pine forests, off-limits to pellet sourcing. Additionally, cypress is not a species that is off limits to harvest.	See Enviva's response to comment #12 above.
21. Enviva's operations are significantly impacting the ecological functioning of these sensitive forests under a false premise of carbon neutrality that is tied to "sustainability" and their Forest Conservation Fund is fundamentally insufficient.	PwC shared this comment with Enviva and they provided the following response: See comment above regarding harvesting practices in bottomlands. Enviva will not source from a tract where assessment shows that regeneration will not be successful.

7.6 Preconditions

PwC issued one precondition to Enviva Sampson during this evaluation. As discussed in Section 10 of this public summary, there was one non-conformity that had to be closed before a final report and certificate could be issued.

Additional preconditions were required to be closed before the final report and certificate could be issued. The following preconditions were: Enviva Pellets Sampson Supply Base Report shall be posted onto Enviva's website and Enviva shall sign the SBP Trademark License Agreement.

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 four 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 four criteria which have "specified risk"; however, via associated mitigation measures and controls Enviva subsequently designated all indicators 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)	
	Producer	CB
1.1.1	Low	Low
1.1.2	Low	Low
1.1.3	Low	Low
1.2.1	Low	Low
1.3.1	Low	Low
1.4.1	Low	Low
1.5.1	Low	Low
1.6.1	Low	Low
2.1.1	Low	Low
2.1.2	Low	Low
2.1.3	Low	Low
2.2.1	Low	Low
2.2.2	Low	Low
2.2.3	Low	Low
2.2.4	Low	Low
2.2.5	Low	Low
2.2.6	Low	Low
2.2.7	Low	Low
2.2.8	Low	Low
2.2.9	Low	Low
2.3.1	Low	Low
2.3.2	Low	Low

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

9 Review of Biomass Producer's mitigation measures

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

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

Risk Designation: Specified Risk

Mitigation Measure: In the US, Federal and State legislation such as the Endangered Species Act and the Clean Water Act are policed effectively. Enviva and its third-party suppliers, require through contracts, that all suppliers of raw material adhere to all applicable laws and regulations and employ BMPs during harvest. Enviva also requires the use of trained loggers, which have completed training on BMPs, T&E species, identification of special sites, and more. Enviva and its third party suppliers will not contract with companies exhibiting poor performance. Enviva sends yearly correspondence to all suppliers with verbiage explaining our commitment to avoid HCV areas and our expectation they will comply with our desires. In addition, the US has a strong network of protected areas through its National Park System, National & State forests, designated wildlife refuges and the US Fish and Wildlife Service.

All of the Southeastern States have Forestry Assessments and Strategies, as well as Wildlife Action Plans. These agencies and others have publicly available mapping software to use in identifying HCV areas. Enviva also utilizes various web GIS data sources and web mapping tools to compile pertinent data for internal use. Enviva engaged the US Endowment for Forestry and Communities to evaluate the Wilmington supply base area to determine other areas of high conservation value. The Endowment consulted with leading independent academics and environmental organizations and identified four specific bottomland priority forest types; Cypress-tupelo swamps, Atlantic white cedar stands, Pocosins and Carolina bays. The Enviva Forest Conservation Fund website (<http://envivaforestfund.org/about-the-enviva-forest-conservation-fund/about-bottomland-forests/>) contains information regards each bottomland forest type. Enviva has committed five million dollars over a ten year period to fund conservation efforts targeting these forest types. The fund is administered by the US Endowment for Forestry and Communities.

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

Indicator 2.1.2: The Biomass Producer has implemented appropriate control systems and procedures to identify and address potential threats to forests and other areas with high conservation values from forest management activities.

Risk Designation: Specified Risk

Mitigation Measure:

Primary Feedstock

All stumpage and vendor/producer tracts in bottomland areas are assessed using the Enviva Forest Conservation Program High Conservation Value Tract Approval process to ensure Enviva's procurement is not negatively affecting potential HCV sites. This process requires a site visit to conduct a field assessment

to any potential source tract that meets the criteria described above. After the site assessment, Enviva will only agree to accept fiber from that source tract if it is determined that harvesting is the best possible outcome for that tract. This policy exceeds the minimum requirements for any CoC or DDS certification Enviva operates.

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

Secondary Feedstock

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

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

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

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

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

SBP-Compliant Sources are:

- The proportion of sawmill and wood industry material received at Enviva with FSC/PEFC/SFI certified content claims (only the proportion of certified fiber is SBP-Compliant).

- Other areas deemed low risk as per the assessment of this SBE. Specifically, residues from sawmills that only use commercial pine species, or suppliers where it can be verified that they do not operate in or use species from bottomland forests

SBP-Controlled Sources are:

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

If Enviva identifies any sources of fiber that are out of compliance with the DDS Enviva will eliminate them from the supply chain.

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

Risk Designation: Specified Risk

Mitigation Measure:

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

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

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

Risk Designation: Specified Risk

Mitigation Measure:

Enviva engaged the US Endowment for Forestry and Communities to develop science-based working group to develop enhanced forestry practices for working bottomland forests. The working group will recommend specific additional measures to define and protect sensitive areas which Enviva will incorporate into its wood supply practices.

Enviva has implemented the Enviva Forest Conservation Program High Conservation Tract Approval process for all Enviva controlled and supplier tracts. Tracts with potential biodiversity concerns must be evaluated using this tool to ensure Enviva does not compromise its commitment to protect special places. See detailed description of the Enviva HCV assessment process under the mitigation measures for Indicator 2.1.2.

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

- Montane longleaf pine: Montane longleaf pine habitats occur in steep rolling topography historically maintained by fire, mostly outside of or on the edge of the Coastal Plain. Biodiversity values are

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

- Specified risk: These habitat types are generally located on south and southwestern slopes and ridges up to about 2000 feet in elevation in northern Alabama and Georgia. These region are outside of the Wilmington supply base area and are of no risk to the Enviva regional supply chain.
 - Mitigation measures: There are no measures required.
- Karst Habitat: There are numerous areas of high aquatic and terrestrial biodiversity in the karst habitats of the Appalachians. The aquatic resources include fresh water mussels, fish and insects. The karst systems are rich with endemic and globally rare fishes, insects and cave invertebrates. The Clinch, Powell and Duck rivers are just a few of the nationally important river systems in the region. Sediment from poor logging practices and improperly constructed and maintained roads are the primary potential forestry related threats.
 - Specified risk: In the Wilmington supply base area these sites are largely controlled by national and state agencies and are on the fringe of the western fringe supply area and generally fall outside of an economic hauling radius. The potential impact of a poorly executed harvest could be high but the likelihood of a raw material delivery from a karst site reaching an Enviva Sampson facility is low.
 - Mitigation measures: Stands that are harvested under the control of Enviva will be managed to preserve diversity and structure. A portion will left protected to preserve late successional elements. Enviva will provide education and assistance to any supplier harvesting on a mesic site. In either case state forest BMP's will be followed. There are known Karst habitats outside of the Appalachian Eco region and in the Wilmington supply base area. Proper forestry BMP's are required by contract and these areas are considered low risk.
 - Red cockaded woodpecker: These birds nest in cavities of living pine trees in the southeastern US. They are dependent on pine woodlands and savannahs that have pine trees large enough to provide nesting habitat. They will nest in all southern yellow pines but prefer longleaf pine. Foraging habitat requires open woodlands with herbaceous groundcover.
 - Specified risk: There are known sightings of red cockaded woodpeckers in the Wilmington supply base area. The potential raw material could be delivered to a mill is moderate given the preferred habitat description.
 - Mitigation measures: Enviva stumpage tracts are surveyed to identify the existence of protected species. Appropriate measures to protect a red cockaded habitat will be employed if the species is found on a tract including the maintenance of an open structure and mature nesting trees of at least 12" DBH.
 - Gopher tortoise: A keystone species native to longleaf pine forests of the southeastern US and is listed as threatened in the western portion of its range generally due to development.
 - Specified risk: Though the gopher tortoise range is in the Appalachian Eco-region it is outside of the Wilmington supply base area.
 - Mitigation measures: None

Overall, PwC concludes that the identification and mitigation measures for each of the four indicators are reasonably designed to address the identified risks.

10 Non-conformities and observations

All nonconformities (minor and major) must be closed before completing the reporting process.

Enviva was allowed sixty (60) days from the closing meeting date to address the major and minor nonconformities raised during the implementation assessment. Enviva provided a root cause analysis for each nonconformity indicating the cause of the system or process failure and provided sufficient evidence to PwC indicating how the nonconformity has been corrected prior to completion of the Certification Assessment.

The details of the Non-conformities and Opportunities for Improvement raised during the evaluation are provided in the tables below:

- Nonconformity**

PwC Reference Number	SBP Requirement	Finding Details	Status
490-IA-NC-01- Minor nonconformity	Sustainable Biomass Partnership (SBP) Standard 5 (V1.0) @ 5.2 requires that the collection of data for the purpose of communicating to external stakeholders on sustainability of the Biomass Producers' feedstock inputs in the Supply Base Report.	<p>Enviva has collected and completed the energy and carbon balance calculations for the Sampson facility. However, the data reported in the Supply Base Report is not consistent with the data collected and completed for the energy and carbon balance calculations.</p> <p>Enviva was given 60 days from the closing meeting to resolve the issue and has subsequently provided PwC with an acceptable action plan and evidence of implementation.</p>	CLOSED

- No Opportunities for Improvement were identified during the assessment.**

11 Certification decision

PwC has concluded that the Enviva Pellets Sampson 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 Sampson as of August 3, 2016. The next assessment should be completed prior to June 15, 2017.