



Forest Project Verification Report: Verification under the Climate Action Reserve (CAR)

Reporter/Member: Mattamuskeet Ventures I, LLC
Project: Blue Source - Alligator River Avoided Conversion
Emissions Year Verified: 2014

SCS Global Services
Lead Verifier: Francis Eaton
Technical Reviewer: Zane Haxtema
Site Visit Date: N/A
Report Date: 6 April 2015 (Revised 6 May 2015)

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1 Summary

This report presents the findings of the verification assessment of the Blue Source- Alligator River Avoided Conversion project (“the Project”) developed by Blue Source on behalf of Mattamuskeet Ventures I, LLC, the forest land owner. This assessment covers the Project’s greenhouse gas emission reductions reported to the Climate Action Reserve (the Reserve) for Emission Year 2014 (1 January 2014 through 31 December 2014). The verification was undertaken to evaluate the Forest Project Monitoring Report and associated documents and assess whether the compiled data conforms to the Climate Action Reserve Forest Project Protocol, version 3.1 (October 2009).

The evaluation was undertaken using the verification guidance described in the Climate Action Reserve Forest Project Protocol, Version 3.1 as well as the verification methodology developed by SCS for forest carbon offset projects submitted to the Reserve.

In the course of the verification assessment, that is reported herein, the SCS verifiers were able to develop findings which included New Information Requests (NIRs) and Non-Conformity Reports (NCRs). No findings were issued during the assessment of the 2014 reporting year.

On the basis of the information provided and the analyses completed, SCS was able to reach a decision on the emissions reductions reported by the Project Proponent on the Reserve website. SCS verified the adequacy of the information provided in the Forest Project Monitoring Report and on the Reserve website, confirming that these documents meet the requirements of the Climate Action Reserve standards. Further, SCS was able to reach a positive opinion on the claimed emission reductions and removals presented in the Forest Project Monitoring Report and on the Reserve website by Blue Source. Thus, SCS has verified 25,369 metric tonnes of CO₂-equivalent reductions and removals from the Alligator River Avoided Conversion for Emission Year 2014, a buffer pool contribution of 5,303 metric tonnes, and Net CRTs to be issued in the amount of 20,066 metric tonnes CO₂ equivalent.

2 Project Description

The Blue Source- Alligator River Avoided Conversion project is located in Hyde County, North Carolina, within the boundaries of a 2,372-acre Project Area that is bordered by agricultural fields and the US Fish and Wildlife Service Alligator River National Wildlife Refuge. The Project Area is located within the Northern Atlantic Coastal Plain—Swamp Hardwood and Cypress Forest Assessment Area and the forest is a mixture of pine and bottomland hardwoods species. Of the Project Area’s 2,372 total acres, 2,308 acres are forested by multi-aged stands of native species. The other 64 acres encompass roads and canals.

The Alligator River Avoided Conversion Forest Project is owned by Mattamuskeet Ventures I, LLC; a landholding group that is interested in preserving the natural resources of the area for the purposes of carbon sequestration, recreation, hunting, and aesthetic values. The forest project was developed by Blue Source, LLC, and has been technically supported by Winrock International and Environmental Services, Inc.

The entire Project Area (2372 total acres) has been placed under a permanent warranty easement deed through the Wetlands Reserve Program (WRP) of the USDA Natural Resources Conservation Service

(NRCS).¹ The WRP easement precludes general development and active management, including such activities as wood product extraction, agriculture, and grazing. With the easement, the Forest Owner has avoided the conversion of the project area to agriculture. In lieu of this economic activity, the Forest Owner has chosen to develop an Avoided Conversion project that conforms to the FPP. The Forest Owner has agreed to promote and restore wetlands on their property as well as accepted the terms of limited land use rights on their property. Nonetheless, they have retained the carbon rights from the creation of the Alligator River Avoided Conversion Forest Project. In accordance with the WRP, the NRCS does not “assert any interest” in the carbon credits generated from the avoidance of GHG emissions that would have occurred once the land was converted from forestland to agriculture.² The carbon credits remain the property of the WRP participant, Mattamuskeet Ventures I, LLC.

Forty years ago, much of the forest in the general vicinity, including the Project Area, was slated to be converted to agriculture. In preparation for the conversion, the land was ditched and drained but allowed to naturally regenerate when the land was not cleared. In 2008, the Forest Owner began to clear 2,740 acres of their property, including the Project Area, to finally convert this land to agriculture. After 180 acres were cleared, the Forest Owner became aware that carbon revenues could potentially provide sufficient resources to maintain the entire property as forestland and suspended planned clearing and conversion activities. Thus, the Project Area delineated by the Alligator River Avoided Conversion Forest Project does not include the 180 cleared acres but only the lands that remain forested and this land was placed under the permanent warranty easement deed with the WRP.

The sequestration associated with the naturally regenerating forest, combined with precluded commercial harvest, will provide reportable GHG reductions and removals net of the baseline scenario.

3 Verification

3.1 Verification Objectives

The purposes of this verification assessment were to:

- Evaluate conformance with the verification criteria as defined in the Climate Action Reserve protocols;
- Evaluate the project information and documentation, including forest inventory monitoring, forest growth projections, quality assurance and control, and risk management monitoring; and
- Evaluate reported net GHG emission reductions and removals.

3.2 Verification Criteria

The assessment was performed against the following criteria of the Climate Action Reserve:

- Forest Project Protocol Version 3.1 (October 2009)
- Forest Project Verification Protocol Version 3.0 (September 2009)
- Program Manual (October 2011)
- Verification Program Manual (December 2010)

¹ Filed in Hyde County, NC on May 14, 2010, Register of Deeds, Book 241, Page 719.

² Federal Register Volume 74, No. 10, Section 1467.20(b)

- Announcement Regarding Optional Carbon Pools (March 2011)
- Errata and Clarifications for Forest Project Protocol Version 3.1 (October 2014)
- Guidance and policy updates posted on the Reserve website
- Methodology to Verify Soil Carbon Estimates on Avoided Conversion Projects (April 2011)
- Updated Avoided Conversion Guidance with Soils (October 2011)

Please note that the April 2011 and October 2011 soil carbon guidance documents have been replaced by the Reserve with guidance document “Updated Guidance of Accounting for Soil Carbon for Avoided Conversion Projects” issued on 03 July 2012. This guidance shall apply to the project during the next site visit verification.

3.3 Level of Assurance

SCS performed the core verification activities described by CAR in the Forest Project Verification Protocol to determine whether it had a reasonable level of assurance that the project’s GHG removals and reductions are materially correct. Only projects in compliance with the CAR Forest Project Protocol are verified.

3.4 Treatment of Materiality

Materiality is a measure of the significance of errors and omissions with regard to statements and numerical claims made in the documents associated with a GHG project. Information is considered material if its omission or misstatement could be seen to influence any decisions or actions resulting from it. While some amount of error is tolerable, a materiality threshold exists which, if exceeded, will require that the verification body issue a negative verification opinion. The Climate Action Reserve recognizes two aspects of materiality; qualitative and quantitative.

Qualitative materiality refers to non-conformance with the project protocols. Any non-conformance related to a prescriptive requirement of the protocol is considered material. This includes content of required documents and factors, parameters, or procedures that are prescribed by the protocols. A positive verification opinion cannot be issued if the project documents include qualitative material errors.

Quantitative materiality refers to errors in measurement and calculation procedures. The cumulative errors in the total quantity of CRTs claimed in the monitoring report cannot exceed the materiality threshold, which is dependent on the project size. For projects registering 25,000 CRTs or less annually, the materiality threshold is 5%. For projects registering more than 25,000 CRTs but less than or equal to 100,000 CRTs, the materiality threshold is 3%. For projects registering more than 100,000 CRTs annually, the materiality threshold is 1%. Because the number of CRTs generated by the project during the reporting period is less than 100,000 and greater than 25,000, the materiality threshold is 3%. A positive verification opinion cannot be issued if the aggregated numerical error in CRT calculation exceeds the materiality threshold.

Additional details regarding materiality are provided in Sections 1.6.3 through 1.6.5 of the Climate Action Reserve Verification Program Manual.

3.5 Verification Scope

The scope of this Desk Review Verification includes the monitoring report for the reporting period, the Monitoring Calculation Worksheet, and the required attestations posted on the Reserve website, the Project Design Document and associated supporting documentation.

Verification items include:

- Review of required attestations;
- Review of reported sources, sinks, and reservoirs;
- Confirmation that no decrease has occurred in the Project Area's Standing Live Carbon Stocks over any ten-year consecutive periods not accounted for by allowable exceptions;
- Review reported estimates of actual onsite carbon stocks and estimates of actual carbon in Harvested Wood Products;
- Review calculations for quantification of Primary and Secondary effects;
- Assessment of the reporting of Reversals
- Verify that the Risk Rating applied is the same used since the previous site -visit verification.

The project is eligible for a Desk Review Verification, per Section 4 of the Forest Project Verification Protocol, because six years have not passed since the previous verification site visit, which occurred in January 2010.

3.6 Verification Team

Lead Verifier: Francis Eaton SCS Global Services, Verification Forester

Francis Eaton holds a Masters of Forest Science from the Yale School of Forestry and Environmental Studies and received his B.S. in Forestry from Northern Arizona University. The focus throughout his studies was forest management with emphases on sampling design and statistical analysis. He spent three years working collecting field data and completing data analysis on forest restoration projects with the Ecological Restoration Institute. His work experience also includes complete biophysical inventories and estimation of timber volume for two 3000 acre properties, as a forest consultant in northern New Mexico. Mr. Eaton is well versed in editing sampling designs and auditing field campaigns as a teaching fellow for masters-level management plan courses. Mr. Eaton currently works as a Verification Forester for SCS and has completed forest carbon projects under the Verified Carbon Standard (VCS), the Climate Action Reserve (CAR), and the Climate, Community, and Biodiversity Alliance (CCBA). Moreover, Mr. Eaton is accredited by the California Air Resources Board as Lead Offset Verifier and is also certified by the Board in the US Forest Project and Urban Forest Protocols. He is also certified as Lead Verifier under the Climate Action Reserve.

Verifier: Christie Pollet-Young, SCS Global Services, Director, Greenhouse Gas Verification

Ms. Pollet-Young is the Director of SCS's Greenhouse Gas Verification Program. Ms. Pollet-Young has over 20 years of experience in forestry, including forest management, forest ecology research, conservation planning, and carbon offset verification in both tropical and temperate climates. Prior to her tenure at SCS, Ms. Pollet-Young worked for the Smithsonian Institution's Center for Tropical Forest Science where she oversaw a network of forest dynamics plots throughout the tropics and The Nature Conservancy of Peru where she developed an ecoregional plan for the conservation of Peruvian

montane forests and the bi-national Equatorial Pacific ecoregion in Peru and Ecuador. Ms. Pollet-Young completed a Master of Forest Science from Yale University where she was a Doris Duke Scholar and completed her Master's thesis research in Khao Yai National Park in Thailand. Ms. Pollet-Young also graduated with high honors from the University of California, Berkeley with a Bachelor of Science in Environmental Science, Policy and Management and a minor in forestry. Ms. Pollet-Young is a lead auditor with SCS who has participated in the assessment of over 50 forest carbon offset projects around the globe under the standards of the Climate Action Reserve, the Verified Carbon Standard, the American Carbon Registry, the Climate, Community and Biodiversity Alliance, the California Air Resources Board's Cap and Trade Program. In addition, Ms. Pollet-Young is a VCS AFOLU expert in Improved Forest Management and Jurisdictional Nested REDD+, as well as a recipient of a CARROT award from the Climate Action Reserve.

Technical Reviewer: Zane Haxtema, SCS Global Services, Senior Forester, Greenhouse Gas Verification
Mr. Haxtema holds a M.S. in Forest Resources from Oregon State University (Corvallis, Oregon, USA) and a B.S. from The Evergreen State College (Olympia, Washington, USA). A well-rounded forestry professional, Mr. Haxtema held a wide variety of positions in forest research and management before coming to SCS, ranging from work on logging and tree planting crews to experience as a wildland firefighter and research assistant. A specialist in natural resource inventory, Mr. Haxtema holds significant expertise in sampling design, inventory management and growth modeling. Mr. Haxtema is well versed in a wide variety of methodological approaches for carbon accounting, having served as a lead auditor on a wide variety of projects under the Climate Action Reserve, the Verified Carbon Standard and the Climate, Community and Biodiversity Standards.

4 Verification Process

Per the guidance of Section 10.2 of the Forest Project Protocol Version 3.1, verifier site visits are required only once every six years. Between site visits, as is discussed in Section 10.2.2, "an ISO-accredited and Reserve-approved verification body may optionally conduct a desk review of annual monitoring reports for the purpose of determining creditable GHG reductions and removals." The desk review undergone to verify the annual reductions and removals for the Alligator River Avoided Conversion Forest Project is described in this section. The verification team worked through Checklist 5.3, supplied on page 12 of the Forest Project Verification Protocol Version 3.0, to evaluate continuing conformance to the Reserve's standards.

4.1 Change in Forest Owner or Landholdings

No changes in forest owner or landholdings were reported in the Monitoring Report. The Hyde County NC Register of Deeds Office confirmed that no changes of title have occurred since the project area was acquired by the Forest Owner on 10 December 2009.

4.2 Estimates of Actual Onsite Carbon Stocks

There was no inventory sampling during the period. Carbon stock estimates are based on FVS-projected growth applied to the previous year's C stock estimate. Biomass estimates for standing live trees are made using the Jenkins equations (Jenkins, J.C.; D.C. Chojnacky; L.S. Heath; R.A. Birdsey. 2004. Comprehensive Database of Diameter-based Biomass Regressions for North American Tree Species.

Gen. Tech. Rep. NE-139. USDA Forest Service). Use of the Jenkins equations for this project has been approved by the Reserve in a guidance letter addressed to Jeff Cole of Blue Source dated 13 September 2010. The lead verifier traced the calculation steps from FVS treelist output to Net CRTs and found no errors. The use of the Southern Variant of the Reserve-approved FVS model is appropriate. The data processing procedures used for the 2014 monitoring period are consistent with previous monitoring periods.

Current stocking in live trees is calculated by adding 1/5 of the 5 year growth increment in live trees predicted by the FVS model to the stocking at the end of the 2013 reporting period. Annual growth increment is constant over the first 5 years of the project. Soil carbon remains constant in the project scenario. In addition, Lying and standing dead wood are held constant. This calculation procedures are consistent with the PDD and in conformance with the requirements of the Protocol.

The verification was conducted by reviewing the following documents and conducting the following data checks:

- Replication of interpolation procedure for the growth of onsite carbon stocks for the aboveground tree biomass described above, using data in workbook “Alligator River CRT Model_Biomass_05_5_11_FINAL_plus soil_2014.xlsb” (as provided by project developer). This data check confirmed that the replicated values for 2010-2014 are correct and in line with the previous calculations of tree growth in the previous reporting periods.
- Replication and review of the data stream that led to the final emissions reductions or CRTs in “Alligator River CRT Model_Biomass_05_5_11_FINAL_plus soil_2014.xlsb.” This data check confirmed that the values for 2014 are within one metric ton of CO₂-e of the values on the Reserve website and identical to the values in the workbook “Alligator River_NEW_Monitoring Calculation Worksheet 2014.xlsx” (as provided by project developer).

The Forest Project Monitoring Report indicates, in Section II(1)(d), that “no commercial harvesting is occurring within the project area”. The monitoring report indicates, in Section IV, that no reversals occurred during the reporting period. The verification team confirmed the absence of any harvesting or disturbance through the following checks:

- Interviews with Josh Strauss, Director of Forest Carbon Projects of Blue Source, to confirm absence of harvesting or recorded disturbance involving project area
- An interview with a representative of USDA Natural Resources Conservation Service (NRCS) who confirmed that, to the best of his knowledge, no timber harvest or other disturbance (or any violation of their easement) took place on the project area during the reporting period

4.3 Check for Decrease in Standing Live Carbon Pool

The Monitoring Calculation workbook shows no decline in C stocks. No disturbance or other circumstances leading to reduced C stocks are reported. Since estimates of Standing Live Carbon stocks are derived from growth model projections and no harvest or disturbance was reported, decrease in the

Standing Live Carbon Pool is not expected to occur. The absence of harvest or disturbance was confirmed by NRCS, holder of the conservation easement.

4.4 Check for Reversals

No reversals were reported, therefore no compensation is required.

4.5 Actual Carbon in Harvested Wood Products

No harvest activities were reported. In addition, the verification team obtained confirmation from the USDA Natural Resources Conservation Service, who holds a conservation easement on the project area, indicating that the terms of the easement, which prohibit harvesting wood products, are being complied with.

4.6 Quantifying the Project's Secondary Effects

Secondary effects were calculated by the verifier following the procedure for Avoided Conversion described in Section 6.3.5 of the Protocol and implemented formulaically in the Monitoring Calculation Workbook. The value calculated by the verifier is identical to the value provided in the Monitoring Calculation Workbook for the reporting year.

4.7 Calculating total net GHG reductions and removals

The auditor reviewed the calculation worksheet posted on the Reserve website. The annual total net GHG reductions and removals shown in the monitoring calculation worksheet are identical to the data check calculations performed by the auditor. Net CRTs and buffer pool CRTs calculated in the Monitoring Calculation Workbook are within one metric ton of CO₂-e to those posted on the Reserve website's Project Emissions/Reductions tab.

4.8 Reversal Risk Rating

The 20.9% reversal risk rating, calculated for the initial reporting period is applied to the current reporting period in conformance with the requirements of the Reserve.

4.9 Regulatory Compliance

As stated within the Attestation of Regulatory Compliance, the project was in material compliance with all applicable laws, statutes and other regulatory frameworks throughout the reporting period. Forest management activities in North Carolina, including all harvesting, road building and site preparation are regulated by the North Carolina Forest Service. The audit team interviewed David Jones, North Carolina Forest Service employee, who informed the audit team that any violations would be submitted to the appropriate regulatory authorities (Table #). Finally, the audit team performed a web based review to confirm that no other regulatory violations are outstanding or occurred during this reporting period.

Table 1 Compliance review for Mattamuskeet ownership in North Carolina

Date of Inquiry	Agency	Contact	Compliance
21 April 2015	United States Environmental Protection Agency	http://www2.epa.gov/enforcement/data-and-results	No violations
21 April 2015	Occupational Health and Safety Administration	https://www.osha.gov/pls/imis/establishment.html?p_message=2&establishment=Mattamuskeet&state=NC&office=all&officetype=all&startmonth=07&startday=15&startyear=2006&endmonth=12&endday=31&endyear=2013&p_case=all&p_violations_exist=both	No violations
21 April 2015	North Carolina Division of Energy, Mineral and Land resources	http://portal.ncdenr.org/web/lr/violations	No Violations
21 April 2015	US Department of Fish and Wildlife	N/A	Not Applicable; no site disturbing activities conducted

In addition, the audit team confirmed that the Attestation of Regulatory Compliance form, attesting to the material compliance of the project for the duration of the reporting period, has been properly executed by an appropriate representative of the project developer. This form has been executed by William G Bount, Executive Officer of Mattamuskeet Ventures I, LLC.

4.10 Review of Required Attestations

The verifier confirms that an Attestation of Title by Mattamuskeet Ventures I, LLC, dated 6 February 2015, signed by Executive Officer William G. Blount, Executive Officer for the Forest Owner, who signed the original attestation at initial verification, has been posted on the Reserve website.

The verifier confirms that an Attestation of Regulatory Compliance on behalf of Mattamuskeet Ventures I, LLC, dated 6 February 2015, covering the reporting period, and also signed by Mr. William G. Blount, Executive Officer for the Forest Owner, has been posted on the Reserve website. The project is also subject to the terms of a conservation easement held by the USDA Natural Resources Conservation Service (NRCS). The verifier obtained confirmation from NRCS attesting that there have been no violations to the terms of the conservation easement.

The verifier confirms that an Attestation of Voluntary Implementation by Mattamuskeet Ventures I, LLC, dated 6 February 2015, for the period 1 January 2014 to 31 December 2014, signed by Mr. William G. Blount, Executive Officer for the Forest Owner, has been posted on the Reserve website.

On 6 May, 2015, the lead verifier observed the document “CAR-497-PIA.pdf”, an amendment to the Project Implementation Agreement between the Reserve and Mattamuskeet Ventures I, LLC pertaining to the Blue Source – Alligator River Avoided Conversion project. The document was provided to the lead verifier in an email from the Reserve on 5 May 2015, and is identified as “FIFTH AMENDMENT OF RESTRICTIVE COVENANT AND PROJECT IMPLEMENTATION AGREEMENT”. The amendment was signed by Gary Gero, President of the Climate Action Reserve on 22 April 2015 and by Mr. William G. Blount, Executive Director, Mattamuskeet Ventures I, LLC on 24 April 2015. Both signatures were witnessed by Notaries Public. The Amendment extends the PIA for 100 years from the date of recording of the amendment. The document includes a receipt issued by the Register of Deeds, Hyde County, North Carolina dated 28 April 2015.

SCS therefore finds with reasonable assurance that the Project Implementation Agreement extension for the Project for 2014 has been implemented in accordance with the requirements of the Reserve.

5 Verification Opinion

Blue Source has supplied all the evidence requested during the verification process to enable SCS to arrive at an opinion on the accuracy of the calculated and claimed emission reductions and removals. SCS has determined that the Blue Source – Alligator River Avoided Conversion project, by Mattamuskeet Ventures I LLC, is in conformance with the CAR Forest Project Protocol v 3.1. The Forest Project Monitoring Report and Monitoring Calculation Workbook posted on the Reserve website are considered accurate, complete, transparent, and free of material misstatements.

The Lead Verifier recommends that SCS issue a verification opinion for 25,369 CRTs for the Emission Year 2014, with a buffer pool contribution of 5,303 CRTs and a balance of 20,066 CRTs recommended for issuance to the Forest Owner. These tonnes of CO₂-equivalent emissions reductions and removals are consistent with those reported by Blue Source on behalf of Mattamuskeet Ventures I, LLC on the Reserve website.

