

VERIFICATION REPORT

American Carbon Registry

ACR386: Bluesource – Hudson Farm Improved Forest Management Project

**Reporting Period:
30 June 2020 to 29 June 2021**

Prepared for:

Bluesource

2 February 2022



AMERICAN CARBON REGISTRY

Prepared by:

Doug Baldwin | Lead Auditor
Greenhouse Gas Verification Program
+1.510.452.8000
dbaldwin@scsglobalservices.com

SCSglobal
SERVICES
Setting the standard for sustainability™

2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA
+1.510.452.8000 main | +1.510.452.8001 fax
www.SCSglobalServices.com

Project Title	Bluesource – Hudson Farm Improved Forest Management Project
Client	Bluesource
Prepared By	SCS Global Services
Date of Issue	2 February 2022
Contact	2000 Powell Street, Suite 600, Emeryville, CA 94608, USA http://www.scsglobalservices.com Email: CPollet-Young@scsglobalservices.com Telephone: +1 (510) 452-8000
Audit Team	Lead Auditor: Doug Baldwin Auditor: James Cwiklik Auditor: Michael Hoe Internal Reviewer: Alexa Dugan

Executive Summary

This report describes the verification services provided for the Hudson Farm Improved Forest Management project (“the project”), an Improved Forest Management project located in Sussex county in northwestern New Jersey, USA that was conducted by SCS Global Services. The overall goal of the verification engagement was to review impartially and objectively the claimed GHG emission reductions/removal enhancements for the reporting period from 30 June 2020 to 29 June 2021 against relevant ACR standards and the approved methodology. The verification engagement was carried out through a combination of document review and interviews with relevant personnel. As part of the verification engagement 2 findings were raised: 1 Non-Conformity Report, 0 New Information Requests and 1 Observation. These findings are described in Appendix A of this report. The project complies with the verification criteria, and SCS holds no restrictions or uncertainties with respect to the compliance of the project with the verification criteria.

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Introduction

About SCS Global Services

- 1 SCS Global Services (SCS) is a global leader in third-party certification, auditing, testing services, and standards. Established as an independent third-party certification firm in 1984, our goal is to recognize the highest levels of performance in environmental protection and social responsibility in the private and public sectors, and to stimulate continuous improvement in sustainable development. In 2012, Scientific Certification Systems, Inc. began doing business as SCS Global Services, communicating its global position with offices and representatives in over 20 countries.
- 1.1

SCS' Greenhouse Gas (GHG) Verification Program has been verifying carbon offsets since 2008 and to date has verified over 250 million tonnes of CO₂e, providing GHG verification services to a wide array of industries including manufacturing, transportation, municipalities, and non-profit organizations. The GHG Verification Program draws upon SCS's established expertise to serve the global carbon market.

Objectives

- 1.2 The overall goal of third-party verification was to review impartially and objectively the claimed GHG emission reductions/removal enhancements against relevant ACR standards and the approved methodology. SCS independently evaluated the GHG assertion, based on supporting evidence and GHG verification best practice. The objectives of verification were to evaluate
- Reported GHG baseline, project emissions and emission reductions/removal enhancements, leakage assessment, and impermanence risk assessment and mitigation (if applicable).
 - Any significant changes to the project procedures or criteria since the last verification.
 - Any significant changes in the GHG project's baseline emissions and emission reductions/removal enhancements since the last verification.

SCS reviewed the GHG project plan, GHG assertion, and any additional relevant documentation provided by the client to determine

- That the reported emissions reductions and/or removal enhancements are real.
- Degree of confidence in and completeness of the GHG assertion.
- That project implementation was consistent with the GHG project plan.
- Eligibility for registration on ACR.
- Sources and magnitude of potential errors, omissions, and misrepresentations, including the
 - Inherent risk of material misstatement.
 - Risk that the existing controls of the GHG project would not have prevented or detected a material misstatement.

Scope

Verification included examination of some or all of the following elements of the GHG project plan:

- 1.3
- Physical infrastructure, activities, technologies, and processes of the GHG project
 - GHG SSRs within the project boundary
 - Temporal boundary
 - Baseline scenarios
 - Methods and calculations used to generate estimates of emissions and emission reductions/removal enhancements
 - Original underlying data and documentation as relevant and required to evaluate the GHG assertion
 - Process information, source identification/counts, and operational details
 - Data management systems
 - Roles and responsibilities of project participants or client staff
 - QA/QC procedures and results
 - Processes for and results from uncertainty assessments
 - Project-specific conformance to ACR eligibility criteria

- 1.4
- SCS examined the reported data, quantification methodologies, calculation spread-sheets or databases, source data, project data management systems, data quality controls in place, measurement and monitoring systems, and records pertaining to emissions quantification. Calculation and error checks, interviews with project participants, an iterative risk assessment, sampling plan, and audit checklist were performed to the extent necessary for SCS to develop an understanding of how data are collected, handled, and stored for a specific project.

Verification Criteria

The verification criteria were comprised of the following:

- 1.5
- ACR Standard, Version 5.1
 - Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal U.S. Forestlands, Version 1.3 (“the methodology”)

Level of Assurance

The level of assurance was reasonable.

Treatment of Materiality

For verification purposes, it was required that discrepancies between the emission reductions/removal enhancements claimed by the project proponent and estimated by SCS be immaterial, i.e. be less than ACR's materiality threshold of $\pm 5\%$, as calculated according to the equation in the ACR Standard.

1.6

Summary Description of the Project

The project is located in northwestern New Jersey, USA with sustainable long-term goals for forest health and preservation. By committing to maintain forest CO₂ stocks above the regional common practice, the project will provide significant climate benefits through carbon sequestration. The project proponent, Hudson Farm Club, Inc., intends to ensure long-term conservation and sustainable management of the forest, promote healthy wildlife habitat, provide recreation opportunities, and prevent future compromise of the forest carbon stocks.

1.7

Assessment Process

2

Method and Criteria

2.1

The verification services were provided through a combination of document review and interviews with relevant personnel, as discussed in Sections 2.2 through 2.4 of this report. At all times, an assessment was made for conformance to the criteria described in Section 1.2 of this report. As discussed in Section 2.5 of this report, findings were issued to ensure conformance to all requirements.

The audit team created a sampling plan following a proprietary sampling plan template developed by SCS. The audit team identified areas of "residual risk"—those areas where there existed risk of a material misstatement (see Section 1.6 above) that was not prevented or detected by the controls of the project. Sampling and data testing activities were planned to address areas of residual risk. The audit team then created a verification plan that took the sampling plan into account.

2.2

Document Review

The monitoring report ('HudsonFarm_MR_RP4_12_9_21.docx' dated December 9, 2021; "MR") were carefully reviewed for conformance to the verification criteria. The following provides a list of additional documentation, provided by project personnel in support of the aforementioned documents, that was reviewed by the audit team.

Documentation Reviewed During the Course of Verification Activities		
Document	File Name	Ref.
Calculations workbook	HudsonFarm_RP4_ERT_HW_12_9_21.xlsx	1
Calculations workbook	HudsonFarm_RP4_CO2_07_16_21.xlsx	2
Monitoring Report	HudsonFarm_MR_RP4_12_9_21.docx	3

Greenhouse Gas (GHG) Plan	HudsonFarm_GHG_Plan_2_8_19_v6.pdf	4
Project Area Boundary	HudsonFarm_Boundary_7_20_18.shp	5

Interviews

2.3.1 Interviews of Project Personnel

- 2.3 The process used in interviewing project personnel was a process wherein the audit team elicited information from project personnel regarding (1) the work products provided to the audit team in support of the MR; (2) actions undertaken to ensure conformance with various requirements and (3) implementation status of the project activities. The following provides a list of personnel associated with the project proponent who were interviewed.

Interview Log: Individuals Associated with Project Proponent			
Individual	Affiliation	Role	Date(s) Interviewed
Megan Finlay	Bluesource	Forest Carbon Analyst	Throughout audit
Liz Lott	Bluesource	Director	Throughout audit

2.3.2 Interviews of Other Individuals

The process used in interviewing individuals other than project personnel was a process wherein the audit team made inquiries to confirm the validity of the information provided to the audit team. The following personnel are not associated with the project proponent. The following provides a list of individuals not associated with the project proponent who were interviewed.

Interview Log: Individuals Not Associated with Project Proponent			
Individual	Affiliation	Role	Date(s) Interviewed
2.4 Mike Hart	New Jersey Dept of Environmental Protection	Regional Forester	11/30/2021

2.5 Site Inspections

No on-site inspections were conducted as part of the verification services.

Resolution of Findings

Any potential or actual discrepancies identified during the audit process were resolved through the issuance of findings. The types of findings typically issued by SCS during this type of verification engagement are characterized as follows:

- Non-Conformity Report (NCR): An NCR signified a discrepancy with respect to a specific requirement. This type of finding could only be closed upon receipt by SCS of evidence

indicating that the identified discrepancy had been corrected. Resolution of all open NCRs was a prerequisite for issuance of a verification statement.

- **New Information Request (NIR):** An NIR signified a need for supplementary information in order to determine whether a material discrepancy existed with respect to a specific requirement. Receipt of an NIR did not necessarily indicate that the project was not in compliance with a specific requirement. However, resolution of all open NIRs was a prerequisite for issuance of a verification statement.
- **Observation (OBS):** An OBS indicates an area where immaterial discrepancies exist between the observations, data testing results or professional judgment of the audit team and the information reported or utilized (or the methods used to acquire such information) within the GHG assertion. A root cause analysis and corrective action plan are not required, but highly recommended. Observations are considered by the audit team to be closed upon issuance, and a response to this type of finding is not necessary.

As part of the audit process, 1 NCR, 0 NIRs and 1 OBS were issued. All findings issued by the audit team during the audit process have been closed. All findings issued during the audit process, and the impetus for the closure of each such finding, are described in Appendix A of this report.

2.6 **Techniques and Processes Used to Test the GHG Information and GHG Assertion**

- Review of project documentation including the MR (Ref 3) and calculation workbooks (Refs. 1-2) to check for project-specific conformance to ACR standard and methodology, appropriateness of methodologies and tools applied, accuracy of GHG information and assertion.
- Assessment of any disturbances or forest management activities that took place in the project area during the reporting period.
- Review of the application of project scenario during the reporting period.
- Review of the sources, sinks and reservoirs of GHG emissions within the project boundary (Refs. 1-2).
- Assessment of the emission reduction calculation inputs and procedures was performed to review the quantitative analyses undertaken by Bluesource to convert the raw inventory data into emission reduction estimates during the reporting period. This included a re-calculation of project emissions, ERTs, and uncertainty using inventory data as described below in section 3.1 and 3.2 (Refs. 1-2).
- Communicate with project personnel and project proponent via interviews, emails, and meetings to gain a better understanding of the project team's methodologies.
- Examine the data management and quality control processes and its controls for sources of potential errors and omissions.
- Review of project documentation including risk assessment and regulatory compliance.

Verification Findings

Results of Quantitative Uncertainty Assessment

- 3.1 SCS devoted a portion of the verification assessment to the review of the manner and propriety by which the project personnel quantified uncertainty associated with the individual GHGs in the project, in addition to the uncertainty of the calculation of GHG emission reductions and removals. The project uncertainty of 5.84% (Ref. 1) was verified via independent re-quantification (see table below).

The audit team also calculated the total materiality of the GHG reduction and removal assertion.

3.1.1 Project Uncertainty

The reported total Project Uncertainty (UNC_t) value of 5.84% was independently re-quantified by SCS using equation 19 in the methodology. No issues were found (see table below). The audit team found the difference reasonable and immaterial.

	SCS Values	Client Values	Difference
Reporting Period	UNC_t	UNC_t	
4	5.84%	5.84%	0.00%

Materiality

$$\% \text{ Error} = \frac{(\text{Project Emission Reduction Assertion} - \text{Verifier Emission Reduction Recalculation})}{\text{Verifier Emission Reduction Recalculation}} * 100$$

$$3.2 \quad \% \text{ Error} = \frac{(43,043 - 43,044)}{43,044} * 100 = \frac{-1}{43,044} * 100 = -0.001\%$$

Analysis of the Quantification Methodologies and Applicable Data Sets and Sources

The audit team re-quantified project emissions, emissions reductions, and project uncertainty from the raw inventory data provided by the client. This process entailed verifying that the methods detailed in the MR were applied as indicated. The team confirmed the emissions reduction by conducting the following analysis:

- Calculate the end of reporting period diameter of individual trees from the raw inventory by adding 3.45 seasons of growth to all trees in tree list (Ref. 2).
- Recalculate the live aboveground, live belowground, and standing dead carbon pools using Jenkins equations and decay class information (Ref. 2).

- Calculate the change in project carbon stock stored in above and below ground live trees using equation 11 in the methodology (Ref. 1).
- Calculate the change in project carbon stock stored in above ground dead trees using equation 12 in the methodology.
- Calculate any greenhouse gas emission resulting from the implementation of the project in the reporting period using equation 13 in the methodology (Ref. 1).
- Calculate the change in the project carbon stock and GHG emissions during the reporting period using equation 14 in the methodology.
- Calculate the percentage uncertainty in the combined carbon stocks in the project during the reporting period using equation 18 in the methodology.
- Calculate the total project uncertainty (percentage) during the reporting period using equation 19 in the methodology.
- Calculate the net greenhouse gas emission reductions (in metric tons CO₂e) during the reporting period and during each annual vintage using equation 20 in the methodology.

Emission Reductions

The audit team verified that the project personnel used the appropriate emissions factors and GWP's to calculate total emission reductions, which is adherent to the ACR Methodology. The team recalculated the final emission reductions and confirmed that they are without material discrepancy.

The ERT's associated with the fourth reporting period are reported in the ERT workbook and are verified by the verification team are as follows:

- 52,492 tCO₂e (Emissions reductions at the end of the current reporting period without risk buffer deductions)
- 43,043 tCO₂e (Emissions reductions at the end of the current reporting period including risk buffer deductions)
- 9,449 tCO₂e Risk buffer contribution
- 34,994 tCO₂e Leakage deduction

Variances or Deviations

For this reporting period, there were no variances and no deviations.

3.3 Uncertainty

See section 3.1.1 above.

Basis of Data and Information Supporting the GHG Assertion

The following table indicates whether the data and information supporting the GHG assertion were based on assumptions and industry defaults, future projections, and/or actual historical records.

Assumptions and Industry Defaults	<input checked="" type="checkbox"/>
Future Projections	<input checked="" type="checkbox"/>
Actual Historical Records	<input checked="" type="checkbox"/>

Leakage Assessment

Section E3 of the GHG Plan (Ref. 4) states: “All actively harvesting forestlands in the project area have been certified by Tree Farm. To prevent activity-shifting leakage, [Hudson Farm Club, Inc.] will not conduct harvests on other lands under its ownership that would offset the harvest reductions attributable to the project. Therefore, leakage is limited to market leakage. We conservatively assume market leakage of 40%.”

SCS confirmed that the applicable market leakage factor of 0.4 was applied.

Risk Assessment

3.5 The reported value of the total risk score, as determined based on the risk analysis documented in the PP and MR, was 18%. The audit team performed a complete review of the risk assessment against the requirements of the ACR Tool for Risk Analysis and Buffer Determination. The audit team concludes that the assignment of risk scores is appropriate and in conformance to the ACR Tool for Risk Analysis and Buffer Determination. A more detailed review of the audit team’s conclusions may be found below.

Actions Undertaken to Evaluate Whether the Risk Assessment Has Been Conducted Correctly		
Risk Category	Value Selected	Verification Activities
A	4%	Confirmation, through independent review of documentation, that project is not located on public or tribal lands
B	4%	Confirmation, through independent review of documentation, that project is not located on public or tribal lands
C	2%	Confirmation, through independent review of documentation, that the project is not located outside the United States
D	0%	Confirmation, through independent review of documentation, that the full project area is not covered under a conservation easement
E	2%	Confirmation, through independent review of documentation, that project is located in low fire risk region.
F	4%	Confirmation, through independent review of documentation, that epidemic disease or infestation is not present within the project areas, or within a 30 mile radius of the project area.
G	0%	Confirmation, through independent review of documentation, that project is not a wetland project or a forest project where more than 60% of the project area is not a forested wetland
H	2%	Confirmation that default value has been applied in the risk assessment calculation

Conclusion

The audit team asserts, with no qualifications or limitations, that the quantification of GHG emission reductions and/or removal enhancements, as reported in the MR, conforms to the verification criteria and is without material discrepancy.

4

On the basis of the information made available to SCS and the analyses completed during the verification, SCS was able to reach a positive opinion, with a reasonable level of assurance, that the emission reductions represented by the Project Proponent during the monitoring period of 30 June 2020 to 29 June 2021 are free from material misstatement and in conformance with the assessment criteria.



The following provides a summary of the ERT issuance for the current Reporting Period with the Leakage deduction included and the Buffer deduction excluded:

Annual Emission Reduction in Metric Tons (tCO _{2e})				
Reporting Period	Vintage	Start Date	End Date	Gross GHG Emission Reductions (tCO _{2e})
4	2020	30 June 2020	31 December 2020	26,606
4	2021	1 January 2021	29 June 2021	25,886
Total				52,492

The following provides a summary of the ERT issuance for the current Reporting Period with the Leakage and the Buffer deduction included (Buffer credits shown separately):

Annual Emission Reduction in Metric Tons (tCO _{2e})					
Reporting Period	Vintage	Start Date	End Date	Net GHG Emission Reductions (tCO _{2e})	Quantity of Buffer Credits (tCO _{2e})
4	2020	30 June 2020	31 December 2020	21,816	4,790
4	2021	1 January 2021	29 June 2021	21,227	4,659
Total				43,043	9,449

Note: final numbers are rounded for simplicity.

<p>Lead Auditor Approval</p>	 <p>Doug Baldwin, 9 December 2021</p>
<p>Internal Reviewer Approval</p>	 <p>Alexa Dugan, 9 December 2021</p>

Appendix A: List of Findings

Please see Section 2.5 above for a description of the findings issuance process and the categories of findings issued. It should be noted that all language under “Project Personnel Response” is a verbatim transcription of responses provided to the findings by project personnel.

NCR 1 Dated 1 Dec 2021

Standard Reference: ACR IFM Methodology v1.3

Document Reference: HudsonFarm_MR_RP4_07_17_21_Signed.pdf,
HudsonFarm_RP4_ERT_HW_07_16_21.xlsx

Finding: For Equation 14 in Section D5, the methodology states for the harvested wood product term (C_p, HWP, t): "Carbon remaining stored in wood products 100 years after harvest (in metric tons CO₂) for the project in year t."

For the HWP calculation in the current reporting period, an HWP value from another reporting period (different 't') is being counted as part of the current reporting period's project carbon stock, which is not in conformance with the methodology.

Project Personnel Response: Our calculations have been updated and placed in the shared verification folder. An updated Monitoring Report has also placed in the verification folder.

Auditor Response: The calculation has been updated. This finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

OBS 2 Dated 6 Dec 2021

Standard Reference: ACR Monitoring Report Template v3.0

Document Reference: HudsonFarm_MR_RP4_12_1_21.docx

Finding: The latest version of the monitoring report has not been signed. The client must submit a final version of the report that is signed before the verification can be completed.

Project Personnel Response:

Auditor Response:

Bearing on Material Misstatement or Conformance (M/C/NA):