

LAGUNA SECA FOREST CARBON PROJECT VCS VERIFICATION REPORT



Document Prepared By: Environmental Services, Inc.

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Summary:

Environmental Services, Inc., (ESI) was contracted by Forest Carbon Offsets LLC on 20 November 2013 to conduct the project verification of the Laguna Seca Forest Carbon Project. The Laguna Seca Project follows the framework of Reducing Emissions from Deforestation and Degradation (REDD) and is achieving Greenhouse Gas (GHG) emission reductions as well as tropical forest protection and conservation through payments for ecosystem services. This project is being developed in conjunction with the Climate, Community and Biodiversity Alliance Standard (CCBA).

The *Laguna Seca Forest Carbon Project* aims to protect the forest and biodiversity of an area demarcated for conversion to agriculture for sugarcane development. This project is defined by the area previously contained in the Gallon Jug Estates owned by Bowen & Bowen Ltd. known as “Lower Wamil”, which encompasses 8,432 hectares in the Orange Walk District of Belize. The Gallon Jug area possesses extraordinary levels of biodiversity, including the highest density of large cats in Central America. In addition to protecting the forest and biodiversity in the project area, project goals also include providing income to landowners who reside there, improving the overall wellbeing of local communities by committing to annual support of a scholarship fund for community members to attend high school and employing local people, all while preserving the rich cultural traditions and customs of the indigenous peoples. Under the “without project” scenario, the area would be cleared for sugarcane/electricity production.

The verification process employed by ESI utilized an internal guiding framework and specifically incorporated VCS documents and ISO 14064-3 to develop and implement a Verification & Sampling Plan. The Verification team assessed the *Laguna Seca Forest Carbon Project* Project’s compliance under the Verified Carbon Standard (VCS) Version 3 (and all associated updates), the selected methodology, and the Project Description. This verification assessed the GHG emission removals through Agriculture, Forestry and Other Land Use (AFOLU) criteria, specifically, REDD – Avoided Planned Deforestation (REDD-APD) activities.

The scope of the verification included the GHG project implementation status; physical infrastructure, activities, technologies as well as processes outlined in the validated PD of the *Laguna Seca Forest Carbon Project* Project; GHG sources, sinks and/or reservoirs; types of GHG’s; and time periods covered. The geographic verification scope was defined by the project boundaries, the carbon reservoir types, management activities, growth and yield models, the inventory program, and contract periods. The verification covered a total of 8,432 ha of REDD-APD over the Monitoring Period.

The verification criteria followed the guidance documents provided by VCS and included the following: VCS Standard (25 March 2015, v3.5), VCS Program Guide (08 October 2013, v3.5), Program Definitions (08 October 2013, v3.5), AFOLU Requirements (08 October 2013, v3.4), AFOLU Non-Permanence Risk Tool (4 October 2012, v3.2), and the VCS Methodology VM0007: “REDD Methodology Modules (REDD-MF)” v1.5 (09 March 2015) and its associated modules and tools.

A summary of all findings is included in Appendix B. There are no restrictions of uncertainty.

ESI here confirms all verification activities including objectives, scope and criteria, level of assurance, monitoring and project documentation adherence to VCS Version 3 and all associated updates as documented in this report are complete. ESI concludes without any qualifications or limiting conditions that the *Laguna Seca Forest Carbon Project* Project Monitoring Report dated 02 May 2016 (v1.7) meets the requirements of VCS Version 3 and all associated updates.

The GHG assertion provided by Laguna Seca and verified by ESI has resulted in the GHG emissions reduction or removal of 704,983 tCO₂ equivalents by the project during the verification period/reporting period (01 January 2011 – 31 December 2013). This value is gross of the 27% (216,887 tCO₂ equivalents) buffer withholding based on the non-permanence risk assessment tool. This results in 488,096 tCO₂ equivalents of credits eligible for issuance as VCUs.

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1 INTRODUCTION

1.1 Objective

The VCS verification objective is to ensure the project is in compliance with the VCS Program, VCS Standard, AFOLU Requirements, and the validated Project Description (PD). ESI assessed the GHG emission removals for the AFOLU project, specifically those arising from REDD-APD activities.

1.2 Scope and Criteria

The scope of the verification included the GHG project and baseline scenarios; physical infrastructure, activities, technologies and processes of the GHG project; GHG sources, sinks and/or reservoirs; types of GHG's; and time periods covered; and the evaluation of the project's net climate, community, and biodiversity benefits. The geographic verification scope was defined by the project boundary, the carbon reservoir types, management activities, growth and yield models, inventory program, and contract periods. The scope of the *Laguna Seca Forest Carbon Project* was outlined by the project developer prior to the verification initiation and is re-defined as follows:

Table 1

Baseline Scenario	Forest clearing and conversion to agriculture (sugar cane)
Activities/Technologies/Processes	Avoiding Planned Deforestation – VM0007, through: - control of access to the project areas -conducting low intensity, FSC-certified timber harvesting operations
Sources/Sinks/Reservoirs	Carbon Pool: above- and below-ground biomass Sources: biomass burning
GHG Type	CO ₂ (Sinks) CH ₄ and N ₂ O (Sources)
Time Period (start date, crediting period, verification period)	Start Date: 01 January 2011 Crediting Period – 30 years, 01 January 2011 to 31 December 2040 Reporting/Verification Period: 1 January 2011 – 31 December 2013
Project Area Boundary	Orange Walk District of Belize 8,240 total ha suitable for conversion to agriculture (sugar cane)

1.3 Level of Assurance

The level of assurance is used to determine the depth of detail that the verifier places in the Verification Sampling Plan to determine if there are any errors, omissions, or misrepresentations

(ISO 14064-3:2006). For VCS verifications, ESI assessed the project's description of general principles, eligibility, data sources, inventory plans, documentation, calculations, etc. to meet the project level requirements of the VCS Program. The amount of evidence necessary to achieve a *reasonable* level of assurance is specified in the following sections.

1.4 Summary Description of the Project

As stated in the Project Description (PD), the Laguna Seca Forest Carbon Project ('the Project') is an 8,432 ha REDD project located in the Orange Walk District of Belize. The project was initiated in 2011 to avoid the "without project" scenario of conversion of tropical forest to sugarcane. As stated in Section 1.1 of the PD, "Gallon Jug Agroindustry Ltd. (GJA) owned and managed the property prior to implementation of the project. GJA implemented the project, and then sold the property to The Forestland Group (TFG). Forest Carbon Offsets LLC (FCO) was an agent of GJA to develop the carbon finance project, and continues to serve in that capacity for TFG."

The region has historically witnessed conversion to agriculture and specifically sugarcane. The Gallon Jug area is a region rich in biodiversity, with the densest population of large cats in Central America. As stated in Section 1.1 of the PD, "In addition to large cats, there are notable populations of Baird's Tapir (*Tapirus bairdii*), Yucatan Black Howler Monkeys (*Alouatta pigra*), and Geoffroy's Spider Monkeys (*Ateles geoffroyi*) all of which are listed as endangered by the International Union for the Conservation of Nature. Many other rare species are commonly found at the project site and 24 species are listed by IUCN above "least concern". The property has been identified as a key biodiversity area (KBA) in Belize and Central America (Meerman 2007) and is contiguous with two other protected areas, the Rio Bravo Conservation and Management Area, and the Maya Biosphere Reserve in Guatemala."

The CCB components of the project are outlined following the requirements under CCBA Indicator G1:

Climate Objectives

- Avoid emissions by avoiding conversion from forest to sugarcane.
- Protect forest to allow on-going carbon sequestration to take place.

Community Objectives

- Provide employment opportunities in rural areas to help manage and monitor the land for conservation.
- Providing educational opportunities through the annual support of a scholarship fund for community members to attend high school.

Biodiversity Objectives

- Manage the land for the conservation of flora and fauna.

2 VERIFICATION PROCESS

2.1 Method and Criteria

A project specific Verification and Sampling Plan was developed to guide the validation auditing process to ensure efficiency and effectiveness. The purpose of the Verification and Sampling Plan is to present a risk assessment for determining the nature and extent of verification procedures necessary to ensure the risk of auditing error is reduced to a reasonable level.

According to the ISO14064-3, the validation criteria are the “policy, procedure or requirement used as a reference against which evidence is compared”. Therefore, validation of the selected methodology (VM0007, v1.5) and reported project results were measured for compliance against the following criteria:

- VCS Standard (v3.5, 25 March 2015)
- VCS Program Guide (v3.5, 08 October 2013)
- VCS Program Definitions (v3.5, 08 October 2013)
- VCS Agriculture, Forestry and Other Land Use (AFOLU) Requirements (v3.4, 08 October 2013)
- VCS AFOLU Non-Permanence Risk Tool (04 October 2012, v3.2)
- REDD+ Methodology Framework VM0007: REDD-MF (09 March 2015, v1.5)
- Carbon pool modules:
 - CP-AB “VMD0001 Estimation of carbon stocks in the above- and belowground biomass in live tree and non-tree pools”, version 1.1
 - CP-W “VMD0005 Estimation of carbon stocks in the long-term wood products pool”, version 1.1
- Baseline module:
 - BL-PL “VMD0006 Estimation of baseline carbon stock changes and greenhouse gas emissions from planned deforestation”, version 1.2
- Leakage modules:
 - LK-ASP “VMD0009 Estimation of emissions from activity shifting for avoided planned deforestation”, version 1.2
 - LK-ME “VMD0011 Estimation of emissions from market-effects”. Mandatory where the process of deforestation involves timber harvesting for commercial markets, version 1.0
- Monitoring module:
 - M-MON “VMD0015 Methods for monitoring of greenhouse gas emissions and removals”, version 2.1.
- Miscellaneous Modules:
 - E-BPB “VMD0013 Estimation of greenhouse gas emissions from biomass and peat burning”, v1.1.
 - X-STR “VMD0016 Methods for stratification of the project area”, version 1.1.
 - X-UNC “VMD0017 Estimation of uncertainty for REDD project activities”, version 2.1.
- Tools:
 - T-SIG, CDM tool “Tool for testing significance of GHG emissions in A/R CDM project activities,” Version 1
 - T-ADD, “VT0001 Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities,” Version 3.0

2.2 Document Review

A detailed review of all project documentation was conducted to ensure consistency with, and identify any deviation from; VCS Program requirements, the VM0007 v1.5 methodological

modules, and the Project Description (PD) document. The process of verification involved seven (7) formal rounds of assessment by the verification team and resulted in a PD which was in conformance with VCS Rules. Desk review included an examination of the project details, data and parameters, and quantification of GHG emission reductions and removals. Documents reviewed included data used to set the baseline, carbon rights contracts, economic analysis, maps and aerial images, biomass and carbon calculation spread sheets. Modifications to the Verification and Sampling plan were made based upon the conditions observed in order to detect the processes with highest risk of material discrepancy.

Please see Appendix A for a complete list of documents and files provided by the client and reviewed by ESI during verification, including any items associated with the risk analysis.

2.3 Interviews

The objective of the interview process was to solicit important information from personnel related to the project and relevant to the verification process. The onsite validation site visit, performed in conjunction with the first verification, occurred between 25 June and 01 July 2014. As the validation and verification were conducted concurrently, the persons interviewed are the same for both validation and verification. Onsite interviews and informal discussions were conducted with project staff, members and leaders of the local communities. The interviews were performed by the verification team on-site and in the vicinity of the project area (within the project area, in Gallon Jug, Silvester, Chan Chich, and Yalbac Mill).

The project area, as stated above in Section 1.4 of this report, is formerly on GJA land. As a result, the only nearby community is exclusively supported by GJA. The livelihood or subsistence of the community does not depend directly on the project area, but instead on employment from GJA. However, this community receives benefits from the project in the form of scholarships started by GJA and supplemented from the proceeds of the carbon project. The majority of interviewees felt the scholarship fund was a critical element to support the children within the community. A single negative comment was received by a community member who expressed concern that the scholarships were not enough support and represented a trading of benefits.

In general, information provided in the PD was supported by interviews with project personnel, community members and other individuals. Several interviewees stated a preference to remain anonymous. Additional interviews were also conducted via phone with the project proponent during the verification process. Individuals interviewed included:

Table 2

Name	Title
Jeff Waldon	Chief Technical Officer - Forest Carbon Offsets LLC
Keister Evans	CEO - Forest Carbon Offsets LLC

Jialiang Zhang	Program Manager (formerly) -Verified Carbon Standard
Kevin McGuckin	Conservation Management Institute - College of Natural Resources, Virginia Tech
Tanya Santos Neal	Coordinator, REDD+ Coordination Unit - Belize Department of Forestry
Alan Jeal	General Manager of Mill - Gallon Jug Agroindustry Ltd.
Filipe	Gallon Jug Mill Employee
Jonny Tezib	Gallon Jug Mill Employee
Luis	Gallon Jug Mill Employee
Jeff Roberson	Yalbac Mill Manager
6 Anonymous	Yalbac Mill Employees
Vladamere	Program Manager - Rio Bravo, adjacent REDD project
Aleida Marlana	Worlds Window Representative (Former Community Member)
Waverly Lemus	Community Member - Sylvester
Rolando Delarosa	Community Member - Sylvester
Alaida	Community Member - Sylvester
Anonymous individual	Belize Department of Lands and Survey Office
Adelo and family	Community Member - Sylvester
Guadalupe Cernin-enyeao	Community Member - Sylvester
Rosaria and Luis	Community Member -Chan Chich
Luois and Olivia	Community Member - Chan Chich
Anonymous	Student - Chan Chich
Anonymous	Store Owner - Sylvester
Jonathan and Anonymous	Gallon Jug Employee -Sylvester
Evelyn Alvarado	Community Member Sylvester

2.4 Site Inspections

The verification site inspection, performed in conjunction with the validation, was conducted 25 June and 01 July 2014. Sites selected for detailed review were chosen at the discretion of the Lead Verifier. A risk based approach was used to select the tracts to allow a review of a wide geographic range of sites, sufficient to provide the necessary sample size to meet a reasonable level of assurance, as directed by the professional judgment of the Lead Verifier.

For the purposes of the VCS validation, inventory plots were selected to re-sample to allow for the confirmation of monitoring methods and establishment of baseline carbon stocking. This also served the purpose of accessing interior project areas to confirm other verification project elements (e.g. review of VCS Non-Permanence Risk elements, review of possible degradation not visible in imagery, boundary integrity confirmation, etc.). Plots selected for re-sample and comparisons were at the discretion of the Lead Validator/Verifier. ESI's minimum sample size for field validation was a minimum of 5%. The specific plots audited represented an approximate 16% sample of the forestry plots and are identified below. The plots were randomly selected and were sufficient to provide the necessary sample size to meet a reasonable level of assurance, as directed by the professional judgment of the Lead Validator/Verifier. Due to logistical considerations, not all specific plots identified in the Validation and Verification Sampling Plan were able to be visited.

Selected Validation Plots:

- 3
- 19
- 20
- 22
- 25
- 37

Direct field measurement of plot and location characteristics were performed in all instances above, with a detailed review of field measurement methodologies occurring, sufficient to satisfy the professional discretion of the Lead Validator/Verifier. The ESI also requested that the project team demonstrate the inventory methodology on a sample plot, which further demonstrated that the inventory methodology was sound and was able to be replicated by the field teams. Further, ESI also completed ground-truthing of the project strata to compare to PD descriptions.

In addition, general field review occurred throughout the site visit in which the following VCS aspects of the project were assessed:

- Pre-project conditions, as evidenced by condition of adjacent or nearby non-project areas, by evidence of site-preparation activities, and related
- Current project conditions, including reported tree species, expected current density, reported growth characteristics (diameter, or similar), reported biomass volume (above-and/or below-ground), management plan/monitoring (historical and contemporary), and related
- Confirmation of Boundaries

- Methodology eligibility criteria- ownership, forest cover, etc.
- Interviews with local community members - questions related to ownership, disputes, land use in project area, leakage and PRA questions.
- Observations of alternative baseline scenarios
- Observations of typical logging and clearing/conversion operations
- Review of VCS Non-Permanence Risk elements
- Leakage – research/interviews with the local municipal government related to ownership and management by the baseline agent of deforestation

2.5 Resolution of Findings

During the verification process, there was a risk that potential errors, omissions, and misrepresentations would be found. The actions taken when errors, omissions, and misrepresentations were found included: notifying the client of the issue(s) identified, and expanding our review to the extent that satisfied the Lead Verifier’s professional judgment.

The process of resolution of findings involved one formal round of assessment by the Verification Team. Findings were resolved during the verification by the Project Proponent implementing corrective actions, such as amending the Monitoring Report and calculations, as well as and providing written responses. This resulted in project documentation that was in conformance with the requirements of the VCS Standard (v3.4) for GHG projects.

Findings were characterized in the following manner:

Non-Conformity Reports (NCRs) were issued as a response to material discrepancies in a part of the project and generally fell into one category:

- Non-conformity to a VCS guiding document listed in Section 2.1 above
- Consistency among project documentation or calculations was lacking
- Mathematical formulae were incorrect
- Additional information was required by the verification team in order to confirm reasonable assurance for compliance

Clarifications (CL) were issued when language within a project document needed extra clarification to avoid ambiguity.

Opportunities for Improvement (OFI) were issued to the project proponents when an opportunity for improvement was identified.

During the course of the Verification, 299 NCRs and CLs were identified. All NCRs/CLs were satisfactorily addressed. The NCRs/CLs provided necessary clarity to ensure the project was in compliance with the requirements of the VCS for GHG projects and the selected methodology.

Detailed summaries of each finding, including the issue raised, responses and final conclusions are provided in Appendix B.

2.5.1 Forward Action Requests

Project Scenario Timber Harvesting:

VM0007 handles harvest accounting through establishment of baseline ex-ante harvested wood products (module CP-W parameter CWP_i) which is subtracted from the logging degradation effects (M-MON Equation 9). Since the project scenario calls for selective FSC logging in the project area through the project crediting period, M-MON requires the project proponent to compute selective logging degradation. A T-SIG demonstration may be provided at verification to assert that selective logging emissions are de minimis following quantification methods in M-MON. Please see requirements within M-MON module and usage of the CWP_i estimate as derived from module CP-W.

Forest Stewardship Council Certification

The Laguna Seca monitoring report section 2.1 indicates that Forest Stewardship Council (FSC) certification is being pursued. Issuance of the FSC certificate should be confirmed at the next verification event.

2.6 Eligibility for Validation Activities

Not Applicable – Validation/Verification body holds appropriate accreditation for validation for the relevant sectoral scope

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The PD entitled “*Laguna Seca Forest Carbon Project PD*” dated 17 March 2016, v1.7 was previously validated by ESI. The validation process is described in the Validation Report, available on the VCS website. The Project Proponent has attested that none of the project area has been or will be registered under another carbon trading scheme during the VCS project lifetime, other than CCBA.

3.2 Methodology Deviations

Methodology deviations were deemed permissible during the validation review following VCS rules. As per Section 3.5.1 of the VCS Standard, "Deviations from the applied methodology are permitted where they represent a deviation from the criteria and procedures relating to monitoring or measurement set out in the methodology (i.e., deviations are permitted where they relate to data and parameters available at validation, data and parameters monitored, or the monitoring plan). Methodology deviations shall not negatively impact the conservativeness of the quantification of GHG emission reductions or removals, except where they result in increased accuracy of such quantification."

The PD was previously validated and contained the following deviations from VM0007 v1.3:

Table 2

<i>Deviation</i>	<i>Validation findings</i>
<p>Calculation of Ex Post Emissions from Fuelwood Collection. A PRA was not conducted but rather assumptions regarding the number of fuelwood users and the amount of fuelwood used for application in a de minimis demonstration.</p>	<p>The validation team confirmed that conservative assumptions were applied to avoid the degradation PRA requirement of M-MON and result in an estimate for parameter $\Delta CP, DegW, i, t$. Please note that no deviation is required for parameter $\Delta CP, SelLog, i, t$ as M-MON allows for this parameter to be deemed de minimis following requirements of T-SIG.</p> <p>The validation team was copied on an email exchange between the project proponent and VCS where guidance was provided to permit the deviation. The project has substituted the PRA, and limited field sampling, for FAO ¹ assumptions. The PD contains adequate justification to show the FAO data is more conservative. Further, the deviation description includes specific reference to the parameter(s) deviated from and whether the deviation pertains to "data and parameters available at validation, data and parameters monitored, or the monitoring plan."</p> <p>A T-SIG analysis for parameter $\Delta CP, DegW, i, t$ was supplied and confirmed to be appropriately deemed de minimis. The application of this methodology deviation is conservative and does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals.</p>
<p>Calculation of Ex Post Emissions from Sustainable Timber Harvest. Methods for quantification of $\Delta CP, SelLog, i, t$ were deviated</p>	<p>A methodology deviation was employed to avoid computation of CLG, i, t and CLR, i, t for the logging gap and logging infrastructure for</p>

¹ FAO. 2008. Forests and Energy Key Issues. FAO Forestry Paper 154. Food and Agriculture Organization of the United Nations. Rome, 2008. 73 pp.

<p>to use values from the literature in lieu of measuring and calculating.</p>	<p>parameter $\Delta CP_{SelLog,i,t}$. The deviation method is conservative as the Whitman (2007)² estimate was tripled and all damage resulted in immediate emissions. This value was taken from the abstract of Whitman et al (2007) and applied to all project area stocks. CLG and CLR were permitted to be combined for this deviation because they could not be split out using the Whitman reference.</p> <p>A T-SIG analysis for parameter $\Delta CP_{SelLog,i,t}$ was supplied and confirmed to be appropriately deemed de minimis. <i>The application of this methodology deviation is conservative and does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals.</i></p>
<p>Palm Allometric Equations</p>	<p>Several species of palms exist in the project area. The project proponent utilized a set of palm biomass equations which were developed for the three most common palms in the area: cohune (<i>Attalea cohune</i>), give-and-take (<i>Chrysophylla stauracantha</i>), and botan (<i>Sabal mauritiiformis</i>). The process was developed on a neighboring property by Brown in 2000 (2015³).</p> <p>No reasonably similar allometric equations could be found for these species. The methodology states that allometric equations for non-tree biomass should include a sample size of 30 individuals. It was the validators' understanding that that statement means 30 individuals per species where species level equations are developed. The validation team chose to validate the Brown equations by review of source data from which equation was derived and confirming that the source data was representative of the species and conditions in the project and covers the range of potential sizes.</p>

² Whitman, A. A., N.V.L.Brokaw, and J. M. Hagan. 1997. Forest damage caused by selection logging of mahogany (*Swietenia macrophylla*) in northern Belize. *Forest Ecology and Management* 2: pp. 87-96.

³ Brown, S. 2015. Personal Communication. Data and equations developed at Rio Bravo Conservation and Management Area, May 2000.

	<p>The database that Dr. Brown used to develop the equations was analyzed. The species, R², and range of data all qualified as appropriate for the project area. Fewer than 30 samples were taken in the determination of the Brown (2015) palm allometric equations. As palm equations have been supported by destructive data from a nearby site, validators deemed that this is an appropriate methodology deviation.</p> <p>The application of this methodology deviation does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals.</p>
<p>Calculation vs. Measurement of Tree Heights</p>	<p>The Project Proponent states in the PD that difficulty in determining the first branch or noting where the bole diameter was 10 cm as required in the CP-AB module led to the use of a regression in estimating the 10 cm top instead of measuring the 10 cm top height. This regression assumes a simple linear relationship between diameter at breast height and the top of the tree. This process did not meet the requirements of the CP-AB module.</p> <p>The methods employed are conservative and were confirmed to be implemented correctly. As such, and given the lack of confidence in the measured data, they are acceptable, but "represent a deviation from represent a deviation from the criteria and procedures relating to monitoring or measurement set out in the methodology."</p> <p>That is, calculating the 10 cm top via a simple linear taper between the diameter at breast height and the top of the tree does not conform to this requirement as written, but also does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals. Conservatively underestimating the biomass volume of the "measured individuals" clearly will result in the use of an allometric biomass equation that does not systematically overestimate.</p>

The validation process confirmed that the above methodology deviations are reasonable and in compliance with the VCS Standard, Section 3.5 and have been appropriately justified. The listed deviations represent a deviation from the criteria and procedures relating to monitoring and/or measurement of GHG emission reductions or removals set out in the selected methodological modules. Moreover, the deviations do not negatively impact the conservativeness of the quantification of GHG emissions reductions or removals.

3.3 Project Description Deviations

There were no deviations to the project description.

3.4 Grouped Project

Not applicable as this is not a grouped project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The project activities and Monitoring Plan, as described in the validated PD, have been initiated. The main objective of the project is the conservation of the tropical forest in the project region, and this has clearly been a success evidenced by the lack of commercial harvesting. There are no remaining issues or material discrepancies between project implementation and the project description. As this is the initial verification, many activities are still being implemented and awaiting carbon revenue for completion, however the Verifiers observed considerable progress during the verification site inspection.

The monitoring approach appears appropriate and sufficient to satisfy the requirements of the monitoring plan and the methodology, with no material discrepancies identified. The Verifiers requested to visit examples of activities during the site inspections and subsequently confirmed the initial implementation of project activities, as discussed in Section 2.1 of the Laguna Seca's monitoring report.

As of the date of issuance of this report, no evidence of any other environmental credits having been sought or received was identified and the project was not found to have been included in an emissions trading program other than VCS/CCB. No evidence that the project has been rejected by any other environmental program was found. All methodology deviations are listed in table 2 of section 3.2 above.

The project activities and Monitoring Plan, as described in the validated PD, have been implemented.

4.2 Accuracy of GHG Emission Reduction and Removal Calculations

ESI conducted an intensive review of all input data, parameters, formulas, calculations, conversions, statistics and resulting uncertainties and output data to ensure consistency with the VCS standard, the project PD and the methodologies. Further, ESI reproduced calculations for selected samples to ensure accuracy of the results. Conversion factors, formulas, and calculations were provided by the Project Proponent in spreadsheet format to ensure all formulas were accessible for review. The verifier recalculated subsets of the analysis to confirm correctness. The Project Proponent also provided a step-by-step overview of calculations to ensure ESI understood the approach and could confirm its consistency with the methodologies

and PD. An overview of the data and parameters monitored, along with ESI’s findings, are included in the table below⁴:

Data Parameter	Verification Team Findings								
$\Delta C_{P,Def,i,t}$	<p>This data/parameter was appropriately chosen because it pertains to net carbon stock change as a result of deforestation in the project case in the project area in stratum <i>i</i> at time <i>t</i>. This value was found to be calculated accurately in a spreadsheet (“Laguna Seca Carbon Table Ver 18.xlsx”) according to the correct formula for the three year monitoring period.</p> <p>All deforestation monitoring was confirmed by ESI via satellite image interpretation, and a limited number of sites were ground-truthed by ESI during the site visit.</p>								
$\Delta C_{P,DistPA,i,t}$	<p>This data/parameter was appropriately chosen because it pertains to net carbon stock change as a result of natural disturbance in the project case in the project area in stratum <i>i</i> at time <i>t</i>. The value applied was 0. This was appropriate as there were no areas of natural disturbance reported in by on-the ground forest monitors/local land managers and none was distinguished (from anthropogenic deforestation) with remote sensing analyses.</p>								
$A_{DefPA,u,i,t}$	<p>This data/parameter was appropriately chosen because it pertains to the area of recorded deforestation in the project area stratum <i>i</i> converted to land use <i>u</i> at time <i>t</i>. This value was found to be calculated accurately from remote sensing/GIS data and was implemented appropriately in the monitoring spreadsheet (“Laguna Seca Carbon Table Ver 18.xlsx”) according to the correct formula for the monitoring period.</p> <p>Values applied and verified correct were:</p> <table border="1" data-bbox="594 1430 969 1606"> <thead> <tr> <th>Year</th> <th>$A_{DefPA,u,i,t}$ (ha)</th> </tr> </thead> <tbody> <tr> <td>2011</td> <td>0</td> </tr> <tr> <td>2012</td> <td>0</td> </tr> <tr> <td>2013</td> <td>0</td> </tr> </tbody> </table>	Year	$A_{DefPA,u,i,t}$ (ha)	2011	0	2012	0	2013	0
Year	$A_{DefPA,u,i,t}$ (ha)								
2011	0								
2012	0								
2013	0								
$A_{DefLK,i,t}$	<p>This data/parameter was appropriately included because it pertains to the total area of deforestation by the baseline agent of the planned deforestation in stratum <i>I</i> at time, <i>t</i>. This parameter is assumed to be zero as the agent of deforestation has not planned</p>								

⁴ Please see Appendix B for detailed findings of monitored parameters

	any deforestation in the project scenario.				
$A_{DistPA,q,i,t}$	This data/parameter was appropriately chosen because it pertains to area impacted by natural disturbance in post-natural disturbance stratum q in stratum i , at time t . The value applied was 0. This was appropriate as there were no areas of natural disturbance reported in by on-the ground forest monitors/local land managers and none was distinguished (from anthropogenic deforestation) with remote sensing analyses.				
$C_{BSL,i}$	This data/parameter was appropriately included because it pertains to the carbon stock in all pools in the baseline case in stratum i and is estimated from the forest carbon inventory. This value was calculated and assessed <i>ex ante</i> (at validation). The appropriate <i>ex ante</i> estimates were found to be implemented appropriately in the quantification of net GHG emission reductions. The values that were confirmed to be correctly applied were: <table border="1" data-bbox="594 842 1192 982"> <tr> <td>Strata</td> <td>$C_{BSL,i}$ (t CO₂-e ha⁻¹)</td> </tr> <tr> <td>One strata</td> <td>362.5</td> </tr> </table>	Strata	$C_{BSL,i}$ (t CO ₂ -e ha ⁻¹)	One strata	362.5
Strata	$C_{BSL,i}$ (t CO ₂ -e ha ⁻¹)				
One strata	362.5				
$\Delta C_{pools,Def,u,i,t}$	This data/parameter was appropriately chosen because it pertains to the carbon stock in all pools in post-deforestation land use u in stratum i . This value was found to be calculated accurately by strata in a spreadsheet (“Laguna Seca Carbon Table Ver 18.xlsx”) according to the correct formula for the two year monitoring period. Verified value applied was 312.9 t CO ₂ -e ha ⁻¹				
$A_{DegW,i,t}$	This data/parameter was appropriately chosen because it pertains to the area potentially impacted by degradation processes in stratum i . The value applied was 0. This was appropriate as the Project Proponent’s assessment of degradation (“Laguna Seca Carbon Table Ver 18.xlsx”) indicated that emissions due to degradation (for this monitoring period) are insignificant as per T-SIG.				
$C_{DegW,i,t}$	This data/parameter was appropriately chosen because it pertains to the biomass carbon of trees cut and removed through degradation process from plots measured in stratum i at time t . The value applied was 0. This was appropriate as the Project Proponent’s assessment of degradation (“Laguna Seca Carbon Table Ver 18.xlsx”) indicated that emissions due to degradation (for this monitoring period) are insignificant as per T-SIG.				

AP_i	<p>This data/parameter was not used in the Project Proponent's analysis, additional details can be found in Section 3.2 – Methodology Deviations of this report. This was deemed appropriate in addition to the Project Proponent's assessment of degradation which indicated that emissions due to degradation (for this monitoring period) are insignificant as per T-SIG.</p>								
$\Delta C_{P,DegW,i,t}$	<p>This data/parameter was appropriately chosen because it pertains to the net carbon stock changes as a result of degradation in stratum i in the project area at time t. This parameter was not used during this monitoring period, as the methodology deviation indicated no degradation (value applied was 0). This was appropriate as the Project Proponent's assessment of degradation ("Laguna Seca Carbon Table Ver 18.xlsx") indicated that emissions due to degradation (for this monitoring period) are insignificant as per T-SIG.</p>								
$Aburn,q,i,t$	<p>This data/parameter was appropriately chosen because it pertains to the area burnt in post-natural disturbance stratum q in stratum i, at time t.</p> <p>Values found to be appropriately applied were:</p> <table border="1" data-bbox="594 1020 854 1192"> <thead> <tr> <th>Year</th> <th>One Strata</th> </tr> </thead> <tbody> <tr> <td>2011</td> <td>0</td> </tr> <tr> <td>2012</td> <td>0</td> </tr> <tr> <td>2013</td> <td>0</td> </tr> </tbody> </table>	Year	One Strata	2011	0	2012	0	2013	0
Year	One Strata								
2011	0								
2012	0								
2013	0								
dbh	<p>This data/parameter was appropriately chosen because it gives the tree diameter at breast height. DBH values were measured and assessed <i>ex ante</i> (at validation). The appropriate <i>ex ante</i> estimates were found to be implemented correctly in the quantification of net GHG emission reductions.</p>								
$dbasal$	<p>This data/parameter was appropriately chosen because it gives the basal diameter. Basal diameter values were measured and assessed <i>ex ante</i> (at validation). The appropriate <i>ex ante</i> estimates were found to be implemented appropriately in the quantification of net GHG emission reductions.</p>								
H	<p>This data/parameter was appropriately chosen because it gives the height of a tree. Tree heights were measured and assessed <i>ex ante</i> (at validation). The appropriate <i>ex ante</i> estimates were found to be implemented appropriately in the quantification of net GHG emission reductions.</p>								

Cpost	This data/parameter was appropriately chosen because it pertains to carbon stock in all pools in the post-deforestation land use. The quantification of this parameter was confirmed correct to follow BL-PL in “Laguna Seca Carbon Table Ver 18.xlsx.”
Bi,t	<p>This data/parameter was appropriately included because it calculates the average aboveground biomass stock before burning stratum <i>i</i>, time <i>t</i>. Emissions from biomass burning are derived from the forest inventory and were confirmed at Validation (they will be updated every 10 years).</p> <p>These values were found to be applied accurately by strata in a spreadsheet (“Laguna Seca Carbon Table Ver 18.xlsx”) according to the correct formulae for the monitoring period.</p> <p>Confirmed value applied was 165.8 t d.m. ha⁻¹</p>
AGB	This data/parameter was appropriately included because it calculates the aboveground biomass density. These values are calculated using forest inventory data and were confirmed at validation. Plot level values were confirmed in the Forest Inventory Report.
Asp	This data/parameter was appropriately included because it determines the area of sample plots in ha. The validated values included 40 nested plots. Each plot consists of three fixed radius plots 4 m, 14 m, and 20 m. Individual subplot areas based on ($\pi * r^2$) is .005024 ha for the 4m plot, .061544 ha for the 14m plot, and .1256 ha for the 20 m plot. All values were confirmed to be used in the Forest Inventory Report.
CP,Dist,q,i	This data/parameter was appropriately included because it determines carbon stock in all pools in post-natural disturbance <i>q</i> in baseline stratum <i>i</i> . Carbon stocks must were confirmed to be measured and estimated using the methods given in module CP-AB and CP-D.
AAplanned,i,t	This data/parameter was appropriately included because it computes annual area of baseline planned deforestation for stratum <i>i</i> at time <i>t</i> . The validated value of this parameter AAplanned,i,t (824 ha/year) was confirmed to be used in the quantification of net GHG emission reductions.
Aplanned,i	This data/parameter was appropriately included because it pertains to total area of planned deforestation over the baseline period for stratum <i>i</i> . The project property value of 8,240 hectares was

	correctly applied.								
ALT,i	<p>This data/parameter was appropriately included because it pertains to emissions from timber harvest in stratum i in the baseline case potentially displaced through implementation of carbon project. It correctly uses the value obtained from equation 4 in the LK-ME module, specifically parameter CBSL,XBFWC,i,t.</p> <p>Confirmed values applied during the verification were:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>ALT,i</th> </tr> </thead> <tbody> <tr> <td>2011</td> <td>81,914</td> </tr> <tr> <td>2012</td> <td>81,914</td> </tr> <tr> <td>2013</td> <td>81,914</td> </tr> </tbody> </table>	Year	ALT,i	2011	81,914	2012	81,914	2013	81,914
Year	ALT,i								
2011	81,914								
2012	81,914								
2013	81,914								
Pcomi	<p>This data/parameter was appropriately included because it pertains to commercial volume as a percent of total aboveground volume in stratum i. This parameter was checked at validation to be sure that commercial species likely to be harvested are reasonable and it correctly references average total biomass. The verification confirmed that the validated value of 10.42% was applied in the quantification of net GHG emission reductions.</p>								
CXB,ty	<p>This data/parameter was appropriately included because it pertains to carbon emission due to displaced timber harvests in the baseline scenario in stratum in time t. It correctly uses the value obtained from the LK-ME module, specifically parameter VBSL,EX,i,t (m3) or volume of timber projected to be extracted from within the project boundary during the baseline in stratum i at time t; m3.</p>								
CWP100,i	<p>This data/parameter was appropriately included because it pertains to carbon stocks entering the wood products pool at the time of deforestation that is expected to be emitted over 100-years from stratum i; t CO₂-e ha⁻¹. The validated value was confirmed to be correctly computed from Equation 2 within module CP-W. The verification confirmed that the validated value of 7.05 tons CO₂/ha was applied in the quantification of net GHG emission reductions.</p>								
CWP,i	<p>This data/parameter was appropriately included because it pertains to carbon stocks entering wood products pool at time of deforestation from stratum i. The value as confirmed to be correctly computed from Equation 2 within module CP-W. The verification confirmed that the validated value of 8.09 tons CO₂/ha was applied</p>								

	in the quantification of net GHG emission reductions.
NewR _{i,t}	This data/parameter was appropriately included because it pertains to new calculated forest clearance in stratum <i>i</i> at time <i>t</i> by the baseline agent of the planned deforestation where no leakage is occurring. The value as confirmed to be correctly computed from Equation 4 within module LK-ASP. A value of 0 was applied for the monitoring period.
PMP _i	This data/parameter was appropriately included because it pertains to merchantable biomass as a proportion of total aboveground tree biomass for stratum <i>i</i> within the project boundaries. Verification Team found the value to be correctly computed from merchantable and total aboveground biomass. This parameter is required to be monitored at least every 5 years or if verification occurs on a frequency of less than every 5 years examination must occur prior to any verification event.

The Verification Team also reviewed a comprehensive assessment of data collection and storage procedures to ensure all opportunities for error in transposition of data between storage devices were minimized.

Uncertainty was assessed as required. The Verification Team recalculated the statistics independently to confirm the accuracy of the reported precision and confirmed no confidence deduction was required.

Field data collection utilized appropriate principles of forestry data collection, including appropriate tools and methods. Collected data was handled appropriately, including a structured process for QA/QC. Analysis of collected data used appropriate formulas, conversions, and parameters, supported by scientific literature. Where ranges of parameters exist, or other types of formulaic uncertainty, appropriately conservative values were used in data analysis.

4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals

During ESI’s verification, the evidence provided by the Project Proponent was sufficient in quantity and quality to support the determination of GHG emission removals reported by the project. The Project Proponent took the measures appropriate to ensure the reliability of evidence provided.

The evidence provided to determine emission reductions reported in the monitoring report included values, notations, units and sources. This evidence has been cross checked with supplied emission reduction calculation spreadsheets and a comprehensive GIS dataset. The procedure for data recording, transfer and final transposition was also verified and found to be in compliance with the monitoring plan outlined in the PD. The verification team was able to confirm through cross checks that adequate monitoring mechanisms are in place where the required parameters need to be monitored.

Interviews conducted (oral evidence) are outlined in Section 2.3 above, and the final documents received from the Project Proponent supporting the determination of GHG removals can be viewed in Appendix A.

4.4 Non-Permanence Risk Analysis

The *Laguna Seca Project* utilized the VCS non-permanence risk analysis tool to assess risk according to internal risk, external risk, natural risk, and mitigation measures for minimizing risk. At all levels, the Verification team evaluated the rationale, appropriateness, and justifications of risk ratings chosen by project proponents. Each risk factor was thoroughly assessed for conformance. Any identified NCR and/or CL findings related to the AFOLU Non-Permanence Risk Tool/Report are presented in Appendix B. The final score was calculated to be 23%. A brief review of each factor is found in the table below:

Factor	Rationale & Quality	Conclusion
Internal Risks		
Project Management	<p>No planting takes place on the project. = n/a</p> <p>Patrols of the project are required to prevent illegal use of the project area, noting that due to the remoteness of the project area the risk of encroachment exists but is low. = 2</p> <p>Management includes individuals with significant experience in carbon project management and tropical timber management. Multiple members with 5+ years experience. This includes the development and validation/verification of 2 previous carbon projects in Belize (Boden Creek and Bull Run). = 0</p> <p>Management team has presence in Belize and within 5 kilometres of the project site. = 0</p> <p>Management team has conducted two other AFOLU VCS projects in Belize both validated and verified the Boden Creek Forest Carbon Project and the Bull Run Forest Carbon Project. Information may be found on the Verified</p>	Score of -2 is appropriate given justifications.

	<p>Carbon Standard web site. = -2</p> <p>Based on monitoring, necessary adjustments to the project will be made and recorded to achieve the climate, community, and biodiversity goals of the project. = -2</p>	
Financial Viability	<p>A copy of the Laguna budget was submitted to auditors where cash flow breakeven point was determined. It was confirmed that "Project cash flow breakeven point is 4 years or less from the current risk assessment." Costs and revenue assumptions as part of the breakeven analysis were deemed reasonable based on invoices provided. = 0</p> <p>As indicated above, cashflow projections documented in project plan reviewed by audit team. Cash out calculated at 100% of cash needed to get to year 2017 when timber harvest begins. = 0</p> <p>Project has available as callable financial resources at least 50% of total cash out before project reaches breakeven. This was demonstrated through the audited financial statements through 2014 provided by the client. = -2</p>	Score of 0 is appropriate given the justifications.
Opportunity Cost	A comparison of the with and without project scenarios was provided by the project proponent. The most conservative score possible score of 8 has been chosen. = 8	A score of 8 is appropriate given the justifications.
Project Longevity	Project longevity without legal agreement/requirement to continue the management practice = 18	A score of 18 is appropriate given the justifications.
Total Internal Risks = 24		
External Risks		
Land And Resource Tenure	Ownership rights and resource/access rights were confirmed through review of land certificates obtained from the project proponent and verified at the Belize government offices. Contracts between Gallon Jug and The Forestland Group were also reviewed. = 0	A score of 0 is appropriate given the justifications.

	<p>No disputes were identified by the project proponent, nor through the verification interviews and review. = 0</p> <p>No mitigation score was claimed.</p>	
Community Engagement	<p>No households were confirmed to live within the project area. Interviews confirmed the only persons dependant/reliant on the project area were the timber crews and millworkers who would have used the timber harvested. The majority of the persons interviewed reported having been consulted by the project proponent. Additionally, based on the review of the project it is not believed that the local community is reliant on the project area for food, fodder, fuel, etc. = 0</p> <p>No mitigation score was claimed by the project.</p>	A score of 0 is appropriate given the justifications.
Political Risk	<p>The governance score for Belize was recalculated by the verifier and confirmed to be -0.09. = 2</p> <p>Mitigation score was claimed as Belize is participating in the FCPF readiness funding process. = -2</p>	A score of 0 is appropriate given the justifications.
	Total External Risks	0
Natural Risks		
Fire, pests and disease, extreme weather, geologic risk	<p>Fire – The project proponent provided Meerman and Sabido (2001) as evidence of significance and likelihood. This reference was confirmed during verification to be appropriate to the project area. Additionally TFG mitigates by having crews on hand to fight fires which was confirmed by the verifier. = 1</p> <p>Pests and disease – the significance and likelihood of occurrence, so a conservative score was applied. This was confirmed during the verification to be appropriately conservative. = 1</p> <p>Extreme weather – Hurricanes were</p>	A score of 3 is appropriate given the justifications.

	<p>determined to be a risk factor based on CCRIF data. The document provided for CCRIF's Country Risk Profile for Belize appears to support a low risk of hurricanes for the project site. Based on this document score is appropriate. = 1</p> <p>Geologic risk – the project indicated that volcanoes do not exist in Belize and that “serious” earthquakes do not occur. Upon review of the literature available on Belize no volcanoes could be found and no recent earthquakes of any significance could be located.</p>	
	Total Natural Risks	3
Overall Risk Rating = 27		

5 VERIFICATION CONCLUSION

After review of all project information, procedures, calculations, supporting documentation and site visits, ESI confirms that the monitoring conducted by the Project Proponent, along with the supporting Monitoring Report, are accurate and consistent with all aforementioned VCS criteria, the validated PD, and the selected methodology (VM0007, v1.5). ESI confirms that the *Laguna Seca Forest Carbon Project Monitoring Report* (v01.7 dated 02 May 2016) has been implemented in accordance with the validated PD.

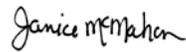
ESI confirms all verification activities, including objectives, scope and criteria, level of assurance, monitoring and project documentation adherence to VCS Version 3 (and all associated updates), as documented in this report are complete. ESI concludes without any qualifications or limiting conditions that *The Laguna Seca Forest Carbon Project*, meets the requirements of VCS Version 3 and all associated updates for the first monitoring period.

The GHG assertion provided by CarbonCo and verified by ESI has resulted in the GHG emissions reduction or removal of 704,983 tCO₂ equivalents by the project during the verification period/reporting period (01 January 2011 – 31 December 2013). This value is gross of the 27% (216,887 tCO₂ equivalents) buffer withholding based on the non-permanence risk assessment tool. This results in 488,096 tCO₂ equivalents of credits eligible for issuance as VCU's.

Verified GHG emission reductions and removals in the above verification period (01 January 2011 – 31 December 2013):

Years*	Estimated baseline emissions or removals (tCO _{2e})	Estimated project emissions or removals (tCO _{2e})	Estimated leakage emissions (tCO _{2e})	Risk buffer (%)	Deductions for AFOLU pooled buffer account (tCO _{2e})	GHG credits eligible for issuance as VCUs (tCO _{2e})
2011	261,777	0	32,776	27%	70,680	158,331
2012	267,760	0	32,776	27%	72,296	162,699
2013	273,743	0	32,776	27%	73,911	167,066
Totals	803,279	0	98,297		216,887	488,096

Submittal Information

Report Submitted to:	Verified Carbon Standard Association 1730 Rhode Island Ave. NW, Suite 803, Washington, D.C. 20036 Forest Carbon Offsets 600 Cameron Street Alexandria, VA 22314 USA
Report Submitted by:	Environmental Services, Inc. - Corporate Office 7220 Financial Way, Suite 100 Jacksonville, Florida 32256
ESI Lead Verifier Name and Signature	 Shawn McMahon Lead Verifier
ESI Division Regional Technical Manager Name and Signature	 Janice McMahon Sr. Vice President/Technical Director Forestry, Carbon and GHG Services Division
Date:	23 May 2016

SM/JM/rb/VO14009.00/VCS Verification Report-Final-20160523.doc

K pf 05/223/16f

APPENDIX A – DOCUMENTS RECEIVED/REVIEWED

Documents received 17 May 2014

- Laguna Seca VCS CCB Project Description Ver 1 0_5 15 2014.docx
- GJ Carbon Table Phase I Final Revised ver 2.xlsx
- Laguna Seca Inventory Data 10-18-13 revised.xlsx

Documents received 20 May 2014

- Cane 1-13.pdf
- Cane 1-22.pdf
- Cane 14-46.pdf
- Carbon Project Handout_combined.pdf
- Gallon Jug Estates Wamil Sugar Cane Project Plan.docx
- Gallon Jug Sugar Plantation Project (42.9 KB).msg
- Gallon Jug.kmz
- Gallon Jug_Biomass_Final Report Version 1.0 March 1_2012.pdf
- GJ Carbon Table Phase I Final Revised ver 2.xlsx
- GJ Sugar Cane Plan Ver 5.xlsx
- GJ_community_poster_20120113.pptx
- Laguna Seca Inventory Report 10-18-13.pdf
- Laguna Seca Stakeholder Report 1-30-14.pdf
- Laguna Seca VCS CCB Project Description Ver 1 1 5-20-14.docx

Documents received 26 May 2014

- VCS Risk Report Calculation Tool, v3.0 Completed Ver 1.xls
- Belize Governance Scores 2012.xlsx
- GJ Carbon Table Phase I Final Revised ver 2.xlsx
- GJ Project Plan Final Ver 2.xlsx
- Laguna Seca VCS CCB Project Description Ver 1.1 1 5-26-14.docx

Documents received 29 May 2014

- Laguna Seca VCS CCB Project Description Ver 1.1 1 5-26-14.pdf

Documents received 04 June 2014

- VCS Risk Report Calculation Tool, v3.0 Completed Ver 1.xls
- CA_Ecosystems_Map_Vol1.pdf
- konrad 1996 Hurricanes.pdf
- Laguna Seca VCS Non-Permanence Risk Report Template Short, v3.0.pdf

Documents received 10 June 2014

- Laguna Seca VCS Monitoring Report Template, v3.3_0.pdf
- GJ Carbon Table Phase I Final Revised ver 2.xlsx
- Laguna Seca Inventory Report 10-18-13.pdf

Documents received 17 June 2014

- Laguna Seca VCS Non-Permanence Risk Report Template Short, v3.0.doc
- Laguna Seca VCS CCB Project Description Ver 1.1 1 5-26-14.docx
- Laguna Seca VCS Monitoring Report Template, v3.3_0.doc

Documents received 20 June 2014

- Property_boundaries_Laguna.pdf
- Lagune_Seca_Survey

- Lagune_Seca_Survey\Laguna_Seca_Survey.shx
- Lagune_Seca_Survey\Laguna_Seca_Survey.cpg
- Lagune_Seca_Survey\Laguna_Seca_Survey.dbf
- Lagune_Seca_Survey\Laguna_Seca_Survey.prj
- Lagune_Seca_Survey\Laguna_Seca_Survey.sbn
- Lagune_Seca_Survey\Laguna_Seca_Survey.sbx
- Lagune_Seca_Survey\Laguna_Seca_Survey.shp
- Lagune_Seca_Survey\Laguna_Seca_Survey.shp.xml

Documents received 20 June 2014 (from CCB Public comment)

- Comments_received_on_Laguna_Seca_Forest_Carbon_Project_6-20-2014.pdf

Documents received 24 June 2014

- Laguna Seca VCS CCB Project Description Ver 1.1 1 6-23-14.docx
- Laguna Seca Land Cover - June24_2014.jpg
- GIS Work - June 24 2014
 - Lower_Wamil_June24.shx
 - Lower_Wamil_June24.dbf
 - Lower_Wamil_June24.prj
 - Lower_Wamil_June24.sbn
 - Lower_Wamil_June24.sbx
 - Lower_Wamil_June24.shp
 - Lower_Wamil_June24.shp.xml

Documents received 26 June 2014

- R-PP_BELIZE_June1_FINAL GIZ.docx

Documents received 01 September 2014

- Gallon Jug Carbon Project Contract Signed08312014.pdf

Documents received 04 March 2015

- McConnell et al 2010 http://www.ers.usda.gov/amber-waves-2010-september-world-sugar-price-volatility-intensified-by-market-and-policy-factors_.pdf
- Background Documentation
 - GJ Carbon Table Phase I Final Revised ver 7.xlsx
 - Baseline Evidence
 - Tons Sugar per Tons Cane.pdf
 - BEL Annual Report 2010.pdf
 - Belcogen Article.pdf
 - Baseline Evidence\Cane 1-13.pdf
 - Cane 1-22.pdf
 - Cane 14-46.pdf
 - determinants-of-interest-rate-spreads-in-belize.pdf
 - Eastern Caribbean Central Bank Key Interest Rates Across the ECCU, CARICOM, and the USA.pdf
 - Electricity Prices in Belize _ Belize Guide_ Your Guide to Belize_ Belize.pdf
 - Eval of Biomass Gasification Equipment.pdf
 - Gallon Jug Estates Wamil Sugar Cane Project Plan.docx
 - Gallon Jug Sugar Plantation Project (42.9 KB).msg
 - GJ Sugar Cane Plan Ver 4.xlsx
 - GJ Sugar Cane Plan Ver 5.xlsx
 - The BCCI Trade and Investment Zone - Primary Industries - Sugar 2009.pdf
 - Land Certificates
 - Laguna Seca Land LLC [Land Cert - Gallon Jug Block 8 Parcel 6.pdf
 - Laguna Seca Land LLC [Land Cert - Gallon Jug Block 8 Parcel 3.pdf

- Project Evidence
 - Resume - Jeff Roberson Dec. 2014.rtf
 - Gallon Jug SFMP.PDF
 - GJ Project Plan Final Ver 2.xlsx
 - JLW Vita.pdf
 - Kaarsten 2014CV.pdf
 - LSL Long-Term Private Forest Permit.pdf
- CMI Allometric_Equation_Test_Trees with allometric equation tests.xlsx
- Copy of Laguna Seca Inventory Data 2-27-15 Chave I-5.xlsx
- CCB Audit
 - 009_00-FCO-VCS CCB Laguna Seca_CCBRound1_Final.docx
 - G1.8
 - Olivet and Asquith 2004 Northern Region of the Mesoamerican Biodiversity Hotspot; Belize, Guatemala, Mexico.pdf
 - G3.8
 - Laguna Seca Stakeholder Report 1-30-14 (2).pdf
 - Carbon Project Handout_combined.pdf
 - Gallon Jug_Biomass_Final Report Version 1.0 March 1_2012.pdf
 - GJ_community_poster_20120113.pptx
 - G3.9
 - Laguna Seca Stakeholder Report 1-30-14 (2).pdf
 - Carbon Project Handout_combined.pdf
 - Gallon Jug_Biomass_Final Report Version 1.0 March 1_2012.pdf
 - GJ_community_poster_20120113.pptx
 - G4.2
 - Resume - Jeff Roberson Dec. 2014.rtf
 - JLW Vita.pdf
 - Kaarsten 2014CV.pdf
 - G5.2
 - LSL Long-Term Private Forest Permit.pdf
 - G5.3
 - Laguna Seca Land LLC [Land Cert - Gallon Jug Block 8 Parcel 6.pdf
 - Laguna Seca Land LLC [Land Cert - Gallon Jug Block 8 Parcel 3.pdf
 - G5.6
 - Laguna Seca Land LLC [Land Cert - Gallon Jug Block 8 Parcel 6.pdf
 - Laguna Seca Land LLC [Land Cert - Gallon Jug Block 8 Parcel 3.pdf
- Maps
 - Proxy Areas for Laguna Seca.kmz
 - 7_3_2014 3_25_22 PM.gpx
 - BelizePlots.jpg
 - DSC00017 N18 deg 04.409 W88 deg 38.787.jpg
 - DSC00018 N18 deg 03.717 W88 deg 38.660.jpg
 - DSC00019 N18 deg 03.527 W88deg 38.200.jpg
 - DSC00020 N18 deg 03.289 W88 deg 37.465.jpg
 - DSC00021 N18 deg 03.020 W88 deg 36.037.jpg
 - DSC00023 N18 deg 01.945' W88 deg 40.267.jpg
 - Gallon Jug.kmz
 - GIS Work - June 24 2014.zip
 - Laguna_Seca_Survey.zip
 - Leguna Seca Land Cover - June24_2014.jpg
 - Lower_Wamil - Copy.dbf
 - Lower_Wamil - Copy.ptj
 - Lower_Wamil - Copy.sbn
 - Lower_Wamil - Copy.sbx
 - Lower_Wamil.dbf
 - Lower_Wamil.ptj

- Lower_Wamil.sbn
- Lower_Wamil.sbx
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 - Gallon_Jug_LC_Historic.kmz
 - Gallon_Jug_Project_Area_Forest_Plots.kmz
 - Leakage_Area.kmz
 - Leakage_Area_LC_2011.kmz
 - Leakage_Area_LC_2013.kmz
 - Lower_Wamil_LC_2011.kmz
 - Lower_Wamil_LC_2013.kmz
 - Lower_Wamil_Project_Area.kmz
 - Stream_Buffer_Zone_66ft.kmz
- LS_Imagery
 - 1820132191_GRef.tif.ovr
 - gls_2000_GRef.tfw
 - gls_2000_GRef.tif
 - gls_2000_GRef.tif.aux.xml
 - gls_2000_GRef.tif.ovr
 - gls_2010.img
 - gls_2010.img.aux.xml
 - gls_2010.img.xml
 - gls_2010.rrd
 - 172011_14_GRef.tfw
 - 172011_14_GRef.tif
 - 172011_14_GRef.tif.aux.xml
 - 172011_14_GRef.tif.ovr
 - 172013_83_GRef.tfw
 - 172013_83_GRef.tif
 - 172013_83_GRef.tif.aux.xml
 - 172013_83_GRef.tif.ovr
 - 182014350_GRef.tfw
 - 182014350_GRef.tif
 - 182014350_GRef.tif.aux.xml
 - 182014350_GRef.tif.ovr
 - 1820132191_GRef.tfw
 - 1820132191_GRef.tif
 - 1820132191_GRef.tif.aux.xml
- PDD, MR, RR, and supporting spreadsheet
 - Laguna Seca VCS Non-Permanence Risk Report Template Short, v3.0 Ver 1.3.doc
 - GJ Carbon Table Phase I Final Revised ver 10.xlsx
 - Laguna Seca Inventory Data 7-29-15 Ver 3.xlsx
 - Laguna Seca VCS CCB Project Description Ver 1.2 10-3-15.docx
 - Laguna Seca VCS Monitoring Report Template, v3.3_0 Ver 1.3.doc
- Risk_Tool v3.2
 - Line 52

- Laguna Seca Stakeholder Report 1-30-14 (2).pdf
- Carbon Project Handout_combined.pdf
- Gallon Jug_Biomass_Final Report Version 1.0 March 1_2012.pdf
- GJ_community_poster_20120113.pptx
- Line 24
 - GJ Sugar Cane Plan Ver 5.xlsx
 - Copy of LSL 2015 budget MH with project projections ver 3.xlsx

Documents received 16 October 2015

- VO14009_Laguna_VM0007_Round 3 NCRs_Final FCO Responses Ver 1.xlsx

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- Proxy Areas for Laguna Seca.kmz
- Belize divisions. Level 1.kmz
- Belize_Protected_Areas.kmz
- Kwok GALLON JUG SUGAR PLANTATION PROJECT BRIEF.doc

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- RE carbon project.msg
- GJ Carbon Table Phase I Final Revised ver 10.xlsx
- Laguna Seca Carbon Table Ver 11.xlsx
- Laguna Seca Carbon Table Ver 12.xlsx
- Laguna Seca Inventory Data 7-29-15 Ver 3.xlsx

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- Line 63
 - NPV analysis for ecotourism at Wamil.xlsx
 - Copy of LSL 2015 budget MH with project projections ver 3.xlsx
 - GJ Sugar Cane Plan Ver 5.xlsx
 - Laguna Seca NPV Comparison.xlsx
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 - Asonuma et al 2014 Sovereign Debt Restructuring in Belize.pdf

Documents received 07 December 2015

- Laguna Seca VCS Non-Permanence Risk Report Template Short, v3.0 Ver 1.4.pdf
- 009_Laguna_VM0007_FindingsRd4_20151118.xlsx
- Laguna Seca Carbon Table Ver 13.xlsx
- Laguna Seca VCS CCB Project Description Ver 1.2 11-27-15.docx
- Laguna Seca VCS CCB Project Description Ver 1.2 11-27-15.pdf
- Laguna Seca VCS Monitoring Report Template, v3.3_0 Ver 1.4.doc
- Laguna Seca VCS Monitoring Report Template, v3.3_0 Ver 1.4.pdf
- Laguna Seca VCS Non-Permanence Risk Report Template Short, v3.0 Ver 1.4.doc

Documents received 25 January 2016

- NPV analysis for ecotourism at Wamil Ver 2.xlsx
- Copy of LSL 2015 budget MH with project projections ver 4.xlsx
- GJ Sugar Cane Plan Ver 6.xlsx
- Laguna Seca NPV Comparison Ver 2.xlsx

Documents received 29 January 2016

- VO14009_Laguna_VM0007_Round 5 NCRs_Final FCO Responses-1.xlsx
- VO14009_Laguna_VM0007_Round 5 NCRs_Final FCO Responses-2.xlsx

Documents received 01 February 2016

- VO14009_Laguna_VM0007_Round 5 NCRs_Final FCO Responses.xlsx
- Laguna Seca Carbon Table Ver 15.xlsx
- Laguna Seca VCS CCB Project Description Ver 1.3 1-24-16.docx
- Laguna Seca VCS Monitoring Report Template, v3.3_0 Ver 1.5.doc
- Laguna Seca VCS Non-Permanence Risk Report Template Short, v3.0 Ver 1.5 1-22-16.doc

Documents received 15 February 2016

- Carbon Letter.pdf

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- Laguna Seca VCS Non-Permanence Risk Report Template Short, v3.0 Ver 1.6 2-12-16.doc
- Carbon Letter.pdf
- Copy of VO14009_Laguna_VM0007_Round 6 NCRs_Final FCO Responses.xlsx
- Laguna Seca Carbon Table Ver 16.xlsx
- Laguna Seca VCS CCB Project Description Ver 1.4 2-15-16.docx

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- Copy of VO14009_Laguna_VM0007_Round 6 NCRs_Final FCO Responses.xlsx

Documents received 02 March 2016

- Laguna Seca VCS Non-Permanence Risk Report Template Short, v3.0 Ver 1.6 2-12-16.doc
- Copy of VO14009_Laguna_VM0007_Round 7 NCRs_Final FCO Response.xlsx
- FAO 1994 Definition and Classification of Commodities 3 Sugar Crops and Sweeteners and Derived Products.pdf
- Laguna Seca Carbon Table Ver 17.xlsx
- Laguna Seca VCS CCB Project Description Ver 1.5 2-27-16.docx

Documents received 09 March 2016

- Laguna Seca VCS Non-Permanence Risk Report Template Short, v3.0 Ver 1.7 3-9-2016.doc
- Laguna Seca Carbon Table Ver 17.xlsx
- Laguna Seca VCS CCB Project Description Ver 1.6 3-9-2016.docx

Documents received 17 March 2016

- Copy of VO14009_Laguna_VM0007_checklist_R9ONLY_GENERAL_ITEMS_20160317 FCO Responses.xlsx
- Laguna Seca VCS CCB Project Description Ver 1.7 3-17-2016.docx
- Laguna Seca VCS CCB Project Description Ver 1.7 3-17-2016.pdf

Documents received 18 March 2016

- Laguna Seca VCS CCB Project Description Ver 1.7 3-17-2016.pdf
- Copy of VO14009_Laguna_VM0007_checklist_R9ONLY_GENERAL_ITEMS_20160317 FCO Responses.xlsx
- Laguna Seca VCS CCB Project Description Ver 1.7 3-17-2016.docx

Documents received 30 March 2016

- Laguna Seca VCS Monitoring Report Template, v3.3_0 Ver 1.6.pdf
- Copy of VO14009_Laguna_VM0007_Round 7 NCRs_Final FCO Response.xlsx
- Laguna Seca Carbon Table Ver 18.xlsx
- Laguna Seca VCS Monitoring Report Template, v3.3_0 Ver 1.6.doc

Documents received 02 May 2016

- Laguna Seca VCS Monitoring Report Template, v3.3_0 Ver 1.7.pdf
- Laguna Seca VCS Monitoring Report Template, v3.3_0 Ver 1.7.doc

Documents received 20 May 2016

- Laguna Seca VCS Monitoring Report Template, v3.3_0 Ver 1.7a.pdf
- Laguna Seca Carbon Table Ver 18a.xlsx
- Laguna Seca VCS Monitoring Report Template, v3.3_0 Ver 1.7a.doc

APPENDIX B – NCRS/CL/OFIS