



VERIFICATION REPORT
CAR VERIFICATION OF THE BLUE SOURCE – FRANCIS BEIDLER IMPROVED
FOREST MANAGEMENT PROJECT

REPORTING PERIOD 10

2/2/2022
Version 2.1

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Abbreviations

ANSI	American National Standards Institute
BMP	Best Management Practices
CAR	Climate Action Reserve
CO ₂ e	Carbon Dioxide Equivalent
CP	Common Practice
CRT	Climate Reserve Tonnes
EPA	Environmental Protection Agency
ERTs	Emission Reduction Tons
FPP	Forest Project Protocol
GHG	Greenhouse Gas
HWP	Harvested Wood Products
ICS	Initial Carbon Stocks
NRCS	USDA Natural Resource Conservation Service
OP	Offset Provider
PD	Project Developer
PDD	Project Design Document
PP	Project Proponent
ROPM	Reserve Offset Program Manual
RPF	Registered Professional Forester
S&A	S&A Carbon
t	Metric Tonnes
U.S.A	United States of America
USDA	United States Department of Agriculture

1 Introduction

S&A Carbon (S&A) has been asked by Bluesource to verify the emission reductions generated by the Blue Source – Francis Beidler Improved Forest Management Project (CAR683) (the project). The verification process is required by the Climate Action Reserve Forest Project Protocol. S&A verification activities began on 12/16/2021. This report presents the findings from the verification of the project’s greenhouse gas (GHG) emission reductions/enhancements.

The Offset Project Registry (OPR) for this project is the Climate Action Reserve (CAR), listed as CAR683.

2 Project Overview

2.1 Project Participants

Role	Project Participant	Contact Information
Technical Consultant	Bluesource, LLC	Josh Strauss 582 Market Street Suite 1505, San Francisco, CA 94101 949-233-1501 jstrauss@bluesource.com
Project Proponent & Forest Owner	National Audubon Society	Justin Stokes 336 Sanctuary Road, Harleyville, SC 29448

Entities listed in the table above are collectively referred to as project participants (PP) throughout this document.

2.2 Description of Project

The Bluesource – Francis Beidler Improved Forest Management Project (CAR683) is located on 5,548 acres of land owned by the National Audubon Society, Inc. (Audubon) in the tidewater region of South Carolina. The Project Area is dominated by naturally occurring native hardwood species (including red maple, sweet gum, water oak, tupelo gum) in uneven aged stands with a smaller component of stands of naturally generated native softwoods (loblolly, spruce, longleaf pine) and a small area of planted loblolly pine. The Project Area includes previously private and commercial forestlands. The majority of these lands were actively managed for timber production and harvested prior to the acquisition by Audubon. The region still has active timber operations occurring today, and no regulations or restrictions would have prevented the owner from continuing timber harvests as of the Start Date.

In the absence of the Project, these lands could have been managed according to one of the common practices in the region, whereby an individual or industrial timber operator buys land and harvests the most valuable wood (saw timber), some pulpwood, and leaves the stands to grow forward in a degraded state. The most common management by such an owner is to cut approximately 100% of growth. Under such management, harvest rotations would vary based upon stands’ post-harvest condition, from as short as 30-40 years in pulpwood stands or up to 60-80 years in quality saw timber stands. However, because the owner conveyed a permanent conservation easement to the Natural Resources Conservation Service (NRCS) on 7/17/2007, no active management of the Project Area will

occur and the property will be permanently conserved as forest. The Project therefore avoids the release of carbon emissions from biomass and soil stocks, and results in the ongoing sequestration of carbon in future biomass growth.

- Offset Project Commencement Date: 7/17/2007
- Reporting Period Start Date: 9/1/2020
- Reporting Period End Date: 8/31/2021
- Verification Start Date: 12/16/2021

2.3 Offset Verification Services Scope and Criteria

The scope is to conduct a full verification (with a site visit) to assess the Project's conformance with the CAR criteria outlined below, for the tenth reporting period (9/1/2020 – 8/31/2021).

The verification will follow the Forest Project Protocol, V3.1 (FPP) reporting and verification requirements in sections 9 and 10, and will assess the project with respect to the baseline scenarios presented in the Project Design Document (PDD).

Specific verification tasks include:

- Verifying that actual monitoring systems and procedures are in compliance with the FPP;
- Verifying that the implementation of the monitoring plan is in accordance with the monitoring report.
- Evaluating the GHG emission reduction/enhancement data and express a conclusion with a reasonable level of assurance about whether the reported GHG emissions reduction/enhancement data is free from offset material misstatement of asserted emission reductions/enhancements; and
- Verifying that reported GHG emissions data is sufficiently supported by evidence.
- To verify the project in accordance with the verification guidelines outlined in the Verification Program Manual and the FPP.

The criteria for the offset verification services are:

- Forest Project Protocol (FPP), Version 3.1 (October 22, 2009)
- Forest Project Protocol (FPP), Version 3.1, Errata and Clarifications, (October 29, 2014)
- Forest Project Verification Protocol, Version 3.0 (September 1, 2009)
- Reserve Offset Program Manual (March 12, 2021)
- Verification Program Manual (February 3, 2021)
- ISO 14064-3:2006

2.4 Verification Objective

The purpose of this report is to document the verification process and to assess the Project's conformance with the criteria listed above.

2.5 Materiality

The verification team must state with reasonable assurance that the percent overstatement of the total reported GHG emission reductions and removal enhancements are no more than a 5% overstatement of the "true" GHG emission reductions and removal enhancements, as calculated by the verifier using the equation below. The analysis must consider all errors, omissions or misstatements for the subset of data included in the data checks.

$$\%Error = abs\left(\frac{Stated\ reductions - Verified\ reductions}{Verified\ reductions}\right) \times 100$$

2.6 Level of Assurance

S&A Carbon provides reasonable assurance that the Project meets the above criteria.

2.7 Findings

Throughout the verification, findings were recorded by the verification team as per verification guidance outlined in the FPP and supporting documents cited above. Any errors, omissions or misstatements identified by the verification team were documented in the List of Findings. The offset verification team has also documented in the Findings List the source of any difference identified, including whether the difference results in a correctable error. The Findings List was submitted to the PP. Prior to completion of the verification, all identified non-conformances were required to be addressed, and correctable errors were required to be fixed. The PP submitted additional evidence for S&A's evaluation for conformance. The PP corrected all correctable issues. The List of Findings and the Verification Report are shared with the PP, the S&A verification team, and CAR.

Specific details regarding document delivery dates, general descriptions and associated file names are found in Appendix A of this report. Some of these documents have been revised during the course of the verification; only the final versions are listed in Appendix A.

3 Summary of Reporting Period CRTs

During the verification process, the S&A verification team gathered evidence to evaluate the project design, the project implementation, and assess the accuracy of the GHG assertion associated with the reporting period.

After review of all project information, procedures, calculations, and supporting documentation, S&A confirms that Project reporting is accurate and consistent with all aforementioned criteria and requirements in the FPP. S&A confirms all verification activities, including objectives, scope and criteria, level of assurance, and project documentation adhere to the FPP. S&A concludes without any qualifications or limiting conditions that the Project meets the requirements of the FPP.

S&A has verified the PP's GHG assertion of **11,433** tCO₂e for the Reporting Period of 9/1/2020 – 8/31/2021.

	Total CRTs (Q _{ry}) (tCO ₂ e)	Total CRTs to Buffer Pool (tCO ₂ e)	CRTs net (Q _{ry after buffer}) (tCO ₂ e)
Total for RP10	11,433	2,390	9,043

4 Verification Methodology

4.1 Verification Team

Role	Name
Lead Verifier	Lawson Henderson
Senior Internal Reviewer	Dwight Chapman
Technical Expert	Marty Duffany
Verification Support/Project Manager/Approver	Alexa Kandaris

4.2 Description of the Verification Process

S&A submitted a proposal to Bluesource for the verification of the Project on 12/3/2021. Upon contract execution, S&A was selected as the Verification Body. The Notice of Verification Activities and Conflict of Interest (NOVA-COI) form was initially filed with the CAR on 12/4/2021. The NOVA-COI form was subsequently approved on 12/10/2020. Verification activities began on 12/16/2021.

A kickoff conference call was held on 12/16/2020. The project team and verifiers discussed initial findings from a desk review of submitted documents, targeting aspects of the project and supporting information that might affect the evaluation.

Initial signed attestations and the monitoring report were provided prior to the kickoff meeting. The verifiers reviewed these documents following the kickoff meeting and assessed the eligibility criteria required to design, measure, and monitor the Project to the requirements of the FPP. Verifiers confirmed that these eligibility requirements were met. The Verification Plan was completed and sent to the PP.

A draft Sampling Plan was prepared based on information available from the PP. The Sampling Plan evaluates the credibility and rigor of the verification methodology items. A risk evaluation was conducted assessing the Annual Monitoring Requirements of the FPP. Finally, the plan outlined a sampling scheme, based on the risk assessment and document reviews, to evaluate the project's monitoring system's compliance with the FPP. The final Sampling Plan summarizes the results of the sampling and the data checks performed on the sampled data.

The Sampling Plan will be retained by S&A for a period of not less than 15 years following the submission of the Project Verification Statement. All material received, reviewed, and generated by the provision of Offset Verification Services will be retained by S&A for the same period.

The verification process included exchanges between S&A and the PP, in order to gather additional information for review and examination. These exchanges included two rounds of a List of Findings by S&A to which the PP was required to respond. The final PP responses to these issues were provided to the verifier on 1/3/2022. The List of Findings is a confidential document, available under separate cover. With responses to the issues as well as supplementary information, S&A was able to close all issues and render a positive verification opinion. Verifiers confirmed on 1/4/2022 that all remaining issues were satisfied in the responses to the final Findings List.

S&A auditors drafted the Verification Statement and Verification Report and presented it for Senior Internal Review, which determined the Verification Statement to be justified based on the project documentation and verification assessment. The final verification documents were then presented

to the PP for review and comment on 1/5/2022. Upon approval, S&A uploaded the final verification documents to the OPR website for registry review on 1/7/2022.

5 Verification Activities

5.1 Desk Review

According to the FPP, a site visit is only required once every six years. The last site visit for this project was undertaken in January 2021, for the ninth reporting period. Therefore, a desk review was conducted for this verification in accordance with the Forest Project Verification Protocol, version 3.0 to evaluate the project’s continuing conformance to these requirements.

The verification criteria for desk reviews are provided in the Forest Project Verification Protocol, version 3.0, checklist 5.3. This checklist is provided in the table below for reference.

Annual Monitoring and Verification Requirements (Checklist 5.3)

Verification Criteria		As specified in § of FPP
1. Change in Forest Owner or Landholdings	If forest owner has acquired additional forestlands outside of the project area, the newly acquired land must be incorporated in their demonstration of sustainable long-term harvesting practices within 5 years of the acquisition	§3.9.1
2. Estimates of Actual Onsite Carbon Stocks	Changes in reported carbon stocks from previous years are within expected bounds resulting from reported harvest, growth, and disturbance effects.	§6.1.3, §6.2.4, §6.3.3, Appendix A, Appendix B
3. Check for Decrease in Standing Live Carbon Pool	Determine if there has been a decrease in the project’s standing live carbon pool over any ten-year consecutive period not accounted for by allowable exceptions; review actions taken in compliance with FPP.	§3.9.3
4. Check for Reversals	Determine if a reversal has occurred and been properly compensated for per the requirements of the FPP.	§7.3
5. Actual Carbon in Harvested Wood Products	Determine if mill efficiency and decay rates are accurate for the assessment area.	§6.1.4, §6.2.5, §6.3.4, Appendix C
6. Quantifying the Project’s Secondary Effects	Check calculations for quantifying secondary effects.	§5.2, §6.1.5, §6.2.6, 6.3.5
7. Calculating Total Net GHG Reductions and Removals	Check calculations for annual total net GHG reductions and removals.	§6

8. Reversal Risk Rating	Reversal risk rating should be the same used since the previous site verification.	Appendix D
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In addition to the checklist outlined in the table above, the Verification Program Manual also details the requirements of the verification report, the assessment of project eligibility, assessment of conformance with the Protocol, and calculation review and sampling. S&A’s desk review of this Project was also conducted according to these requirements.

6 Verification Findings

Please note, non-conformances or observations identified during the verification are included in the List of Findings. All findings related to verification team’s review of evidence submitted by the PP are included within this verification report and the final List of Findings. Data checks for many items are available in the verifier’s data check log.

6.1 Project Type and Forest Owners

FPP § 2.1.2, 2.2

The verifiers are reasonably assured the land is privately owned based on reviewing the project Deeds, parcel tax list, and GIS project area and historical shape files; assessing project boundaries during the last site visit; conducting interviews with the PP and contractors about land ownership; and reviewing available online tax information. Verifiers confirmed that all parcels reviewed are within the project areas and they correlate reasonably well with the delineated GIS project boundary.

Sources used by the verifiers to assess the percentage of tree canopy included reviewing the recent and historical, publicly available aerial imagery (NAIP, 2019) and project documents (maps and previous site visit observations). Imagery used by verifiers appears comparable to a map submitted by the PP. Based on this imagery and past site visit observations, the verifiers confirm that the project property exhibits greater than 10% tree canopy.

The forest types are native to the area and are comprised of multiple ages and mixed species. Sustainable harvesting criteria are not applicable as no commercial harvesting is occurring within the Project Area in accordance with the terms of the conservation easement. Based on discussions with the PP and contractors, and site visit observations from the previous full verification, the project does not use broadcast fertilization. The PP attests that no broadcast fertilization has been or is being employed.

The PDD states the management activities that will maintain or increase carbon stocks on forested land relative to baseline levels include:

- Project takes place on land that has greater than 10% canopy cover
- Project employs natural forest management practices
- Project does not employ broadcast fertilization
- Land is not part of any previously registered Forest Project

The PP attests that all project documentation and reports that reference carbon stocks have been reviewed by a Professional Forester, in this case, William (Bobby) Sarvis (SC RPF #1738), who is a South Carolina Registered Professional Forester. Verifiers confirmed the good standing of this individual’s certification through a check of the SC Board of Registration for Foresters website.

The verifiers uncovered no evidence that the Project was previously listed or registered as a Forest Project under any other voluntary or compliance protocol by checking the following registries:

- Verified Carbon Standard (<http://www.vcsprojectdatabase.org/>)
- American Carbon Registry (<https://acr2.apx.com/myModule/rpt/myrpt.asp>)
- Climate Action Reserve (<https://thereserve2.apx.com/myModule/rpt/myrpt.asp>)
- Clean Development Mechanism (<https://cdm.unfccc.int/>)

Verifiers also checked these registries for evidence of any ARB compliance offset projects or other voluntary offset projects that occurred within this same project area. The Climate Action Reserve is the only registry that lists the current project (CAR683). No evidence of double counting was found.

FPP § 3.1, 3.1.1.2, 3.1.2.2

The Project is **not** mandated by any law, statute, or regulation, and verifiers found no evidence to the contrary. The verifiers conclude with reasonable assurance that the Project offset credits generated are additional to any laws and regulations and exceed a conservative baseline scenario.

The PP signed the Attestation of Regulatory Compliance, indicating that the Project was in compliance with all laws during the reporting period. No occurrences of violations with regulatory compliance were brought to the attention of the verifiers throughout the verification process. This was supported by interviews with the PP, and on-site observations during the previous verification site visit. The lack of harvesting given the establishment of the project area as an ecological reserve greatly reduces the chance for a regulatory infraction to occur. Further, the verifiers contacted NRCS, the easement holder, and confirmed that no violations with the easement had occurred, giving the verifiers reasonable assurance conformance with the regulatory compliance requirements for the reporting period had been met. An Improved Forest Management Project automatically satisfies the performance test.

Verifiers found no reason to question the additionality of the Project.

FPP § 3.2

The offset project commencement date was 7/17/2007, which coincides with the recordation of a forest conservation easement conveyed to the Natural Resources Conservation Service.

FPP § 3.3, 3.4

The Project Crediting Period for offset projects using the FPP is 100 years. The crediting period is coincident with the start of the initial reporting period, 7/17/2007, and ends no later than 7/16/2107. The tenth reporting period includes 9/1/2020 to 8/31/2021. The PP will monitor the forest carbon stocks for a period of 100 years following the last year of the issuance of any offset credits. These assertions are made in the listing and PDD documents.

FPP § 3.5

S&A will review the updated Project Implementation Agreement amendment upon execution and will confirm its completeness and if it has been signed by all required parties.

FPP § 3.6

No Qualified Conservation Easement is in place on this property. However, the Project Owner conveyed a permanent Wetlands Reserve Project (WRP) conservation easement to the United States

Department of Agriculture, Natural Resources Conservation Service (USDA NRCS) covering the entire Project Area, filed on 7/17/2007 in Dorchester, Berkeley, and Orangeburg Counties, South Carolina. Verifiers confirmed this by reviewing the easement itself, and associated ownership documentation.

FPP § 3.7

A copy of the Attestation of Title signed by a representative from the landowner, Justin Stokes, on 12/22/2021 was provided for the current reporting period (RP10).

FPP § 3.8

The project land is privately owned and located within the jurisdictions of Berkeley, Dorchester, and Orangeburg Counties, South Carolina. According to the PDD, no tribal interests or land ownership are documented within the project area. Centroid latitude and longitude coordinates are approximately 33.222026 N and -80.353726 W, respectively. The project lies in climate zone 8b on the USDA Plant Hardiness Zone map.

FPP § 3.9.1, 3.9.2

Native Species

The PDD states the project area is comprised of at least 95% native species. Based on the PP's supporting calculations for the percentage of standing live basal area by species, for the 2019 inventory, approximately 100% of the species in the project area are native to the region (confirmed by the team Registered Professional Forester). The verifiers calculated 100% using the individual tree data provided confirming the percentage of native species is meets the 95% or greater FPP criteria.

The PDD's calculations show that composition of the native species within the project area is mixed; no single species exceeds the species diversity index for the Atlantic Coastal Plain Swamp Hardwood & Cypress Assessment Area. The verifiers reviewed the calculations for relative species distribution and confirmed that no species exceeds 65%. The maximum concentration is in blackgum at 37.99%. The species distribution table was also reviewed by the verification team's SC RPF, Bruce White for RP9 and confirmed to be reflective of onsite observations and knowledge of the local area following the previous site visit.

Sustainable Harvesting Practices

No commercial harvesting is allowed under the terms of the conservation easement. Verifiers confirmed with the easement holder (NRCS) that there have been no violations to the easement terms during the reporting period. The lack of harvesting in the Project Area was further supported by observations onsite during the previous verification, as well as through review of recent and historical aerial imagery. Verifiers are reasonably assured that no harvesting has taken place on the Project Area since the Project start date (7/17/2007).

Age-class distribution

According to the PDD and the associated supporting calculations, the age class distribution of trees younger than 20 years represents 0% of forested acres for both the entire project area. The verifiers confirmed this by reviewing the project area over recent and historical aerial photographs, and through forest age class observations made during the site visit at the previous verification. The verification team's SC RPF for RP9 specifically noted while onsite that observed stands were much older.

Verifier review of recent and historic aerial imagery (Google Earth, 2019-1994), as well as on-site observations made during the verification site visit for RP9 did not lead the verifiers to question that the age class distribution requirements were not being met.

Structural Elements

The natural forest management criteria require structural elements, in the form of standing and lying deadwood, are retained in ecologically sufficient quantities in the Project Area. The FPP requires projects to demonstrate the higher of either: 1) at least 1% of standing live carbon stocks in standing deadwood or 2) at least one metric tonne, on average, of deadwood per acre, or progress towards that goal.

At the end of the reporting period (8/31/2021), the PP's value for the actual onsite carbon for standing dead wood within the entire forested project area was 1.38 metric tons of carbon per acre (equivalent to 1.79% of standing live carbon). The verifiers calculated similar values (1.38 mtC per acre, 1.85% of standing dead carbon compared to standing live).

Both the PP and verifiers found the standing dead wood quantities to meet the percent of standing live carbon requirement as well as the required threshold in terms of metric tons of carbon, established in the FPP §3.9.2.

The conservation easement does not allow for any harvesting in the Project Area, and Project activities restrict the active harvest or removal of standing or lying dead wood. Therefore, it is reasonable to expect that quantities of carbon in standing dead wood will be maintained. No evidence of the removal of standing dead wood was observed during the previous site visit. Requirements of FPP §3.9.1/3.9.2 are satisfied.

FPP § 3.9.3

Since the project start date (7/17/2007), the PP's project monitoring worksheet shows no decrease in standing live carbon stocks. Verifiers confirmed that these calculations are correct.

FPP § 3.9.4

The intent of this section of the FPP is to limit the regeneration harvests in even-aged management systems to stands no greater than 40 acres. Harvested stands must also meet certain criteria for age or regeneration height in adjacent stands. No commercial timber harvesting is ongoing, planned or allowed by the terms of the conservation easement covering the project area. No destruction of vegetative cover or harvest of any kind can occur without prior NRCS authorization, which can only be given if the activity enhances the natural values of the easement area. Verifiers' observations onsite during the previous site visit verification and review of historical and recent aerial imagery further corroborated the lack of harvesting in the Project Area. Verifiers find the project complies with the intent of FPP §3.9.4.

FPP § 4

The project area consists of 5,548 acres covered by the conservation easement that were forested as of the start date. The total easement acreage is 6,217 acres, but when parcels with deed restrictions are excluded, the total Project Area acreage is 5,548 acres. Of these 5,548 acres, 46 acres are non-forested, resulting in a total forested acreage of approximately 5,502 acres.

GIS shape files were provided. The verifiers confirm that the information provided above complies with the requirements of the FPP (§4 & §9.1.1.1 (10) (a-i)).

Verifiers evaluated the depictions of physical boundaries and land cover classification of the project area by overlaying the associated shapefiles with recent orthophotographs, private & federal property boundaries, and topographic features. Land cover classification and property boundary lines were also assessed during the previous site visit and verified at various points with GPS. All verifier checks against both property boundaries and land cover classification confirmed the accuracy of these data.

Non-forest areas within the project area consist of buildings (a cabin and Visitor Center), power lines, and ponds. Verifiers checked the calculations examined mapped areas associated with these exclusions and found them to be accurate. Verifiers also concur with the calculated Project Area (5,548 total acres /5,502 forested acres).

FPP § 5.2

The following Sources, Sinks and Reservoirs (SSRs) were reviewed for inclusion in the Offset Project Boundary:

Project: IFM-1, IFM-3, IFM-7, IFM-8, IFM-14, IFM-17

Baseline: IFM-1, IFM-3, IFM-7, IFM-8, IFM-17

All appropriate SSRs are included.

6.2 Inventory Methodology

FPP Appendix A.1

A check against the CAR Assessment Areas confirms that the entire project area is located in the Atlantic Coastal Plain & Flatwoods Supersection. The species evident on the property and in the inventory confirm appropriateness of the choice of the assessment area. The site class calculations for the Assessment Area were based on a soils analysis using NRCS soils data.

The PP has submitted maps included in the PDD for the project area. A description of the Assessment Areas encompassing the project is included in the PDD as well as the determination of the project area. Present and historical land cover/land use, forest vegetation type, site class, and project land use are also described in the PDD.

Finding for FPP Appendix A.3

The original 2011-2012 forest carbon inventory for the Project included the establishment of 165 permanent plots, laid on a grid across the project area. The Project's inventory contractor, American Forest Management (AFM), re-inventoried the Project Area in late 2019, adding 20 plots and adhering to the updated Project inventory methodology. The updated inventory methodology included the addition of 20 plots in order to reduce the sampling error to <5%. The Project also included the measurement of a 1/100th acre subplot (in addition to the 1/10th acre overstory plot), to measure saplings (trees <5.0" diameter). The updated methodology also included additional details on measurements of irregular trees to make the measurements more accurate and replicable, details on painting/numbering trees, establishing witness trees, and the inclusion of the walkthrough method for any new plots falling on Project boundaries (none did). Verifiers reviewed and approved the updates to the inventory methodology and the re-measurement of all plots during the previous,

full site visit verification of RP9. No updates to the inventory methodology occurred for this tenth reporting period, and no plots were remeasured.

The inventory stratification was based on breaking the Project Area out into four strata based on a 1-meter resolution infrared aerial image from 2006 (SC DNR), as well as from true color aerial imagery. These images were used to draw the stand boundaries in ArcGIS. This work was conducted by American Forest Management (AFM). The main purpose of this stratification was to isolate the main stream channel (Stand 1), which is dominated by the water-tolerant blackgum and cypress species, from the more upland sites (other stands), which have a more diverse species mix, such as red maple, sweetgum, loblolly pine, which grow better on the drier sites. Non-forested areas consisting of buildings, a powerline, and ponds are distinguished from the forested portions of the project area. The final four strata are as follows:

- Compartment 2, Stand 1
- Compartment 2, Stands 2, 3, 5
- Compartment 3, Stand 1
- Compartment 3, Stands 2, 3, 5 and 6

The strata acreage was determined from the sum of the acreages stated in the deeds and based on physical historic surveys for each parcel. In contrast, Project Area maps were developed from GIS analysis, which digitized each deed's metes and bounds into GIS polygons. Due to the difference in these approaches, the deed acreages did not match GIS shapefile acreages. Surveyed deed acreages were chosen to represent the Project acreage in carbon calculations as these acreages and documents correspond to legal ownership. As strata boundaries were determined via analysis of aerial imagery of GIS polygons, these GIS calculations (5,464 forested acres) diverged slightly from the Project Area acreage determined from deeds (5,548 total acres / 5,502 forested acres). To determine the actual strata acreages corresponding to deed and Project Area acreage, each strata was scaled proportionally so that total strata acreage equals the total Project Area based on deed acreage. Verifiers confirmed this by reviewing the actual deeds, the conservation easement, Project strata shapefiles, deed shapefiles, and recalculating the strata acreage using the scaling approach. Verifiers are reasonably assured the Project Area acreage and strata acreage are accurately represented and reported in the PDD.

Finding for FPP Appendix A.4

The sampling error was recalculated for RP10 at 4.77%. Verifiers' calculations were identical. The appropriate confidence deduction is calculated as 0% and applied correctly in the Monitoring Calculation worksheet.

Finding for FPP Appendix B, B1-B3

Section 3e of the PDD contains details about the modeling process and also the methods used to calculate live and standing dead carbon stocks. Bluesource addressed the verifiers' modeling questions related to model calibrations and updates made to the model since the project's initial verification. The processing methods are thorough, systematic, and follow the FPP guidance for projects outside of CA, WA and OR.

Inventory data were collected by AFM and then processed with proprietary software by Bluesource (carbon stock calculations/reporting). Verifiers had various discussions with members of the inventory field crew (Doug Dekoster & Jim Tatum) during the previous site visit regarding the inventory process including measurements, procedures, data management, processing and tracking

and reporting. Verifiers also asked them to provide descriptions of the sampling methodologies for specific situations at plots, along with requests to measure tree diameters and/or heights in order to assess the contractor's understanding of the inventory specifications and technical competency.

Methods for quality control are described in the inventory methodology. These methods included assigning trained and experienced personnel in data collection and processing, peer review of data by senior staff, application of standardized procedures for the collection and handing of sampling information, back-up and both electronic and physical storage of project information, and professional forester oversight.

The processing of inventory measurements into estimates of volume and carbon occurs in a custom system developed by Bluesource, primarily in Excel workbooks. Comprehensive inventory data and carbon calculations were available from the PP and were reviewed by verifiers for RP10. The PP validates, processes, and maintains inventory data. These systems were found to be sufficiently detailed, with appropriate internal controls, to meet the standards set forth by the protocol and by the profession of forestry. Details of the data management and analytical systems are provided in the Inventory Methodology and PDD. All procedures described in various process documents appear to have been followed.

The verifiers concluded the data management and processing systems are adequate to ensure the integrity, accuracy, and transparency of the GHG data. The PP backs up data on a regular basis. The PP attests to having systems and procedures in place that will ensure retention of required documents for a period of at least 15 years.

The entire inventory data set was also run through the verifiers' carbon calculation tool. The total estimate of IFM1+IFM3 for the 2019 inventory grown forward to the end of the tenth reporting period calculated by Bluesource was less than the verifier's calculation using that same inventory data by 4 tCO₂e, over a total of 1,525,740 tCO₂e (-0.003% difference.)

Based on these assessments, the verifiers conclude the procedures for inventory methodology, data processing, and data management for on-site carbon stocks are sound. Supporting documentation on the data checks performed in this section is available in the verifier's data check log and within the List of Findings.

6.3 Baseline Carbon Stocks

FPP § 6.2.1

As a thorough Baseline modeling review was required for the initial verification, the degree of baseline review is thus reduced for this RP10 verification. Nevertheless, verifiers have traced data from the Monitoring Report and associated calculation workbooks back to the results of the baseline modeling and conducted a general review of the baseline modeling process. The level of review was not further augmented as no issues of concern surfaced during the process. The baseline modeling assumptions have been previously confirmed as being in conformance with the protocol requirements during the last full verification. The analytical methods used to apply growth to current stocks are described in the PDD. The verifiers reviewed these calculations and procedures once more and found:

- The FVS model was calibrated and used appropriately;
- The application of the model results is accurate and appropriate;

- The amount of growth predicted by the model is consistent with FIA estimates for the region and is consistent with published studies; and
- The methods used to calculate biomass and carbon from tree data are consistent with the protocol and have been accurately applied.

6.4 Project Carbon Stocks

FPP §6.2.4

The original 2011-2012 forest carbon inventory has been the basis for the Project stocks from RP1 through RP8. A carbon re-inventory was completed in late 2019. The PP used this data set and the verified biomass equations to calculate the RP9 onsite carbon stocks. RP10 end of reporting period stocks were created by growing ahead the 2019 inventory tree list to the end of the current reporting period (8/31/2021). FVS was used to develop annualize change/growth rates for live trees (standing dead was held constant).

Verifier data checks confirm: (1) the appropriate use of the CRM equations; (2) the appropriate tree and plot level data was utilized; and (3) that the stock estimates, in total, are very similar to verifier calculations for the adjusted tree lists. The Monitoring Report is consistent with the estimates shown in the various calculation sources.

FPP § 6.2.5

As mentioned above, no harvesting was conducted during the reporting period as Project Area harvesting is prohibited by the conservation easement.

FPP § 6.2.6

Secondary effects (leakage) are quantified for the Baseline and Project in the PP's calculation workbook. The verifier checked and confirmed the accuracy of these equations. Equation 6.1 of the FPP was used correctly to quantify the secondary effects of the project. Twenty percent of the difference between the actual onsite carbon harvested and the baseline carbon harvested is noted in the PP's calculation workbook. The verifier checked the calculation of the built-in equations in the Monitoring Calculation worksheet and confirm that it is correct.

6.5 Calculation of GHG Reductions and Removals

FPP § 6

The PP has provided the Monitoring Calculation worksheet as the implementation of FPP equation 6.1. This document accounts for project and baseline stocks, project and baseline harvested wood products, HWP storage, secondary effects, buffer pools and any reversals. All data entered by the user into this workbook is consistent with supporting documents. Calculations embedded in the worksheet were recalculated and checked by the verifier. These checks are available in the verifiers' data check log.

6.6 Reversal Risk Rating

Finding for FPP Appendix D

The table below presents the verifiers' findings pertaining to the Project's Reversal Risk Rating, following the guidance in the FPP Appendix D. The verifiers concur with the assessment offered in the PDD and found that it complies with the protocol guidance for each risk type. It is noted that the overall risk rating of 20.9% has not changed since the initial verification of the project. The table summarizes the evidence used to support each risk level.

Risk Type	Conform	Finding	PDD	Verif. Check
Financial	Y	Default	5%	5%
Management: Illegal removal of forest biomass	Y	Default	0%	0%
Management: Conversion of project area to alternate land use	Y	Default	2%	2%
Management: Over-harvesting	Y	Default	2%	2%
Social	Y	Default	2%	2%
Natural disturbance: Wildfire	Y	Default	4%	4%
Natural disturbance: Disease or insect outbreak	Y	Default	3%	3%
Natural disturbance: Other episodic catastrophic even	Y	Default	3%	3%
PIA	Y	Default	2%	2%
Cumulative Risk	Y		20.9%	20.9%

7 Summary Table of Data Checks

A summary of selected data checks for project are provided below. The assigned ranking reflects both the size and uncertainty associated with these SSRs. These and other data checks performed (along with narrative details of the check and results) are included in the verifiers data check log.

SSR (rank)	Data reviewed & Checks performed	Reported (PP) tCO ₂ e	Calculated (VB) tCO ₂ e	Discrepancy tCO ₂ e	Impact on misstatement/ conformance
Rank 1 IFM-1, IFM-3 Project Stocks (eORP)	PDD and supporting modeling documents, Model appropriateness and use.	1,525,740	1,525,744	4	Impact on Materiality
	Model calibration. Model performance against independent benchmarks. Recalculation of carbon stocks using inventory trees and FPP methods. Grow back/forward methods.				
Comments: Discrepancy due to slight difference in strata means. Not correctable.					
Rank 2	PDD and supporting modeling documents, Model appropriateness and use.	1,505,579	1,505,579	0	No Impact on Materiality

IFM-1, IFM-3 Project Stocks (boRP)	Model calibration. Model performance against independent benchmarks. Recalculation of carbon stocks using inventory trees and FPP methods. Grow back/forward methods.				
Comments:					
Rank 3 IFM-1, IFM-3 Baseline Stocks (eoRP)	PDD and supporting documents, calculation worksheets. Checks of calculations that implement FPP 6.2.1.	520,703	520,703	0	No Impact on Materiality
Comments:					
Rank 4 Quantified GHG removal enhancements	PDD, supporting workbooks Checks on all PDD entries. Checks worksheet calculations.	11,433	11,433	0	No Impact on Materiality
Comments:					
Rank 5 Confidence Deduction	PDD, calculation workbooks, supporting documents. Recalculated using FPP methods on inventory.	0%	0%	0	No Impact on Materiality
Comments:					
Rank 6 IFM-7, IFM-8 Baseline – Long term storage of HWP, eoRP	Various worksheets, Mill survey, model cutlist Checks of cutlist to carbon calculations, conversions, specific gravity and all embedded calculations	5,355	5,355	0	No Impact on Materiality
Comments: Includes landfill as Project HWP < Baseline HWP					
Rank 7 IFM-7, IFM-8 Project – Long term storage of HWP, eoRP	Various worksheets, Mill survey, model cutlist Checks of cutlist to carbon calculations, conversions, specific gravity and all embedded calculations	0	0	0	No Impact on Materiality
Comments:					
Rank 8 Buffer Pool and Risk Rating	PDD, calculation workbooks, supporting documents. Checks on calculations, verify all assumptions	20.9% 2,390	20.9% 2,390	0	No Impact on Materiality
Comments:					
Rank 9 Secondary Effects	Model results, HWP worksheets Checks on calculations.	(4,443)	(4,443)	0	No Impact on Materiality
Comments:					

8 Quantitative Materiality Threshold

The verification team must state with reasonable assurance that the percent overstatement of the PP’s total reported GHG emission reductions and removal enhancements is no more than a 5% overstatement of the “true” GHG emission reductions and removal enhancements, as calculated by the verifier using the equation below. The analysis must consider all errors, omissions, or misstatements, for the subset of data included in the data checks. Any errors, omissions, or misstatements are identified separately in the table above.

$$\%Error = abs\left(\frac{Stated\ reductions - Verified\ reductions}{Verified\ reductions}\right) \times 100$$

Total errors, omissions, misstatements*	Total RP emission reductions (before buffer pool) $QR_{end\ RP}$	Calculated Materiality %
-4 tCO ₂ e	11,433 tCO ₂ e	-0.035%

*Note: In this column, a positive value represents *over-reporting* by the PP.

The Project is 0.035%, under-reporting. Therefore, the project is less than the Quantitative Materiality Threshold of 5%.

APPENDIX A: REFERENCE LIST

Project Documents

Document Description		Filename
PDD		CAR_683_Blue Source_Beidler_IFM_PDD_Revised_010915.pdf
Monitoring Report		DRAFT_Beidler-2021-Forest-Monitoring-Report_12_22_21_Signed.pdf
Attestations	Regulatory Compliance	Attestation-Regulatory-Compliance-12-16-19_Signed.pdf
	Title	Attestation-Title-12-16-19__1_Signed.pdf
	Voluntary Implementation	Attestation-Voluntary-Implementation-12-16-2019_Signed.pdf
PIA Amendment		<i>To be provided upon ROC issuance</i>
Calculation Workbooks		Beidler_2021_Calc_Workbook_12_22_21.xlsx Beidler_EndRP_2021_CO2_Calcs_12_22_21.xlsx
Inventory	Methodologies	Beidler_CarbonPlot_Methodology_3_15_21.pdf Beidler_CarbonPlots_JobControl_12-18-2019.pdf Beidler Site Index Sampling Methodology_8_28_12.pdf
	RPF Oversight	Blue Source Joshua Strauss Carbon Beidler Letter 2021.pdf
Modeling		Beidler_IndTreeGrowth_Data.accdb Beidler_IndTreeGrowthSN.bat FVS_Treelnit_IndTreeGrowth_8_12_20.xlsx FVSOut.xlsx suppose.loc
Spatial	Plots	Beidler_Plots_12_18_20.shp
	Stratification	BeidlerStands.shp
	Deeded Boundary	Beidler_Deed_Boundaries.shp
	Non-Forest Areas	Beidler_Non_Forest_3_4_21.shp
Easement		SC Beidler Closing Binder 6,127 acre USA conservation easement (01791834).pdf

Verifier Documents

Document Description	Filename
NOVA-COI Form	CAR683_NOVA-COI.docx

Data Check Log	CAR683-RP10_Data Check Log.xlsx
List of Findings	CAR683_List Of Findings_v2.2_Closed.docx
Sampling Plan	CAR683-RP10_SamplingPlan.docx
Verification Plan	CAR683-RP10_VerificationPlan.docx

Interviews

The following is a list of the people interviewed as part of the verification. The interviewees included those people directly, and in some cases indirectly, involved and/or affected by the project activities. The training and qualifications of the PP technical consulting team was confirmed by referencing bios for the team on the Bluesource website. The verification team also confirmed these qualifications during interviews with the team on the site visit and during the modeling review session.

Date	Name	Title
Throughout verification	Ben Parkhurst	Director of Technical Services, Bluesource
Throughout verification	Ian Hash	Manager, Bluesource
Throughout verification	Tim Hipp	Forest Carbon Analyst, Bluesource
12/21/2021	Jeff Lucas	District Conservationist, NRCS

OPR Conferences and Communication

Date	Name	Description
None		

APPENDIX B: PROJECT TEAM

Verification Team	Qualifications
Lawson Henderson	Lawson Henderson brings over a decade of experience in forest certification through his prior employment with Rainforest Alliance, where he acted as a project manager and lead auditor of forest carbon offset projects against the major voluntary GHG programs, and FSC Forest Management & Chain of Custody Certifications. Lawson is qualified as a Lead Verifier under the Climate Action Reserve (CAR), and is also qualified as a AFOLU IFM Expert under the Verified Carbon Standard (VCS) program. He has led the validation and verification of IFM, AR & REDD forest carbon offset projects against the major voluntary GHG programs globally. Lawson holds a B.S.F in forest management from the University of New Hampshire (2005).
Alexa Kandarís	Alexa Kandarís has 5 years' experience in carbon auditing and climate change mitigation policy and is accredited by ARB as a lead verifier under their US Forests protocol and the Ozone Depleting Substances protocol, and by the Climate Action Reserve (CAR) as a lead verifier. In this time, she has participated in over 150 verifications of carbon offset projects and corporate inventories under a variety of GHG programs, including the Air Resources Board, Climate Action Reserve, American Carbon Registry, Verified Carbon Standard/Climate Community & Biodiversity Standard, and Carbon Disclosure Project. Alexa developed tracking systems for a program registered under the Clean Development Mechanism and registered with the Gold Standard. Alexa is currently responsible for implementation of S&A's corporate management system to ensure ongoing

Verification Team	Qualifications
	improvement and compliance with ISO requirements. In addition to this, she has field experience with Forestry, Ozone Depleting Substances, and Livestock verification projects. She holds a Bachelor of Arts in Economics with a focus on natural resource and environmental Economics.
Dwight Chapman	Mr. Chapman is a Forester and Project Manager with experience running a private consulting company conducting forest inventory and natural resource surveys for government agencies and the private sector. As a sole proprietor, he has extensive experience taking ownership of and building project strategies from the ground up for projects outside of his formal educational training. With over 25 years of consulting experience, he brings strong leadership and management skills to the carbon verification industry. While running the forestry consulting business, he was responsible for client management, facilitating meetings between the public and private sector, and hiring and managing forestry field staff. He has completed thousands of field-based forest inventory plots in all western states from the Rocky Mountains to the coast of California. He has also managed and performed private industrial forest volume cruises throughout the pacific northwest. Additionally, he brings 10 years of professional and technical writing experience including proposal preparation, progress and final reports, and GIS analysis including spatial analysis.
Marty Duffany	Martin Duffany holds a BS in Forestry from SUNY College of Environmental Science and Forestry. He brings over 35 years of experience in forest management working for forest industry and Timberland Investment Organizations (TIMOs) primarily in the northeastern and Appalachian regions of the US and eastern Canada. This experience focuses mainly on managing all aspects of forest inventory and mapping projects but includes extensive work in forest management planning, modeling and analysis. He has years of experience working in compliance with FSC and SFI certification standards and protocols. Martin joined S&A Carbon in February 2019 as a contractor providing support on desk and field verification projects. He is an SAF Certified Forester and holds forester licenses in Maine, New Hampshire and Vermont.

APPENDIX C: VERSION TRACKING

Version	Date	Developed By	Description of Changes
1.0	1/4/2022	Alexa Kandarlis	Initial Document
1.1	1/5/2022	Lawson Henderson	Reviewed prior to Senior Internal Review
1.2	1/5/2022	Dwight Chapman	Senior Internal Review
1.3	1/7/2022	Alexa Kandarlis	Bluesource Approval
2.0	1/27/2022	Lawson Henderson	Updated report to address CAR review comments
2.1	2/2/2022	Alexa Kandarlis	Finalized for CAR Approval