



**Verified Carbon
Standard**

PROJECT BIGCOAST FOREST CLIMATE INITIATIVE



Document Prepared by Vanessa Mascorro

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Summary:

This report describes the validation and verification audit of the BigCoast Forest Climate Initiative (“the project”), an Improved Forest Management (IFM) project located in British Columbia, Canada, that was conducted by SCS Global Services. The purpose of the validation engagement was to conduct an independent assessment of the project to determine whether the project complies with the VCS Program rules. The purpose of the verification engagement was to conduct, in accordance with the VCS rules, an ex-post independent assessment of the greenhouse gas (GHG) emission reductions and removals that have occurred as a result of the project during the monitoring period from 01-January-2018 to 31-December-2021 (“the verification period”). The validation and verification engagements were carried out through a combination of document review, interviews with relevant personnel and on-site inspections. As part of the validation and verification engagements 16 findings were raised: 5 Non-Conformity Reports, 10 New Information Requests and 1 Observation. These findings are described in Appendix A of this report. The project complies with the VCS validation and verification criteria, and SCS holds no restrictions or uncertainties with respect to the compliance of the project with the validation and verification criteria.

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1 INTRODUCTION

1.1 Objective

A common objective of validation and verification was to assess the non-permanence risk analysis. Other validation and/or verification objectives were established in accordance with Section 4.1 of the VCS Standard (see the below Section 1.2 for full reference) and Sections 2.1.1 and 2.1.2 of the VCS Validation & Verification Manual, V3.2, for validation and verification, respectively, as set out below.

1.1.1 Objective of Validation

In accordance with the VCS Standard, SCS conducted an independent assessment of the project to determine whether the project complies with the VCS Program rules. In accordance with the VCS Validation & Verification Manual, the objectives of the validation engagement were to assess

- The project's conformance to the VCS rules.
- The project's conformance to the applied methodology, including the procedure for the demonstration of additionality specified in the methodology.
- The likelihood that the methods and procedures set out in the project description will generate verifiable GHG data and information when implemented.

The other objective of the validation engagement was to assess the non-permanence risk analysis.

1.1.2 Objective of Verification

In accordance with VCS Standard, SCS carried out an ex-post independent assessment of the GHG emission reductions and removals that have occurred as a result of the project during the verification period, conducted in accordance with the VCS Program rules. In accordance with the VCS Validation & Verification Manual, the objectives of the verification engagement were to evaluate the monitoring report and assess

- The extent to which methods and procedures, including monitoring procedures, have been implemented in accordance with the validated project description (this included assessing conformance with the monitoring plan).
- The extent to which GHG emission reductions and removals reported in the monitoring report are materially accurate.

1.2 Scope and Criteria

1.2.1 Scope

As defined in accordance with Section 4.3.4 of ISO 14064-3:2006, the scope was defined to include

- The project and its activities.
- The baseline scenario(s) applicable to the project.
- The carbon pools and/or greenhouse gases included in the project boundary.
- The crediting period and the verification period.

1.2.2 Criteria

In accordance with Section 4.1.8(2) of the VCS Standard (see below for full reference), the criteria for validation and verification included the following documents:

- VCS Standard, Version 4.3, 22 June 2022
- VCS Program Definitions, Version 4.2, 22 June 2022
- VCS Program Guide, Version 4.2, 22 June 2022
- VCS-approved methodology VM0012 Improved Forest Management in Temperate and Boreal Forests (LTPF), Version 1.2, 23 July 2013

1.3 Level of Assurance

In accordance with Section 4.1.8(1) of the VCS Standard, the level of assurance was reasonable.

1.4 Summary Description of the Project

The project is located in coastal British Columbia, Canada. It has been developed by Mosaic Forest Management Corporation (Mosaic) to create greenhouse gas (GHG) emission reductions and removals by converting privately owned operational forest lands to protected forest lands. Mosaic is the timberlands manager for TimberWest Forest Corporation (TimberWest) and Island Timberlands Limited Partnership (Island Timberlands), managing forest planning, operations, and product sales.

The project area encompasses properties owned by TimberWest and Island Timberlands located in the West Coast and South Coast Natural Resource Regions (as defined by the Government of British Columbia Ministry of Forests, Lands, Natural Resource Operations and Rural Development) consisting of an area of approximately 200,000km².

Current project activity instances (defined as the BigCoastForest Climate Initiative) are within 44,022ha of TimberWest and Island Timberlands private forest lands located within Managed Forests 7, 8, 19, 21, 65, 68, 74, and 76 (as established under the Private Managed Forest Land Act of British Columbia). This forest carbon project area is non-contiguous, with parcels located throughout Vancouver Island, Cortes Island, and Haida Gwaii. Old forests (aged >120 years), ecologically significant areas, and culturally important areas were targeted for the forest carbon project.

2 VALIDATION AND VERIFICATION PROCESS

2.1 Method and Criteria

The validation and verification engagements were conducted through a combination of document review, interviews with relevant personnel, on-site inspections, and field assessment, as discussed in Sections 2.2 through 2.4 of this report. At all times, an assessment was made for conformance to the criteria described in Section 1.2.2 of this report. As discussed in Section 2.5 of this report, findings on the document review, the on-site visit, field assessments and interviews were issued to ensure conformance to all requirements.

The audit team created a sampling plan following a proprietary sampling plan template developed by SCS, that was used for the entire audit, including the on-site inspections, and field assessment. The audit team identified areas of “residual risk”—those areas where there existed risk of a material discrepancy (either in terms of non-conformance to the validation/verification criteria or in terms of errors, omissions, and misrepresentations that, in aggregate, exceeded the materiality threshold established for the project as a percentage of the total reported GHG emission reductions and/or removals) that was not prevented or detected by the controls of the project. Sampling and data testing activities were planned to address areas of residual risk throughout the audit, including the areas of residual risk for on-site inspections and field assessment. The audit team then created a validation and verification plan that took the sampling plan into account, including the scope, criteria, de level of assurance, the treatment of materiality, and other considerations taken into account throughout the planning of the audit, the on-site visit and field assessments. This approach is justified as it has been designed in accordance with Section 4.4.3 of ISO 14064-3:2006 and the guidance provided in Annex A.2.4.6 of the same document.

2.2 Document Review

The joint Project Description and Monitoring Report (version 2.7 dated 27 October 2022; “PD”) and non-permanence risk report (version 1.0 dated 22 June 2022; “NPRR”) were carefully reviewed for conformance to the validation/verification criteria. The following additional documentation, provided by project personnel in support of the aforementioned documents, was also reviewed by the audit team:

Document	File Name	Ref.
Non Permanence Risk Report	<ul style="list-style-type: none"> Mosaic - VCS-Risk-Report-Calculation-Tool-v4.0 (Sept '22) - Revised.xlsm 	1

	<ul style="list-style-type: none"> VCS-Non-Permanence-Risk-Report-Short-Form-BigCoast v1.0 (Jun '22).pdf 	
Adaptive Management Plan	<ul style="list-style-type: none"> Climate Solution Strategy_2022-04_signed.pdf Timber Supply Area procedures.pdf 	2
Financial NPV Cash Flow Analysis	<ul style="list-style-type: none"> Non-Perm. Risk Report - NPV Analysis (incl Project Cash Flow Forecast) - 2022-09-06.xlsx 	3
Carbon price	<ul style="list-style-type: none"> The BigCoast Forest Climate Initiative (“BigCoast”) Pricing 	4
Ownership documents	<ul style="list-style-type: none"> MF7 Letter to Land Reserve Commission.pdf Management Commitment for MF8.pdf Island Timberlands Management Commitment MF19_LR.pdf Island Timberlands Management Commitment MF21_LR.pdf MF 65 LRC Ltr to BCA.pdf Management Commitment for MF65.pdf Letter to Land Reserve Commission MF 68.pdf Island Timberlands Management Commitment MF74_LR.pdf Mosaic_Land Title Agreement_1.pdf¹ Mosaic_Land Title Agreement_2.pdf Mosaic_Land Title Agreement_3.pdf MOSAIC - ITLP- Sales and Services Agreement Amended and Restated-FINAL.pdf MOSAIC TW-Sales and Services Agreement Amended and Restated-FINAL.pdf 	5
Parcel IDs	<ul style="list-style-type: none"> Mosaic MF PIDs Summary (Aug '22).xlsx 	6
Stakeholder consultations	<ul style="list-style-type: none"> 20220425 - Duncan Open House Attendees.pdf 20220425 - Qualicum Open House Attendees.pdf 20220504 - Port Alberni Open House Attendees.pdf 20220510 - Haida Gwaii Open House Attendees.pdf BigCoast - Feedback Summary (May '22).xlsx IMG_0108.MOV Newsletter Email - News and Views from Mosaic _ Spring 2022.msg 	7
SOP GHG Monitoring	<ul style="list-style-type: none"> GreenRaise SOP-GHG Monitoring ((Jul'22) v12.pdf 	8
SOP Stakeholder Consultation	<ul style="list-style-type: none"> GreenRaise SOP-Stakeholder Consultation+Engagement (May '22).pdf 	9
VCUs calculation workbook	<ul style="list-style-type: none"> Final GHG Estimate (Sept 6, 2022).xls 	10

¹ The name of the land title agreements has been changed for confidentiality reasons.

HWP emissions calculation workbook	<ul style="list-style-type: none"> • Mosaic - BSL HWP (Sept '22).xlsx 	11
Woodstock harvesting data	<ul style="list-style-type: none"> • 2022 Ecora Woodstock Final PRJ.xlsb 	12
Logging & Transportation emissions calculation workbook	<ul style="list-style-type: none"> • Emissions_BSL_Estimate (Aug '22).xlsx 	13
Uncertainty	<ul style="list-style-type: none"> • VM0012 - Uncertainty Calculator (Aug'22).xlsx 	14
Leakage	<ul style="list-style-type: none"> • BigCoast Activity Shifting Leakage-(Jun '22).xlsx 	15
Inventory carbon calculations	<ul style="list-style-type: none"> • AU2 Volume-Biomass Calculations.xlsx, ...to AU22 Volume-Biomass Calculations.xlsx 	16
Carbon wood density	<ul style="list-style-type: none"> • CWD - decay constants.xlsx 	17
Carbon and inventory dataset	<ul style="list-style-type: none"> • AU Areas CarbonProject_Aug1722.xlsx 	18
Modeled disturbances by area	<ul style="list-style-type: none"> • BC_BSL_areadist.xls 	19
Modeled delta ecosystem results	<ul style="list-style-type: none"> • BigCoast_CBM_Results(May '22).xls 	20
Model input data	<ul style="list-style-type: none"> • Snag.xlsx • SamplePlots_TSACarbon_JOIN_May0922.xlsx • Merch.xlsx 	21
Field inventory data	<ul style="list-style-type: none"> • 20220708-Compiled ZIMFOR Tree and Plot Data-KOZAK.pdf • Input - CWD_TRANSECT_COMPILER_43PLOTS.xlsm • Input - ZIMFOR_COMP_V3.xlsx • BigCoast_12M_03_Jul2122.pdf • BigCoast_21R_51_Jul2122.pdf • VCS_SDVista_MOSAIC_BigCoast_SiteVisit_GearEquip_List_V1-1_071422.xlsx 	22
Spatial information of project area	<ul style="list-style-type: none"> • MonitoringPlots_20220630.gdb • Project_Area_AnalysisUnits_20220630.kmz • ProjectArea_BigCoast.kml • Project_Area_Boundary_20220630.kmz • Project_Area_Instances_20220630.kmz • BigCoast_AnalysisUnits_Aug0922.shp • BigCoast_ProjectInstances_May0522.shp • Mosaic_BigCoast.mxd • BigCoastSpatial_Aug1822.gdb 	23
Project proponent resumes	<ul style="list-style-type: none"> • Corporate Resume - Zimmfor+GreenRaise_2022-07.pdf 	24

MOSAIC Internal Reports	<ul style="list-style-type: none"> • 20220407_Mosaic_2021_Sustainability_Progress_Report.pdf • An Analysis and Appraisal of the Total MOSAIC Forest Management Corporation Timberland Ownership by Timberland Appraisal.pdf • Mosaic Timber Supply Analysis.pdf 	25
Environmental Policy	<ul style="list-style-type: none"> • Environmental+Policy.pdf 	26
Indigenous relations policy	<ul style="list-style-type: none"> • Indigenous+Relations+Policy.pdf 	27
Progressive Aboriginal Relations Factsheet	<ul style="list-style-type: none"> • Mosaic-FactSheet-PAR_Sep09-2020_final.pdf 	28
Progressive Aboriginal Relations Silver Level Certification	<ul style="list-style-type: none"> • Mosaic PAR-Silver (exp. Sep 2023).pdf 	29
MOSAIC SFI Certification 2022	<ul style="list-style-type: none"> • 2022 May Mosaic SFI-FM CERT.pdf 	30
IPCA agreement	<ul style="list-style-type: none"> • 20211222 - IPCA P159 Mosaic Forest Management Alliance Agreement_executed_.pdf 	31
Community Salmon Program support	<ul style="list-style-type: none"> • Final Report - Mosaic CSP 2021.pdf 	32
MOSAIC Discrimination policy	<ul style="list-style-type: none"> • CORPWorkplaceBullyingPolicy2019.pdf 	33
Emergency Preparedness Response Plan (EPRP)	<ul style="list-style-type: none"> • EPRP Pkg_2022-05.pdf 	34
Environmental Management System	<ul style="list-style-type: none"> • EMS Manual_2022-03.pdf • EMS Manual_App.1_Aspect Lists_2020-04.pdf • EMS Manual_App.2_SFI Matrix_2022-03.pdf • EMS Manual_App.3_Env Objectives_2022-03.pdf 	35
Evidence - Managed forest inspections	<ul style="list-style-type: none"> • MF 7 Inspection TW 2018.pdf • MF 8 Inspection TW 2019.pdf • MF 19 Inspection IT 2020.pdf • MF 21 FieldSampleListing IT 2021.pdf • MF 21 Inspection IT 2021.pdf • MF 21 Photos IT 2021.pdf • MF 65 Inspection TW 2020.pdf • MF 76 Inspection TW 2020.pdf 	36
Inventory manual	<ul style="list-style-type: none"> • BC Cruise Compilation Manual.pdf 	37
Government official reports	<ul style="list-style-type: none"> • The Economic Impact of British Columbia's Forest Sector.pdf • National Resources Canada Report.pdf • Province of BC 2022 BC Coast Appraisal Manual.pdf 	38

Carbon Budget Model of the Canadian Forest Sector: CBM-CFS3	<ul style="list-style-type: none"> • Kurz et al 2009: CBM-CFS3: a model of carbon-dynamics in forestry and land-use change implementing IPCC standards.pdf • Kull S et al 2019: Operational-Scale Carbon Budget Model of the Canadian Forest Sector (CBM-CFS3) v1.2 	39
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Following the review of above-listed documentation, the audit team held a walk-through call with the project proponent to receive a comprehensive overview of the PD and Quantification Workbook.

2.3 Interviews

The process used in interviewing the project personnel was a process wherein the audit team elicited information from project personnel regarding (1) the work products provided to the audit team in support of the PD, MR and NPRR; (2) actions undertaken to ensure conformance with various requirements and (3) project activities as planned and implemented.

The following personnel associated with the project proponent and/or implementing partner were interviewed:

Individual	Affiliation	Role	Date(s) Interviewed
Jason Zimmermann	Zimmfor	Project implementation	Throughout
Dave Brown	Zimmfor	Methodology application	Throughout
Marika Forge	Zimmfor	Monitoring, Safeguards	Throughout
Zoie Richards	Zimmfor	Monitoring	Throughout
Marlo Zimmermann	Zimmfor	NPRR, Financial	Throughout
Alexandra Shaw	Zimmfor	Spatial & remote sensing	Throughout
David Belezny	Mosaic	Manager, Hydrology & Terrain	Throughout
Sager Bradley	Mosaic	Summer Student	Throughout
Sean Deno	Independent contractor	Field technician	26 July 2022

Dave Judson	LadySmith Community Watershed	Watershed board member	26 July 2022
Pam Jorgensen	Mosaic	Land Use Forester	26 July 2022
Phil O'Connor	Private Managed Forest Council	Executive Director	27 July 2022
Colin Koszman	Mosaic	Land Use Forester	27 July 2022
Jimmie Hodgson	Mosaic	Senior Manager of Forestry Operations	27 July 2022
Domenico Iannidinardo	Mosaic	VP Forest & Climate and Chief Forester	28 July 2022
Molly Hudson	Mosaic	Director of Sustainability	28 July 2022
Mike Reagan	Mosaic	Director of Health and Safety	28 July 2022
Louise Bender	Mosaic	VP People and Administration	28 July 2022
Bill Simms	City of Nanaimo	General Manager, Engineering and Public Works	28 July 2022
Chief Gordon Planes	T'souke First Nations	Chief of the T'Sou-ke First Nation	29 July 2022
Eli Enns	IPCA	Founder and Director of Strategic Initiatives	29 July 2022

2.4 Site Inspections

The objectives of the on-site inspections were as follows:

- Select samples of data and information from field observations in order to meet a reasonable level of assurance and to meet the materiality requirements of the project, as required by Section 4.1.2 of the VCS Standard.
- Perform a risk-based review of the project area and project activities to ensure that the project, and the monitoring and quantification of GHG emission reductions and removals for the verification period, conforms to the validation/verification criteria
- Confirm the validity of information presented in the non-permanence risk report

In fulfilment of the above objectives, the audit team performed an on-site inspection of the project area on the dates 25 of July 2022 through 29 of July 2022. The main activities undertaken by the audit team were as follows:

- Interviewed project personnel (see Section 2.3 of this report) to gather information regarding the monitoring procedures, the project activities and implementation.
- Interviewed residents located in the immediate vicinity of the project area to confirm the claims of the project proponents with respect to the extent of the community engagement.
- Carried out on-site inspections of the project's measurement and/or monitoring methodologies through the following activities:
 - Interviewed local stakeholders and first nations leaders involved in the project activities to confirm the claims of the project proponents with respect to the extent of community engagement and to confirm other information provided in the PD.
 - Carried out an on-site assessment of the project's inventory, which included the audit team observing the project's forestry crew take tree measurements and taking measurements of our own.
 - Took GPS measurements to document plot locations and path taken through the project area during the site visit.
 - Interviewed government officials and assessed official documentation to verify claims about project ownership and common practice.

2.5 Resolution of Findings

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

- Non-Conformity Report (NCR): An NCR signified a discrepancy with respect to a specific requirement. This type of finding could only be closed upon receipt by SCS of evidence indicating that the identified discrepancy had been corrected. Resolution of all open NCRs was a prerequisite for issuance of validation and verification statements.
- New Information Request (NIR): An NIR signified a need for supplementary information to determine whether a material discrepancy existed with respect to a specific requirement. Receipt of an NIR did not necessarily indicate that the project was not in compliance with a

specific requirement. However, resolution of all open NIRs was a prerequisite for issuance of validation and verification statements.

- **Observation (OBS):** An OBS indicates an area where immaterial discrepancies exist between the observations, data testing results or professional judgment of the audit team and the information reported or utilized (or the methods used to acquire such information) within the GHG assertion. A root cause analysis and corrective action plan are not required, but highly recommended. Observations are considered by the audit team to be closed upon issuance, and a response to this type of finding is not necessary.

As part of the audit process, 8 NCRs, 11 NIRs and 1 OBS were issued. All findings issued by the audit team during the audit process have been closed. In accordance with Sections 4.1.13 and 4.1.14 of the VCS Standard for validation and verification, respectively, all findings issued during the audit process, and the impetus for the closure of each such finding, are described in Appendix A of this report.

2.5.1 Forward Action Requests

This section is not applicable, as no forward action requests have been issued.

3 VALIDATION FINDINGS

3.1 Project Details

3.1.1 Project Type, Technologies and Measures Implemented, and Eligibility of the Project

The audit team has the following conclusions regarding the project type and technologies and measures that constitute the project activities:

- The project falls under sectoral scope 14 - Agriculture, forestry and other land use (AFOLU).
- Discussion regarding the project's eligibility under the VM0012 methodology can be found in Section 3.4.2 below.
- The technologies and measures implemented, as described in Section 3 of the PD, are likewise eligible under the VCS Program.

The audit team finds that the project meets the eligibility requirements of the VCS Program because it meets the additionality test (as discussed in Section 3.4.5 below) and complies with all applicability conditions of the selected methodology (as discussed in Section 3.4.2 below).

3.1.2 Project Design, Including Eligibility Criteria for Grouped Projects

The audit team has the following conclusions regarding the project design and eligibility criteria:

- This assessment engagement is comprised by one project activity instance. The audit team confirms that this activity instance meets the eligibility criteria, as outlined in section 1.3 of the PD, in accordance with section 3.5.15 of the methodology, and consistently, all the applicability conditions set out in the VM0012 methodology have been met, as described in further detail in Section 3.4.2. Moreover, the audit team confirms that the project design has been set to be a grouped project and include future activity instances that meet the eligibility criteria set in section 1.4.1 of the PD.

3.1.3 Project Proponent and Other Entities Involved in the Project

The audit team has the following conclusions regarding the project proponent and other entities involved in the project:

- The project proponent is the Mosaic Forest Management Corporation (“Mosaic”) who has been identified in section 1.5 of the PD.
- Other entities involved in the project are GreenRaise Consulting GmbH (“GreenRaise”) and Zimmfor Management Services Ltd. (“Zimmfor”) who have been identified in section 1.6 of the PD.
- The audit team agrees with the identification of Mosaic as the project proponent as Mosaic is the entity that has been granted control and rights of emission reductions generated through each project activity instance. Mosaic is tasked with management and oversight of the project activity and has overall control and responsibility for the project (see reference 5).
- The audit team agrees with the identification of GreenRaise and Zimmfor as additional entities involved in the project that have been tasked with the representation of Mosaic during project implementation, development, and management for the successful registration of emission removal credits.
- The audit team confirmed during interviews with the project team the active engagement of both Mosaic, GreenRaise, and Zimmfor in the project.

3.1.4 Ownership

The audit team concludes that the PD has been accompanied by one or more of the following types of evidence establishing project ownership accorded to the project proponent(s); the audit team’s specific conclusions regarding evidence of project ownership are provided specific to each type of evidence.

Conclusions regarding evidence of...	
Project ownership arising or granted under statute, regulation, or decree by a competent authority	<ul style="list-style-type: none"> • N/A
Project ownership arising under law	<ul style="list-style-type: none"> • N/A

<p>Project ownership arising by virtue of a statutory, property or contractual right in the plant, equipment or process that generates GHG emission reductions and/or removals (where the project proponent has not been divested of such project ownership)</p>	<ul style="list-style-type: none"> • N/A
<p>Project ownership arising by virtue of a statutory, property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions and/or removals (where the project proponent has not been divested of such project ownership)</p>	<ul style="list-style-type: none"> • The audit team confirmed that the project proponent MOSAIC has the legal right to manage the forest lands of the project activity instance and that TimberWest and Island Timberlands are the rightful owners, with full property rights of the project parcels, as reviewed in the land title agreements granted by the Government of British Columbia's Register to Land Titles (see reference 5, 6 and Section 3.4.2 item 3 for additional information).
<p>An enforceable and irrevocable agreement with the holder of the statutory, property or contractual right in the plant, equipment or process that generates GHG emission reductions and/or removals which vests project ownership in the project proponent</p>	<ul style="list-style-type: none"> • N/A
<p>An enforceable and irrevocable agreement with the holder of the statutory, property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions or removals which vests project ownership in the project proponent</p>	<ul style="list-style-type: none"> • N/A
<p>Project ownership arising from the implementation or enforcement of laws, statutes or regulatory frameworks that require activities be undertaken or incentivize activities that generate GHG emission reductions or removals</p>	<ul style="list-style-type: none"> • N/A

3.1.5 Project Start Date

The project start date is 01 January 2018. The audit team has the following conclusions regarding the conformance of the project start date to the validation criteria:

- This is the date that MOSAIC, previously TimberWest and Island Timberlands, have curtailed harvesting within the project activity instances of the project area, which effectively represents the date on which the project begins generating GHG emission reductions or removals.
- The audit team confirmed this date during interviews with the project team, as outlined in section 2.3.
- The audit team agrees that the project start date complies fully with the VCS rules.

3.1.6 Project Crediting Period

The crediting period for this project dates from 01 January 2018 through 31-December-2047. The audit team has the following conclusions regarding the conformance of the project crediting period to the validation criteria:

- The start date of the crediting period coincides with the project start date, which is the date that harvesting within the project area has been curtailed, which effectively represents the date on which the project begins generating GHG emission reductions or removals.
- The audit team confirmed this date during interviews with the project team.
- The audit team agrees that the project crediting period of 30 years complies fully with the VCS rules.

3.1.7 Project Scale and Estimated GHG Emission Reductions or Removals

The estimated average annual GHG emission reductions or removals, during the crediting period from 01-January-2018 through 31-December-2047, have been calculated at 715,834 tonnes of CO_{2e} per year, as reported in the PD provided by the project proponent. Therefore, the audit team agrees that the project is correctly classed as a large project, per Section 3.9.1 of the VCS Standard.

3.1.8 Project Location

The audit team has the following conclusions regarding the project location:

- The project is located in Coastal British Columbia, Canada. Additional description of the location is described in sections 1.12 of the PD.
- The project boundary aligns with 53.8237° north, 48.3803° south, -123.6° east, and -123.3993° west.
- A KML file of the project area has been provided (see reference 23) and is also available on the Verra registry.

- The project activity instances that are aggregated in this grouped project are limited to the boundaries Vancouver Island, Coastal Mainland, and Haida Gwaii in British Columbia, Canada.

3.1.9 Conditions Prior to Project Initiation

The audit team has the following conclusions regarding the conditions existing prior to project initiation:

- The audit team confirmed that the baseline land-use conditions prior to project initiation are documented in section 1.13 of the PD. The baseline conditions were confirmed as part of the additionality check described in section 3.4.4 and 3.4.5 of this report.
- The baseline scenario refers to a business-as-usual forestry management that includes continuous timber harvest and other forestry related operations.
- The audit team confirmed these conditions during interviews with project personnel, review of inventory data and review of aerial imagery.

3.1.10 Project Compliance with Applicable Laws, Statutes and Other Regulatory Frameworks

The audit team has the following conclusions regarding the compliance of the project with all applicable laws, statutes, and other regulatory frameworks:

- The project activities, as described in section 1.11 of the PD comply with relevant laws, statutes, and other regulatory frameworks in Canada.
- The audit team confirmed through interviews with project team members and program participants, and through the review of the relevant national and local laws described in section 1.14 of the PD that the project proponent provides sufficient assurance that the project complies with these applicable laws, statutes and other regulatory frameworks.

3.1.11 Participation Under Other GHG Programs

The audit team concludes that the project is not currently registered under or seeking registration under another GHG program, as confirmed through the following steps:

- Through discussions with the project personnel and review of section 1.15.1 of the PD, the audit team confirmed that the project is not currently registered or is seeking registration under another GHG program.
- It should be noted that a portion of the project area was previously registered under the Strathcona Ecosystem Conservation Project. This carbon project followed the British Columbia Forest Carbon Offset Protocol 1.0 (FCOP 1.0) and was classified as an Improved Forest Management Project. Project activities followed the BC Emissions Offset Regulation. The areas that were verified (2011-2012) and have an offset permanence agreement with the Pacific Carbon Trust have been excluded from BigCoast. FCOP 1.0 is no longer a recognized protocol and the Strathcona Project has not been grandfathered under the current legislation.

The audit team concludes that the project has not been rejected by any other GHG program, as confirmed through the following steps:

- Through discussion with project personnel, and review of section 1.15.2 of the PD, professional knowledge on the part of the audit team of the alternative GHG programs to VCS, the audit team has confirmed that the project has not been rejected by any of these.

3.1.12 Other Forms of Credit

The audit team concludes that the project is not currently participating in any emission trading or other binding limit program or mechanism, as confirmed through the following steps:

- Through discussion with project personnel, and review of section 1.16.1 of the PD, the audit team confirmed that the project does not currently nor plan to receive emission trading or other binding limit program or mechanism credits.

The audit team concludes that the project has not sought or received another form of GHG-related environmental credit, as confirmed through the following steps:

Discussion with project personnel and through review of Section 1.16.2 of the PD, the audit team confirmed that the project does not currently nor plan to receive another form of GHG-related environmental credit, including renewable energy certificates.

3.1.13 Sustainable development contributions

The audit team has the following conclusions regarding the project's sustainable development contributions:

- The project proponent has submitted the BigCoast Climate Initiative project under Verra's SD VSta program which is undergoing validation/verification concurrent with this VCS validation/verification.
- The project proponent has aimed to contribute to the following five SDGs: 6 (Clean Water and Sanitation), 12 (Responsible Consumption and Production), 13 (Climate Action), 14 (Life Under Water), and 15 (Life on Land) through the implementation of three Group Activities: (1) Sustainable Forest Management, (2) Climate Improvement Initiative, and (3) Aquatic Ecosystem Enhancement Initiative.

3.1.14 Leakage management for AFOLU projects

The audit team has the following conclusions regarding the project's leakage management strategy:

- Per section 8.3 of the Methodology, leakage is zero and the audit team concludes that this value has been applied appropriately by the project proponent.

3.1.15 Commercially sensitive information

The audit team has the following conclusions regarding the project's commercially sensitive information:

The project team confirmed through a series of interviews with the project proponent personnel, the on-site visit evidence gathered and the documentation review, that the information disclosed below as commercially sensitive is in conformance with the project requirements. The following list of information was provided to the audit team upon request, and has been excluded from the public version of the project description:

- a) Section 2.4; Due to confidentiality concerns, comments associated with the Local Stakeholder Consultation process will not be made publicly available, however were provided to the VVB at the time of validation and will be made available at subsequent verification events.
- b) Section 4.3.2.; Table 16: Project Proponent's Market and product table
- c) Section 4.3.2; Barrier Analysis (Step 2 commentary)
- d) Section 4.3.1; Step 1 reference to gross hectares and Timber Harvesting Land base (hectares)
- e) Section 5.3.3; Table 21: Project Plot Geographic Locations
- f) Appendix 1; Table 2: Ecosystems and Disturbance Types for Mosaic Lands

3.2 Participation under Other GHG Programs

Not applicable; the project is not seeking registration under the VCS Program and an approved GHG program.

3.3 Safeguards

3.3.1 No Net Harm

An assessment of potential negative environmental and socio-economic impacts has been performed in accordance with Section 3.17.2 of the VCS Standard and no such impacts have identified. The audit team performed the following actions to confirm the absence of potential impacts:

- The audit team conducted interviews with project participants who have already been participating in the project and confirmed that no negative environmental or socioeconomic impacts have been experienced thus far. Project participants did not express that there were potential negative impacts that they foresaw.
- The audit team also interviewed officials and local stakeholders and reviewed the evidence provided in references 25, 26, 27, 33 to confirm that no negative impacts had been reported and that no potential negative impacts were foreseen.

3.3.2 Local Stakeholder Consultation

In accordance with Section 3.17.3 of the VCS Standard, a local stakeholder consultation was performed prior to validation as laid out in section 2.2 of the PD and in reference 9. The stakeholder consultation events can be summarized as follows:

- 25 April 2022 within the community of Qualicum, BC; 26 April 2022 within the community of Duncan, BC; 4 May 2022 within the community of Port Alberni, BC; 10 May 2022 within the community of Haida Gwaii
- The audit team confirmed that the project proponents conducted stakeholder engagement activities by meeting with representatives from April 2022 through May 2022.
- The audit team interviewed representatives from Mosaic, GreenRaise, Zimmfor, and community members as listed in section 2.3 of this report, to confirm the subject matter and topics of the stakeholder engagement meeting.
- The audit team reviewed evidence from these stakeholder engagements including presentation materials (reference 7), and confirmed that at these meetings, stakeholders were provided with information about the project design, risks, costs and benefits, the implementation, mechanisms for continued communication with communities and other stakeholders, and the stakeholders were given the opportunity to provide input and feedback regarding the project design.
- Neighbors expressed that they have a good relationship with Mosaic's staff, and do not mention any complaints in interviews.

As part of the stakeholder consultation, 11 comments were received and addressed by the project proponent. A detailed assessment of the project proponent's response to all and any input were provided for validation, but for privacy reasons these comments will not be shared publicly. The audit team concludes, overall, that an adequate stakeholder consultation has taken place prior to validation and that the project proponent has taken all appropriate measures to communicate and consult with local stakeholders in an ongoing process for the life of the project, including communication regarding the following:

- The project design and implementation, including the results of monitoring
- The risks, costs and benefits the project may bring to local stakeholders
- All relevant laws and regulations covering workers' rights in the host country
- The process of VCS Program validation and verification and the validation/verification body's site visit

The audit team's conclusion that all appropriate measures have been undertaken to communicate the above is justified as follows:

- All the local stakeholders interviewed on-site stated that they know whom to contact from MOSAIC in the event of a complaint. They have the contact information of people in the company, and some said they were in constant close contact with the company staff. Until now, they have not had any grievances to resolve. All of them stated that they feel listened to by the project proponent, and that they expressed positive comments about the project.
- Neighbors and local stakeholders involved, expressed that they have a good relationship with the company's staff, and do not mention any complaints in interviews, but just positive comments and good opinions about it, they acknowledged to be aware and have been informed

properly about the scope, potential risks, achievements and all the benefits that this project could mean, and they acknowledged that it was explained to them.

- All of the project workers interviewed are aware of their rights as workers. During the interviews, MOSAIC showed to have very well documented and established regulation to ensure the rights and safety of their workers. They provide constant training and information sessions to keep the workers informed, safe and aware of their rights (see reference 25, 26, 34). The proponent explained legal rights to their employees, and the employees have signed contracts that endorse this agreement.

The audit team concludes, overall, that sufficient and effective stakeholder input was received for the design and development of this project.

3.3.3 Environmental Impact

Not applicable, an environmental impact assessment was not required for BigCoast.

3.3.4 Public Comments

A 30-day public comment period was conducted in accordance with Sections 3.17.6 – 3.17.9 of the VCS Standards.

No public comments were received during the consultation.

3.3.5 AFOLU-Specific Safeguards

The steps taken to assess against the requirements of Sections 3.17.3-3.17.19 of the VCS Standard are as follows.

Element	Steps taken by the audit team to assess the element
The local stakeholder identification process and the description of results	<ul style="list-style-type: none"> • The audit team confirmed that section 2.2 of the PD explains the process of identification and consultation of stakeholders. • During interviews with project personnel as well as project participants and other local stakeholders, the audit team concluded that all relevant stakeholders have been identified and addressed as described in detail in the SOP “Stakeholder Consultation and Engagement” (see reference 9).
Risks to local stakeholders due to project implementation and how the project will mitigate such risks	<ul style="list-style-type: none"> • The audit team confirmed by reviewing the PD (section 2.2), the SOP (reference 9) and supporting documentation provided (reference 25, 26, 27, 33, 34), as well as interviews with

	<p>project personnel and local stakeholders on the site visit, that the project has informed local stakeholders about potential risks and how the project plans to mitigate such risks (i.e., worker training, safety training, feedback and grievances procedure, etc).</p> <ul style="list-style-type: none"> • Assessed whether workers knew their rights and safety hazards by onsite interviews and supporting documentation (reference 26, 33, 34, 35). • The audit team confirmed that the project proponent continues to offer employment opportunities on the remainder of their forest lands. • The audit team confirmed that the project proponent provides opportunities of recreation and access to the land, fuelwood for local communities' consumption, as well as continuing maintenance of the project area, to prevent road failures, landslides, sediment control, etc. • Assessed the project's hazard monitoring systems on site and through document review (reference 34).
<p>Risks to local stakeholder resources due to project implementation and how the project will mitigate such risks, including plans to ensure the project will not impact local stakeholders' property rights without the free, prior and informed consent</p>	<ul style="list-style-type: none"> • Reviewed land ownership rights of the project proponent (reference 5 and 6). • Assessed whether the project proponent will continue to provide access to roads, and local communities the opportunity to access the land for food resources. • The audit team conducted interviews with local stakeholders including project participants and local officials to confirm that the risks to the local stakeholder resources as a result of project implementation have been communicated.
<p>Processes to ensure ongoing communication and consultation, including a grievance redress procedure to resolve any conflicts that may arise</p>	<ul style="list-style-type: none"> • Assessed whether any project-specific grievances arose during interviews (see reference 7).

between the project proponent and local stakeholders

- The audit team confirmed on interviews with the stakeholders they know there is a grievance mechanism in place and they are aware of the process to present a complaint.

The audit team concludes, overall, that the project has been designed and, as appropriate, is implementing, plans and processes to ensure the project will not create any negative impacts on local stakeholders or mitigates such impacts where necessary. This conclusion is justified as follows:

- The audit team confirmed during interviews with project participants members, other local stakeholders, and the project proponent, that that any potential negative impacts have been identified and communicated to the stakeholders.
- The audit teams concludes for any potential risks identified, the project proponent has put in place appropriate prevention and/or mitigation measures (see reference 34).
- The project has developed and informed about the grievance and redress procedure outlined within the GHG – Stakeholder Consultation + Engagement SOP (see reference 9), providing access to the grievance submission form to all the public online: <https://green-raise.com/projects/>. The audit team confirmed that the grievance and redress procedure is in conformance with the VCS requirements of section 3.17.18, and the local stakeholders are aware of it.

3.4 Application of Methodology

3.4.1 Title and Reference

The title and reference of the methodology applied by the project (referred to hereafter as “the methodology”) and any tools applied by the project are identified in the table below. The audit team affirms that the methodology and any applied tools, and the specific versions of them applied by the project, were valid at the time of issuance of this validation report.

Type*	VCS ID**	Title	Version	Notes regarding validity
Methodology	VM0012	Improved Forest Management in Temperate and Boreal Forests (LTPF)	1.2	Current version
Tool	N/A	AFOLU Non-Permanence Risk Tool	4.0	Current version
Tool	VT0001	Tool for the Demonstration and Assessment of Additionality in VCS	3.0	Current version

		Agriculture, Forestry and Other Land Use (AFOLU) Project Activities		
Module	VMD0033	Estimation of Emissions from Market Leakage	1.0	Current version

3.4.2 Applicability

Applicability Condition	Steps taken by the audit team to assess compliance	Conclusion regarding applicability condition
1. The project meets criteria for VCS IFM-LtPF projects.	Through interviews with the stakeholders, the review of the PD, and supporting documentation (reference 2, and 5), the audit team confirmed that the project meets the criteria by voluntarily protecting privately owned management forest lands within the project area.	The project meets this applicability condition
2. The project is located in Temperate or Boreal Domain Global Ecological Zones and meet Tier III inventory and data requirements.	<p>The audit team confirmed through the assessment of the FAO Global Ecological Zones map (https://www.fao.org/forest-resources-assessment/remote-sensing/global-ecological-zones-gez-mapping/en/) that all the polygons in the project area are located in the Temperate Ecological Zone.</p> <p>Moreover, the audit team performed on-site inspections, interviews with the stakeholders and a thorough review of the supporting documentation regarding the forest inventory and standard procedures (reference 8 and 22), and confirmed that the project inventory data and methods meets Tier III inventory and data requirements.</p>	The project meets this applicability condition
3. The project meets VCS Standard	The following steps were taken by the audit team to assess the project's ownership. A risk-	The project meets this applicability condition

<p>requirements for ownership.</p>	<p>based sample assessment was done to select a sample of the polygons contained in the project activity instance, verify and confirm the ownership of each of them. The Parcel IDs were selected from the land title agreements granted by the Government of British Columbia's Register to Land Titles (in accordance with the Land Title Act). The government of British Columbia through the Land Owner Transparency Registry provides access to publicly search for land registries (https://parcelmapbc.ltsa.ca/pmsspub/). The audit team overlaid the spatial layer of the polygons with their corresponding Parcel ID with the Government of British Columbia's Register to Land Titles polygons layer. The audit team then confirmed that each of the polygons selected correspond to the Parcel IDs listed in each of the Forest Management Units Land Title Agreements (see reference 5 and 6), and confirmed that TimberWest and Island Timberlands are the rightful owners of the land managed by MOSAIC, confirming that the VCS Standard requirements for ownership are met.</p>	
<p>4. The average annual illegal, unplanned, and fuelwood removals in the project lands are less than 5% of total annual harvest levels.</p>	<p>Through the on-site inspection, interviews with the stakeholders, the review of the PD and supporting documentation (reference 2) the audit team confirmed that currently, there is no illegal or unplanned harvesting activities happening in any of the forest lands of the project area, and there are no de-minimis fuelwood removals, as stated by the project proponent in Section 3.2 of the PD, point 4.</p>	<p>The project meets this applicability condition</p>
<p>5. The project lands have no managed peatland forests.</p>	<p>An assessment of peatland forests over the project area was conducted with ancillary data from FAO (https://www.fao.org/3/CA8200EN/CA8200E</p>	<p>The project meets this applicability condition</p>

	<p>N.pdf), the Geological Survey of Canada map of Peatlands of Canada (https://geoscan.nrcan.gc.ca/images/geoscan/gscof_3152_e_1995_mn01.jpg), and research data from Academia provided by the project proponent: the Bolin Centre for Climate Research map from Hugelius et al. (2020) of Northern Peatlands (https://bolin.su.se/data/hugelius-2020-peatland-1?n=hugelius-2020).</p> <p>The audit team conducted an assessment of the documentation and evidence provided, and performed a spatial inntersect of the peatland map of Hugelius et al. 2020 with the polygons of the project area and confirmed that none of the polygons in the project area have peatland forests.</p>	
<p>6. The total percentage of wetlands in the project area is not expected to change as part of project activities.</p>	<p>Through the on-site inspection, interviews with the stakeholders, the review of the PD and supporting documentation (reference 2) the audit team confirmed that only “productive, operable forested lands” are included in the project area. The audit team assessed the evidence provided in Management Plan and the operational Timber Supply Area guidelines that define how the “operable forest areas” (aka., the Productive Forest Land Base areas) are determined. The audit team confirmed that, according to these guidelines, non-forest areas, non-productive areas (alpine, swamps, wetlands, rivers, areas with less than 200m³/ha, etc), and roads/trails are removed from the gross area, confirming that the project area only includes polygons that are considered “productive forest land base”.</p> <p>Based on this assessment, the audit team confirms the assertion of the project proponent in Section 3.2 of the PD, point 8 that the percentage of wetlands in the polygons of the</p>	<p>The project meets this applicability condition</p>

	project area are not expected to change as part of the project activities.	
7. There will be no activity shifting to other lands owned or managed by project proponents outside the project boundary at the beginning of the project.	Through interviews with the stakeholders, the on-site visit inspections, the review of the PD, and supporting documentation (e.g. Woodstock harvesting projections) showed evidence that there will be no activity shifting in harvesting to areas outside the project area. The audit team validated the modelled and actual historical harvest volumes produced by Woodstock, where the project proponent demonstrated that the baseline benchmark harvesting levels are not expected to shift to areas outside of the project activity instance, confirming the project's assertion in Section 3.2 of the PD, point 7.	The project meets this applicability condition
8. The project does not include non-de minimis application of fertilizer in the project scenario.	The audit team confirmed through interviews with stakeholders, on-site inspections, the review of the PD, and supporting documentation (reference 2), that the project proponent will not include any application of fertilizer in the polygons of the project area, as stated in Section 3.2 of the PD, point 8.	The project meets this applicability condition

3.4.3 Project Boundary

The audit team concludes, overall, that the project boundary is appropriately specified, and the selected sources, sinks and reservoirs appropriately justified for the project, as described in detail below.

3.4.3.1 Spatial Boundaries

The audit team evaluated the spatial boundaries of the project area based on the procedures outlined in the methodology. The audit team confirmed that the project activity instances and spatial boundaries of the project area are included in the area of Vancouver Island & Coastal Mainland, and Haida Gwaii, and are accurately depicted in the shapefiles provided by the project proponent (see reference 23) as demonstrated in the maps in section 3.3 of the PD. The audit team confirmed through independent recalculation that the areas in the shapefiles provided match the areas of the forest analysis units

presented in the PD (section 4.1.2, Table 14) and those utilized in the calculation workbooks (see reference 10 and 18).

3.4.3.2 Carbon Pools (i.e., Greenhouse Gas Reservoirs)

The steps taken to assess whether each carbon pool has been selected (or not selected) correctly in accordance with the methodology are described below:

Carbon Pools	Included/Excluded	Steps taken by the audit team to assess the element
Above-ground biomass	Included	Checked against Table 1 in methodology to confirm that inclusion above ground tree biomass is mandatory. All calculations of GHG emissions reductions include above ground live tree biomass.
Below-ground biomass	Included	Checked against Table 1 in methodology to confirm this pool is mandatory and has been included in the PD. All calculations of GHG emissions include below-ground biomass.
Deadwood	Included	Checked against Table 1 in methodology to confirm this pool is mandatory and has been included in the PD. All calculations of GHG emissions include deadwood.
Litter	Excluded	Checked against Table 1 in methodology to confirm this pool is excluded by VCS for AFOLU projects. It is conservative to omit.
Soil	Excluded	Checked against Table 1 in methodology to confirm this pool is optional in VCS AFOLU IFM projects. It is conservative to omit.
Wood Products	Included	Checked against Table 1 in methodology to confirm this pool is mandatory and has been included in the PD. All calculations of GHG emissions include wood products.

3.4.3.3 Greenhouse Gas (GHG) Sources and Sinks

The steps taken to assess whether each GHG emission source or sink has been selected (or not selected) correctly in accordance with the methodology are described below.

- The audit team confirmed through the review of the Methodology (tables 1 and 2) that CO₂ emissions are accounted for through the accounting of carbon stock changes in the above-ground and below-ground biomass, which are included (see table above).

- The audit team also confirmed through the review of Table 2 of the Methodology that the inclusion of CO2 emissions from fuel combustion by vehicles/equipment is optional, and the project activity is accounting them. All calculations of GHG emissions include CO2 emissions from fuel combustion by vehicles/equipment.
- The audit team confirmed through review of Table 2 of the Methodology that CO2 emissions from the use of fertilizers and the burning of biomass area not included, so no accounting them is appropriate.
- The audit team confirmed through review of Table 2 of the Methodology that CH4 and N2O emissions are not included, so not accounting for them is appropriate.

3.4.4 Baseline Scenario

Overall, the identified baseline scenario is justified. The audit team’s high-level assessment of the baseline scenario is included in the table below.

Item assessed	Step(s) taken to assess item
Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable	<ul style="list-style-type: none"> • The audit team conducted interviews with stakeholders, including staff and other community members. • The land use history has been established as timber harvesting, which is still occurring in areas surrounding the project area.
Documentary evidence used in determining the baseline scenario is relevant, and correctly quoted and interpreted in the project description	<ul style="list-style-type: none"> • Confirmed that the documentary evidence is relevant and interpreted correctly in the PD. All PD reporting requirements pertaining baseline scenario have been included.
Relevant national and/or sectoral policies and circumstances have been considered and are listed in the project description	<ul style="list-style-type: none"> • Confirmed during interviews with local government agency and an independent review of relevant laws in British Columbia, that the baseline scenario of continuation of the pre-project activities (timber harvesting) are in-line with relevant national and sectorial policies.
The procedures for identifying the baseline scenario have been correctly followed and the identified scenario reasonably represents what would have occurred in the absence of the project	<ul style="list-style-type: none"> • As discussed in the table below and section 3.4.5 on additionality, all procedures for identifying the baseline scenario have been correctly followed. • The audit team agrees that the procedures were appropriate, and the baseline scenario

reasonably represents what would have likely occurred in absence of the project.

The specific steps taken to validate the baseline scenario against each applicable requirement of the methodology are described below.

Section(s)	Step(s) taken to assess compliance
6 STEP 1: “Identify Plausible Alternative Baseline Scenarios to the VCS Project Activity”	<ul style="list-style-type: none"> • The audit team confirmed that the project identified the baseline and demonstrated that the project activity is additional by applying the “Tool for the Demonstration and Assessment of Additionality In VCS AFOLU Project Activities”. See Section 3.4.5 below. • Audit team conducted interviews on site with stakeholders to determine land use history and likely scenarios without project activity. • Audit team confirmed that the historical practice of the project area was for timber harvesting.
6 STEP 2: “Selection of a Single Baseline Scenario for the Project”	<ul style="list-style-type: none"> • The audit team assessed the four plausible scenarios identified by the project proponent, and has found that the selection of the “Historical Baseline Scenario” is appropriate to this project, as the project proponent has at least 5 years historical harvest level data history, as required by the Methodology.

3.4.5 Additionality

Overall, SCS concludes that additionality is justified for the project. A high-level summary of steps taken to assess additionality is provided below.

Item assessed	Step(s) taken to assess item
Adherence to regulatory surplus requirements.	<ul style="list-style-type: none"> • The alternatives to the project (Historical Practice, Common Practice, Land acquisition for Conversion to Real Estate Development, or Acquisition For Conversion to Conservation Lands), are legal. The audit team confirmed that the project activity goes above and beyond the

	<p>alternative scenarios with respect to sequestering CO₂.</p> <ul style="list-style-type: none"> The audit confirmed through interviews with the stakeholders, the PD review, supporting documentation, and on-site visit that all plausible baseline scenarios could be undertaken within the legal requirements of British Columbia's Private Managed Forest Land Act and are congruent with private forestland management in Canada.
<p>The appropriateness of data and parameters used in financial calculations and sensitivity analyses, including those taken from feasibility study reports.</p>	<ul style="list-style-type: none"> The audit team confirmed the data and analysis presented in the NPV project cash flow analysis regarding the prevalence of forestry operations being much more profitable.
<p>The suitability of the benchmark used for investment analysis.</p>	<ul style="list-style-type: none"> A financial benchmark analysis is not applicable for this project because the project proponent applied a simple cost analysis.
<p>The credibility of each barrier identified in the barrier analysis.</p>	<ul style="list-style-type: none"> Interviews with project personnel and in-country expertise confirmed the barriers are appropriate.
<p>The appropriateness of the geographical region used in the common practice analysis.</p>	<ul style="list-style-type: none"> Through interviews with stakeholders and the on-site visit, the audit team confirms the appropriateness of the geographic region. In addition, the analysis provided by MOSAIC in section 3.5.9 showing the appropriateness of the geographic region is credible given their history and expertise of the company in the forest industry of British Columbia.
<p>Information regarding similar projects identified in the common practice analysis, including essential distinctions between similar projects and the proposed project.</p>	<ul style="list-style-type: none"> The audit team accepts the data used as appropriate regarding the higher profitability and greater financial attractiveness of forestry operations with shorter rotations to investors, as it was demonstrated in the NPV analysis (reference 3).

The reasonableness of assumptions made in the demonstration of additionality.	<ul style="list-style-type: none"> Interviews with project personnel, stakeholders, and the on-site visit confirmed the assumptions underlying the demonstration of additionality.
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3.4.6 Quantification of GHG Emission Reductions and Removals

3.4.6.1 Quantification of Baseline Emissions

The quantification methods that will be used for calculation of baseline emissions during the project crediting period are summarized as follows:

- Establishment of a valid starting inventory
- Establishment of baseline scenario area stratification.
- Model selection and use.

The following steps have been taken to validate the quantification methods described above.

- Independently verify the assumptions and data supporting the assertion that the project meets the conditions in sections 8.1 and 8.1.1 of the Methodology.

A description of steps taken to validate the data and parameters used in the PD follows. Some parameters relevant to the baseline emissions quantification are listed in section 3.4.6.2 below.

Parameter/Data	Value	Step(s) taken to validate the value
Forest inventory	N/A	<ul style="list-style-type: none"> The audit team confirmed through on-site remeasurement of inventory plots, interviews with the project team, review of the SOP of GHG monitoring, the BC Cruise Inventory Manual and supporting documentation (see reference 9 and 37), that the forest inventory 1) covers the entire area; 2) was created <10 years ago; and, 3) the documents of methodology used to create, update and validate the starting inventory are available and based on sound scientific data.
APRJ,i	44,022 ha	<ul style="list-style-type: none"> Confirmed the area of baseline strata as well as the total area of the analysis units reported in the PD in Section 4.1.2 through the independent recalculation of areas in ArcGIS from the spatial datasets provided (reference 23) that this area is accurately reported and utilized in the

		<p>quantification of emissions reductions (reference 10 and 18).</p> <ul style="list-style-type: none"> The audit team confirmed through interviews with the project team, the site visit, and the review of satellite imagery that the areas selected meet the methodology criteria and are: <ol style="list-style-type: none"> 1) defined as forest areas (vs non forest areas) 2) considered merchantable and economically feasible to harvest; and 3) they are not located within a legally restricted or protected area.
Model Selection	<p>CBM-CFS3</p> <p>Carbon Budget Model of the Canadian Forest Sector</p>	<ul style="list-style-type: none"> The audit team confirmed through interviews with the project team and documentation review (see reference 39) that the selection and use of the CBM-CFS3 and Woodstock model meets the Methodology requirements: <ol style="list-style-type: none"> 1) Is well established 2) Generates values on an annual basis 3) Includes a reasonable representation of mortality from stand-self thinning and natural disturbance agents that are regionally appropriate 4) Outputs are expressed in carbon units (tC/ha) 5) Is well documented and expert reviewed 6) Parameterized, calibrated, and tested for the specific conditions of the BigCoast project.

The audit team concludes the following with respect to the PD:

Assessment of whether...	
All relevant assumptions and data are listed in the PD, including their references and sources.	<ul style="list-style-type: none"> The audit team confirms that all relevant assumptions and data as well as their references and relevant sources are documented clearly in the PD.
All data and parameter values used in the PD are considered reasonable in the context of the project.	<ul style="list-style-type: none"> The audit team has concluded that the values presented in the PD are reasonable in the context of the project. This was concluded after review of the data and parameter values presented in the PD, as well as independent review of documentation and interviews with local officials, participants, and the project team.

<p>All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PD.</p>	<ul style="list-style-type: none"> The audit team was able to confirm the data and parameter assumptions used in the estimates of baseline emissions, and confirms that the baseline emissions can be replicated using the input data provided for validation with the parameters, and processes described in the PD.
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3.4.6.2 Quantification of Project Emissions

The quantification methods that will be used for calculation of project emissions during the project crediting period are summarized as follows:

- Estimation of ex-ante carbon stock in tree biomass using the CBM-CFS3 with a series of stand attributes, model assumptions and growth curves developed for each analysis unit to estimate carbon ecosystem dynamics by carbon pool over time.
- Estimation of annual change in carbon stocks in living tree biomass, dead wood, and harvested wood products across the project activity area.
- Plot biomass measurements.
- The application of uncertainty factor discount for ex-ante estimation of carbon stocks in the aforementioned carbon pools.

A description of steps taken to validate the data and parameters used in the PD follows.

Data / Parameter	Value	Step(s) taken to validate the value
APRJ,i	44,022 ha	Confirmed the area of baseline strata as well as the total area of the analysis units reported in the PD in Section 4.1.2 through the independent recalculation of areas in ArcGIS from the spatial datasets provided (reference 23) that this area is accurately reported and utilized in the quantification of emissions reductions (reference 10,18)
APSP,i,	400m ²	The audit team confirmed on-site the area of the permanent sampling plots is 400m ² (reference 8, 22, 37).
CF	0.5	The audit team confirmed that the carbon fraction used, meets the Methodology requirements set in Section 9.1 “Carbon Fraction IPCC default value = 0.5, if more relevant values are not available”. The audit

		team submitted an Observation about this (see Finding No. 8).
BEF	Unitless	The audit team confirmed the biomass expansion factor is a parameter modeled in the CBM-CFS3 used for conversion of volume to biomass as a function of jurisdiction, ecozone and tree species (reference 39).
R_i	Unitless	The audit team confirmed the root to shoot ratio is a modeling parameter in the CBM-CFS3 used to calculate belowground biomass as a function of tree species and tree size (reference 39).
f_{BSL,NATURAL,i,t} f_{PRJ,NATURAL,i,t}	$(0 < f_{BSL,NATURALi,t} < 1)$ $f_{PRJ,NATURAL,i,t} < 1)$	The audit team confirmed that the proportion of biomass that dies from natural mortality in the polygon, is a modeling parameter in the default settings of the CBM-CFS3 (reference 39).
f_{BSL,DAMAGE,i,t} f_{PRJ,DAMAGE,i,t}	$(0 < f_{BSL,DAMAGEi,t} < 1)$ $f_{PRJ,DAMAGE,i,t} < 1)$	The audit team confirmed that the proportion of additional biomass removed for road and landing construction in the polygon is applied as described in the management plan for road development.
f_{BSL,BLOWDOWN,i,t} f_{PRJ,BLOWDOWN,i,t}	$(0 < f_{BSL,BLOWDOWNi,t} < 1)$ $f_{PRJ,BLOWDOWN,i,t} < 1)$	The audit team confirmed that the proportion of aboveground tree biomass subject to blowdown in the polygon, is modeled within the natural mortality factors calculated in the CBM-CFS3 (reference 39).
f_{BSL,BRANCH,i,t} f_{PRJ,BRANCH,i,t}	$(0 < f_{BSL,BRANCHi,t} < 1)$ $f_{PRJ,BRANCH,i,t} < 1)$	The audit team confirmed that the proportion of aboveground tree biomass comprised of branches > 2 in diameter in the polygon, is modeled by the CBM-CFS3 (reference 39).
f_{BSL,BUCKINGLOSS,i,t} f_{PRJ,BUCKINGLOSS,i,t}	$(0 < f_{BSL,BUCKINGLOSSi,t} < 1)$ $f_{PRJ,BUCKINGLOSS,i,t} < 1)$	The audit team confirmed the proportion of the log bole biomass left on site after assessing and/or merchandizing the log bole for quality in the polygon, is a modeling parameter in the default values of the CBM-CFS3 (reference 39).
f_{BSL,SNAGFALLDOWN,i,t} f_{PRJ,SNAGFALLDOWN,i,t}	$(0 < f_{BSL,SNAGFALLDOWNi,t} < 1)$ $f_{PRJ,SNAGFALLDOWN,i,t} < 1)$	The audit team confirmed that the proportion of snag biomass in the polygon that falls over, is modeled by the CBM-CFS3 depending on the species, dbh and age class (reference 39).
f_{BSL,LWDECAY,i,t} f_{PRJ,LWDECAY,i,t}	$(0 < f_{BSL,LWDECAYi,t} < 1)$ $f_{PRJ,LWDECAY,i,t} < 1)$	The audit team confirmed that the annual proportion of loss of lying dead biomass due to decay, is modeled by the CBM-CFS3 using default values for British Columbia (reference 39).

$f_{BSL,SWDECAY,i,t}$ $f_{PRJ,SWDECAY,i,t}$	$(0 < f_{BSL,SWDECAY,i,t}$ $f_{PRJ,SWDECAY,i,t} < 1)$	The audit team confirmed that the proportion of loss of snag biomass due to decay, is modeled by the CBM-CFS3 using default values for British Columbia (reference 39).
$f_{BSL,DBGDECAY,i,t}$ $f_{PRJ,DBGDECAY,i,t}$	$(0 < f_{BSL,DBGDECAY,i,t}$ $f_{PRJ,DBGDECAY,i,t} < 1)$	The audit team confirmed that the proportion of loss of dead belowground biomass due to decay, is modeled by the CBM-CFS3 using default values for British Columbia (reference 39).
E_M	-0.164%	The audit team independently recalculated and confirmed the calculation of the mean model error for the project in the calculation workbook provided (reference 14).
E_I	0.201%	The audit team independently recalculated and confirmed the calculation of the inventory error for the project in the calculation workbook provided (reference 14).
E_P	0.037%	The audit team independently recalculated and confirmed the calculation of the estimated project error in the calculation workbook provided (reference 14).
$E_{Ry,ERR}$	1.5%	The audit team independently recalculated and confirmed the calculation of the uncertainty factor in the calculation workbook provided (reference 14).
MLF_y	0	The audit team confirmed the market leakage factor was adequately determined (see section 3.4.6.4 below).

The audit team concludes the following with respect to the PD:

Assessment of whether...	
All relevant assumptions and data are listed in the PD, including their references and sources.	<ul style="list-style-type: none"> The audit team confirms through recalculation, issuance/closure of findings, and other independent checks that the assumptions and data are appropriate.
All data and parameter values used in the PD are considered reasonable in the context of the project.	<ul style="list-style-type: none"> The audit team confirms the data and parameter values are reasonable in context of the project.

3.4.6.3 Quantification of Leakage

The quantification methods that will be used for calculation of leakage emissions during the project crediting period are summarized as follows:

- The audit team followed guidelines from the VM0012 LtPF methodology to confirm that there is no activity shifting leakage within the project proponent operating areas, and the management plans and/or land-use designations of all other lands operated by the project proponent have not materially changed as a result of the project activity. The former was confirmed through a series of interviews with the project proponent personnel, the documentation review, on-site visit inspections, as well as demonstration of trends in harvest volumes produced by Woodstock (Remsoft) forecast reports of harvest volumes showing no deviation from historical trends.
- The audit team followed the VM0012 LtPF guidelines, Option 1 from Section 8.3.2 to assess the most current VCS market leakage discount method. Following the VMD0033 - Estimation of Emissions from Market Leakage module, three options for market leakage (local, regional, and international) were analyzed with a stepwise process and demonstrated that timber harvesting would likely not be displaced outside the project area.
- Through interviews with the project proponent, local stakeholders, web search, and the on-site visit evidence gathered, the audit team confirmed the identification of commodities and services: the assumption that the harvested logs are linked to the international markets, validated by the National Resources Canada Report (reference 38). Moreover, it was confirmed that the project proponent does not own any manufacturing facilities, and verified that there are no residents that reside directly within the project area.
- The audit team reviewed and confirmed the assumptions and steps used in the barrier analysis assessment and conditions on the market, through interviews with the project personnel, local stakeholders, and documentation review (i.e. MOSAIC internal reports “An Analysis and Appraisal of the Total MOSAIC Forest Management Corporation Timberland Ownership by Timberland Appraisal”, “Mosaic Timber Supply Analysis”, reference 25); and government official reports (i.e. “Province of BC 2022 BC Coast Appraisal Manual”, reference 38).
- The percentage of market supplied was reviewed and confirmed in the official government report: “Economic State of British Columbia’s Forest Sector” (reference 38).

In conclusion, the audit team confirms that the that the assumption of zero leakage is reasonably assured.

The following steps have been taken to validate the quantification methods described above.

The audit team concludes the following with respect to the PD:

Assessment of whether...	
All relevant assumptions and data are listed in the PD, section 4.3.2, including their references and sources.	<ul style="list-style-type: none"> Relevant assumptions and the data and sources underlying them are listed in the PD.
All data and parameter values used in the PD are considered reasonable in the context of the project.	<ul style="list-style-type: none"> The data and parameter values are considered reasonable.

3.4.6.4 Summary of Net GHG Emission Reductions or Removals

The quantification methods that will be used for calculation of net GHG emission reductions or removals during the project crediting period are summarized as follows:

- Calculation of the net GHG emission reductions follows the required equations in the methodology and supporting modules.

The following steps have been taken to validate the quantification methods described above.

- Independently calculate the net GHG emissions using the audit team's independent quantification of ex-ante baseline emissions and project emissions.
- Confirm that all parameters and datasets used for the net GHG emission reduction calculation in the workbooks are accurate and reasonable and are in agreement with those reported in the PD.
- Trace the project team's calculations through the GHG emissions reduction workbook and confirm that they were carried out per the methodology and modules

3.4.6.5 Uncertainties Associated with the Calculation of Emissions

The quantification methods that will be used for calculation of uncertainty during the project crediting period are summarized as follows:

- Assess the uncertainty factor ($ER_{Y,ERR}$) of the project scenario emissions according to the methodology requirements established in section 8.5.3 to apply an uncertainty deduction. The project team calculated the uncertainty factor error following the equations 60a – 60f of the methodology.

The following steps have been taken to validate the quantification methods described above.

- Independently recalculate the inventory error (E_i), and the mean model error (E_M), to determine the average area-weighted difference between measured values in monitored plot observations and model-predicted values.
- Independently recalculate the total error for the project (E_P).
- Traced the client's calculation of the uncertainty factor in the calculation workbook to confirm it was free of errors (reference 14).

3.4.6.6 Documentation used as the basis for assumptions and sources of data

Certain data and information supporting the ex-ante estimation of GHG emission reductions and/or removals for the crediting period were hypothetical, projected and/or historical in nature, as described in more detail below.

- The baseline land use and subsequent emissions were based on projected conditions using the CBM-CFS3 that simulate carbon forest ecosystem dynamics and merchantable timber volume, based on a series of stand attributes that characterize each analysis unit. Results were simulated with the use of a “MAKELIST” software tool that is used to format the inventory data for input into the CBM-CFS3 to initialize the dead organic matter pools.
- The ex-ante project scenario emissions for harvested wood products were based on Woodstock (Remsoft) forecast reports of harvest volumes, that are then converted to Merchantable Carbon/ Wood Products pool using species specific wood densities.

Overall Conclusion

In conclusion, the methodology and any referenced tools have been applied correctly to calculate baseline emissions, project emissions, leakage and net GHG emission reductions and removals during the project crediting period.

3.4.7 Methodology Deviations

This section is not applicable, as no methodology deviations applied to the project were validated as part of the validation engagement described in this report.

3.4.8 Monitoring Plan

The parameters to be monitored are as follows:

Parameter	Unit	Description
APRJ,i	Hectares (ha)	Area of forest land in polygon, i
APSP,i	Hectares (ha)	Area of permanent sample plot (PSP) in polygon, i
DBHi,t	Centimeters (cm)	Diameter at breast height measured for each tree in the sampleplot at time, t (cm)
Height i,t	Meters (m)	Tree height measured for each tree in the sample plots at time, t (m)
BAG i,t	t d.m. ha ⁻¹ (d.m. = dry matter)	Aboveground live tree biomass in polygon, i, year, t, in the project case.
BBG i,t	t d.m. ha ⁻¹ (d.m. = dry matter)	Average belowground live tree biomass in polygon, i, year, t, in the project.

BTOTAL _{i,t}	t d.m. ha ⁻¹ (d.m. = dry matter)	Average total above and below ground live biomass in polygon, i, for year, t.
CLBi _t	t d.m. ha ⁻¹ (d.m. = dry matter)	Total carbon storage in live tree biomass in polygon, i, year, t, tC in the project case.
CDOMi _t	t d.m. ha ⁻¹ (d.m. = dry matter)	Total carbon storage in dead organic matter in polygon, i, year, t,
fPRJ,NATURAL _{i,t}	unitless (0 < fPRJ,NATURAL _{i,t} < 1)	The proportion of biomass that dies from natural mortality in polygon, i, year, t, in the project case.
fPRJ,HARVEST _{i,t}	unitless (0 < fPRJ,HARVEST _{i,t} < 1)	The proportion of biomass removed by harvesting from polygon, i, in year, t, in the project case.
fPRJ,DAMAGE _{i,t}	unitless (0 < fPRJ,DAMAGE _{i,t} < 1)	The proportion of biomass removed for road and landing construction in polygon, i, year, t, in the project case.
DOMSNAG _{i,t}	t d.m.ha ⁻¹ (d.m. = dry matter)	Total mass of dead organic matter contained in standing dead wood in polygon, i, year, t in the project case.
DOMLDW _{i,t}	t d.m.ha ⁻¹ (d.m. = dry matter)	Total mass of dead organic matter contained in lying dead wood in polygon, i, year, t in the project case.
VLDW _{i,t}	m ³ ha ⁻¹	Total volume of dead organic matter contained in lying dead wood in polygon, i, year, t in the project case.
Li _t	Meters (m)	Calculation of lying dead wood: Length of the transect used to determine volume of lying dead wood in the sample plot, at time, t (25m).Completed by Project Developer.
Dn _{i,t}	Centimeters (cm)	Diameter of each piece n of dead wood along the transects in the sample plot at time, t).Used in calculation of lying dead wood
N _t	Unitless	Calculation of dead organic material. Diameter of each piece n of dead wood along the transects in the sample plot at time, t)
EM Mean model project error	Percentage (%)	An estimate of the mean model error for the project
EI	Percentage (%)	An estimate of the inventory sampling error for the project

Inventory project error		
EP Estimated project error	Percentage (%)	An estimate of total project error calculated as the sum of the model and inventory error terms
ERy,ERR Uncertainty Factor	Percentage (%)	The uncertainty factor calculated for year 'y'
MLFy	Unitless	The market leakage factor determined for year 'y'

A monitoring plan, consistent with the requirements of the methodology, is provided in Section 5.3 of the PD. The audit team took the following steps to validate the suitability of the implemented monitoring system:

- The audit team confirmed during interviews that the project team has an appropriate level of skill and ability to carry out the monitoring tasks as described.
- Through review of the adaptive management plan and supporting documentation (reference 8) and section 5.3 of the PD, the audit team can confirm that monitoring procedures are described with an appropriate degree of certainty, but with some flexibility to allow for decisions to be made according to situations that may arise in the future. All monitoring procedures are appropriate to the stated task.
- The audit team confirmed that the scope, description, and general requirements of the monitoring plan are in conformance with the methodology and relevant monitoring modules.
- The audit team confirmed through interviews with the project team that the datasets, field survey, and data management approaches that the project proposes for monitoring of carbon stock changes are currently available and feasible and will continue to be available through the crediting period.
- Confirmed the ownership through the review of documentation and land title agreements that are in place between the project proponent and the Government of British Columbia's Register to Land Titles (in accordance with the Land Title Act) and confirmed that the project proponent has the right to continue to implement, monitor and manage project activities.
- Through review of the PD and interviews with the project proponent the audit team confirmed that a robust QA/QC plan is in place to ensure quality data is used for monitoring parameters relevant to the project.

In conclusion, the monitoring plan adheres to the requirements of the applied methodology and any referenced tools.

3.5 Non-Permanence Risk Analysis

The reported value of the overall risk rating, as determined based on the risk analysis documented in the NPRR, is 14%.

The audit team performed a complete review of the risk analysis against the requirements of the AFOLU Non-Permanent Risk Tool. The audit team concludes that the assignment of risk scores is appropriate and in conformance to the AFOLU Non-Permanence Risk Tool. The Non-Permanence Risk Report has been completed using the required VCS template and calculation tool and have been provided to the audit team as stand-alone documents.

A detailed review of the audit team’s conclusions may be found below.

3.5.1 Internal Risk - Project Management

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(a)	Confirmed during interviews with the project personnel that the species in the project area are 100% native to British Columbia, using locally sourced seed stock in reforestation and following typical forest regeneration practices in British Columbia.	N/A	Risk rating is appropriate
(b)	Confirmed during on-sit visit and interviews with project participants that the project area has controlled access with locked gates on road access points, and enforcement to prevent encroachment by outside actors is not necessary.	N/A	Risk rating is appropriate
(c)	The audit team interviewed key project personnel, reviewed the project team resumes (reference 24) and conducted independent searches on LinkedIn to confirm that the management team does includes individuals with significant experience in all skills necessary to successfully undertake all project activities.	Corporate resumes (reference 24) are appropriate and appear to be of high quality.	Risk rating is appropriate
(d)	Confirmed during interviews with the management team that most members of the management team reside within Canada. The corporate office of MOSAIC is also based on the city of Nanaimo in	N/A	Risk rating is appropriate

	Vancouver Island, where main part of the project area is located.		
(e)	Confirmed through interviews with the project team, review of project team resumes (reference 24) and independent searches on LinkedIn, that the management team does not specifically include members with significant experience in AFOLU project design and implementation. However, the audit team confirmed that the Implementation Partner and Project Developer, GreenRaise Consulting has significant experience (reference 24) in project design and implementation, managing carbon projects through validation, verification and issuance of GHG credits.	The project developer resumes (reference 24) are appropriate and appear to be of high quality.	Risk rating is appropriate
(f)	The audit team reviewed the Adaptive Management Plan (Corporate Strategy and Climate Solutions Strategy, reference 2) to confirm that it is in place and meets the requirements of the risk tool. The audit team also conducted interviews and found that the adaptive management plan has been utilized to improve the project expansion and implementation.	The Adaptive Management plan (reference 2) is well written and contains all required components of the Risk tool, and the data and management plan appears to be of high quality.	Risk rating is appropriate

3.5.2 Internal Risk – Financial Viability

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(a-d)	The audit team confirmed through interviews with the project team, additional evidence shown about Woodstock Timber Supply Analysis, and the review of the NPV cash flow analysis (reference 3) demonstrating the cash inflow and outflow of the BigCoast project, and verified that the projected breakeven point is adequately assessed by the project proponent.	The project proponent provided documentation to support assumptions in their cash flow analysis. The evidence provided is deemed of high quality.	Risk rating is appropriate
(e-h)	The audit team confirmed through interviews with the project team, review	The project proponent provided documentation to	Risk rating is appropriate

	of the NPV cash flow analysis (reference 3) and additional evidence shown on-site that they have secured about 80% of funding needed to cover total cash out before the project reaches its breakeven point.	support assumptions in their cash flow analysis. The evidence provided is deemed of high quality.	
(i)	The audit team confirmed through interviews with the project team, review of the NPV cash flow analysis (reference 3) and additional evidence shown that project has available as callable financial resources at least 50% of the total cash out before the project reaches breakeven. The project proponent was able to verify the evidence provided from MOSAICs financial situation during an interview with project proponent personnel (Marlo Zimmerman, Marika Forge and Dave Brown), where they walked us through the excel worksheets and their financial corporate documents, showing how the company has a solid, healthy and reliable financial condition, supporting their statement in the NPRR that has callable financial resources to support the project before breakeven point.	The information is of high quality.	Risk rating is appropriate

3.5.3 Internal Risk – Opportunity Cost

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(a-f)	<p>NPV analysis of the most profitable alternative was conducted for timer harvesting activities, the pre-project land use. The analysis includes relevant costs and returns using data from the Woodstock Model used by MOSAIC for the timber harvesting management operations.</p> <p>The NPV analysis (reference 3) of the BigCoast project activities includes implementation costs, project revenues</p>	The project proponent provided documentation to support assumptions in their NPV cash flow analysis. The evidence provided is deemed of high quality.	Risk rating is appropriate

	<p>from harvesting, and costs and revenues associated with the generation and sale of carbon credits using conservative carbon pricing assumptions.</p> <p>The audit team confirmed that the NPV analysis shows that the project activity is more profitable than the project scenario.</p>		
(g-i)	The project does not meet any of the mitigation eligibility criteria.	N/A	Risk rating is appropriate

3.5.4 Internal Risk – Project Longevity

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(a)	The audit team confirmed through interviews with the project personnel that the project proponent does not have a legal agreement or requirement to protect the area to continue the management practice and that the project period is set for a 30 year duration.	The evidence is deemed of high quality.	Risk rating is appropriate

3.5.5 External Risk – Land Tenure and Resource Access/Impacts

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(a)	The audit team verified the project's ownership by reviewing the land title agreements granted by the Government of British Columbia's Register to Land Titles (in accordance with the Land Title Act). The government of British Columbia through the Land Owner Transparency Registry provides access to publicly search for land registries (https://parcelmapbc.ltsa.ca/pmsspub/). The audit team did a risk-based sample approach and selected a sample of each of the polygons of the project area contained in the Land Title Agreements, and their	The data is in form of official documents, and interviews by the audit team on site confirmed this, so this is deemed high quality.	Risk rating is appropriate

	<p>corresponding Forest Management Units. We then performed a visual check, cross referencing the BC government database with the Parcel IDs contained in the Land Title Agreements and confirmed that the rightful owners are TimberWest and Island Timberlands (reference 5 and 6) managed by MOSAIC. Moreover, MOSAIC is a widely recognized company in Vancouver Island, during the site visit and interviews with the local stakeholders, they all confirmed that there are no land disputes and that MOSAIC is the rightful manager of the forest lands that TimberWest and Island Timberlands have been historically and lawfully owned. Additional evidence of this can be found online: https://www.ccab.com/main/ccab_member/mosaic-forest-management/.</p>		
(b-g)	N/A	N/A	Risk rating is appropriate

3.5.6 External Risk – Community Engagement

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(a)	Interviews with the project personnel, local stakeholders, and the site visit confirmed that local households are not reliant on the project area.	The evidence is deemed of high quality.	Risk rating is appropriate
(b-c)	N/A	N/A	Risk rating is appropriate

3.5.7 External Risk – Political Risk

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(e)	The audit team downloaded data from the World Bank Governance Indicators and Confirmed the project's 5 year average score, is higher than 0.82.	The information is of high quality.	Risk rating is appropriate

(f)	The project does not meet the mitigation eligibility criteria.	N/A	Risk rating is appropriate
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3.5.8 Natural Risk

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
FIRE			
a)	The audit team confirmed through interviews with the project personnel, local stakeholders, the site visit, and supporting documentation in the adaptive management plan and supporting documentation (reference 2, 34, 35) that wildfires do not play a significant role in the natural disturbance for Vancouver Island, and MOSAIC has an efficient fire prevention and response measures in place, and also has proven history of effectively containing the natural risk of fire in coordination with the local authorities and neighboring community leaders.	The information is of high quality.	Risk rating is appropriate
PEST AND DISEASE OUTBREAKS			
b)	The audit team confirmed through interviews with the project personnel, local stakeholders, the site visit, and supporting documentation in the adaptive management plan and supporting documentation (reference 2, 34, 35) that the risk of insect & disease hazard is very low, and incidents usually do not result in mortality. The audit team confirmed that MOSAIC has prevention measures in place for this risk and that the project proponent has proven history of effectively containing this risk.	The information is of high quality.	Risk rating is appropriate
EXTREME WEATHER			
c)	The audit team confirmed through interviews with the project personnel,	The information is of high quality.	Risk rating is appropriate

	local stakeholders, the site visit, and supporting documentation in the adaptive management plan and supporting documentation (reference 2, 34, 35) that the risk of extreme weather is not significant.		
GEOLOGICAL RISK			
d)	The audit team confirmed through interviews with the project personnel, local stakeholders and the site visit that the risk due to geological factors is insignificant.	The evidence is deemed of high quality.	Risk rating is appropriate
(e-g)	N/A	N/A	Risk rating is appropriate

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The audit team conducted an exhaustive review of all the data provided by the project proponent, including the PD, standard operating procedures, the non-permanence risk report, input data, calculation workbooks, uncertainty estimates, equations, parameters, assumptions used and supporting documentation, to ensure that the methods and approach are in consistency and compliance with the VCS standard version 4.3 requirements and the Methodology VM0012 applied. The project proponent provided excel spreadsheets containing the input data and equations that the audit team was able to recalculate and verify the correctness of the data, the application of the methodology, equations and calculations, and verify that the data and the calculations presented are free of errors and material misstatements. The audit team also conducted a series of interviews with the project personnel (see section 2.3) where the project proponent explained in detail the flow and content of all the data provided and the different sections of the PD, to confirm the data and information provided is clear, adequate, correct, free of errors and misstatements and is in consistency with the PD and the methodology applied. Additionally, the audit team performed site visit inspections into the project area (see section 2.4) where the audit team confirmed through a series of interviews with local stakeholders, project personnel, the plot remeasurements, the verification of on-site land conditions, roads, signs and the infrastructure of MOSAIC, that the statements and claims of the project proponent in the PD and methodology applied were valid and accurate. Based on this, SCS concludes the following:

- There are no material discrepancies between the project implementation and the project description.
- *The monitoring plan is complete and is consistent with the VCS requirements, and the VM0012 methodology. The implemented monitoring system is suitable and follows adequate, sound science-based methods and expertise (reference 22, 39) to obtain, record, compile and analyse the monitored data and parameters.*
- *There are no material discrepancies between the actual monitoring system, and the monitoring plan set out in the project description and the applied methodology.*
- *The project has not participated or been rejected under any other GHG programs since the validation.*
- *The project has not received or sought any other form of environmental credit, or has become eligible to do so since validation.*
- *The GHG emission reductions or removals generated by the project have not become included in any other emissions trading program, or any other mechanism that includes GHG allowance trading.*
- The project has implemented the activities that resulted in the SD contributions described in the monitoring report.
- The project activities that lead to the GHG emission reduction commenced prior to the monitoring period.

Overall, SCS concludes that the project has been implemented as described in the project description.

4.2 Accuracy of GHG Emission Reduction and Removal Calculations

The GHG emission reductions and/or removals for the verification period have been quantified correctly in accordance with the project description and with the applied methodology VM0012.

An identification of the data and parameters used to calculate the GHG emission reductions and/or removals for this verification period, and a description of the steps taken to assess each of them, follows.

Data / Parameter	Assessment of accuracy of GHG emission reductions and removals	Assessment of whether methods/formulae set out in project description have been followed	Conclusion regarding appropriateness of default values
APRJ,i	The audit team independently re-calculated in ArcGIS from the spatial datasets provided (reference 23) and confirmed the total project area, as well as the total area of each individual	Methods have been followed adequately	The values are appropriate

	stratum-level analysis unit reported in the PD, and attests that are accurately reported and utilized in the quantification of emissions reductions (reference 10,18).		
APSP,i,	The audit team confirmed on-site the area of the permanent sampling plots is 400m ² (reference 8, 22, 37).	Methods have been followed adequately	The values are appropriate
DBHi,t	The audit team confirmed on-site the measures of diameter at breast height (DBH) taken on the permanent plots.	Methods have been followed adequately	The values are appropriate
Height i,t	The audit team confirmed on-site the tree height measurements taken on the permanent plots.	Methods have been followed adequately	The values are appropriate
BAG i,t	The audit team confirmed the estimates of aboveground live tree biomass followed methodology well established in the cruise compilation manual (reference 37), performed by Dr. Ian Moss, recognized local forest scientist, and are in consistency with the VM0012 methodology.	Methods have been followed adequately	The values are appropriate
BBG i,t	The audit team confirmed the estimates of belowground live tree biomass followed methodology well established in the cruise compilation manual (reference 37), performed by Dr. Ian Moss, recognized local forest scientist, and are in consistency with the VM0012 methodology.	Methods have been followed adequately	The values are appropriate
BTOTAL i,t	The audit team confirmed this is a parameter modeled in the CBM-CFS3 (reference 39).	Methods have been followed adequately	The values are appropriate
CLBi,t	The audit team independently recalculated and confirmed the carbon storage in live tree biomass estimated in the calculation workbooks provided (see reference 18).	Methods have been followed adequately	The values are appropriate

CDOMi,t	The audit team independently recalculated and confirmed the carbon storage I dead organic matter estimated in the calculation workbooks provided (see reference 18).	Methods have been followed adequately	The values are appropriate
fPRJ,NATURAL,i,t	The audit team confirmed the estimates of the proportion of biomass that dies from natural mortality, followed methodology well established in the cruise compilation manual (reference 37), performed by Dr. Ian Moss, recognized local forest scientist, and are in consistency with the VM0012 methodology.	Methods have been followed adequately	The values are appropriate
fPRJ,HARVEST,i,t	The audit team confirmed that the proportion of biomass removed by harvesting from polygon is modeled in the CBM-CFS3 (reference 39).	Methods have been followed adequately	The values are appropriate
fPRJ,DAMAGE,i,t	The audit team confirmed that estimates of the proportion of biomass removed for road and landing construction have not changed as this is the first monitoring period.	Methods have been followed adequately	The values are appropriate
DOMSNAG,i,t	The audit team confirmed the estimates of dead organic matter in standing dead wood, followed methodology well established in the cruise compilation manual (reference 37), performed by Dr. Ian Moss, recognized local forest scientist, and are in consistency with the VM0012 methodology.	Methods have been followed adequately	The values are appropriate
DOMLDW,i,t	The audit team confirmed the estimates of total mass of dead organic matter contained in lying dead wood, followed methodology well established in the cruise compilation manual (reference 37), performed by Dr. Ian Moss, recognized local forest scientist, and are in consistency with the VM0012 methodology.	Methods have been followed adequately	The values are appropriate

VLDW,i,t	The audit team confirmed the estimates of total volume of dead organic matter contained in lying dead wood, followed methodology well established in the cruise compilation manual (reference 37), performed by Dr. Ian Moss, recognized local forest scientist, and are in consistency with the VM0012 methodology.	Methods have been followed adequately	The values are appropriate
Li,t	The audit team confirmed on-site the length of the transect used to determine volume of lying dead wood in the sample plot is 25m (reference 8).	Methods have been followed adequately	The values are appropriate
Dn,i,t	The audit team confirmed on-site the measurements of the diameter of each piece of dead wood along the transects in the sample plot (reference 8).	Methods have been followed adequately	The values are appropriate
N,t	The audit team confirmed the calculation of dead organic material, followed methodology well established in the cruise compilation manual (reference 37), performed by Dr. Ian Moss, recognized local forest scientist, and are in consistency with the VM0012 methodology.	Methods have been followed adequately	The values are appropriate
EM/ Mean model error for the project	The audit team independently recalculated and confirmed the calculation of the mean model error for the project in the calculation workbook provided (reference 14).	Methods have been followed adequately	The values are appropriate
EI/ Inventory error for the project	The audit team independently recalculated and confirmed the calculation of the inventory error for the project in the calculation workbook provided (reference 14).	Methods have been followed adequately	The values are appropriate
EP/ Estimated project error	The audit team independently recalculated and confirmed the calculation of the estimated project error in the calculation workbook provided (reference 14).	Methods have been followed adequately	The values are appropriate

ERy,ERR/ Uncertainty Factor	The audit team independently recalculated and confirmed the calculation of the uncertainty factor in the calculation workbook provided (reference 14).	Methods have been followed adequately	The values are appropriate
MLFy	The audit team confirmed the market leakage factor was adequately determined (see section 3.4.6.4).	Methods have been followed adequately	The values are appropriate

In conclusion, the audit team finds that the estimates of the GHG emission reductions and removals have been quantified correctly in accordance with the monitoring plan and applied methodology VM0012 v.1.2 for this verification period: 01-January-2018 to 31-December-2021

4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals

Based on the review of the PD, standard operating procedures, calculation workbooks, supporting documentation, on-site visit, and interviews with the project personnel and local stakeholders, the audit team asserts that the evidence used to determine the GHG reductions and removals for the verification period was of sufficient quantity and appropriate quality. An identification of the categories of evidence used to determine the GHG emission reductions and removals, and a description of the steps taken to assess the sufficiency of quantity, and appropriateness of quality, of each category of evidence, follows.

Category	Reliability of the evidence, and source and nature of evidence (external or internal, oral or documented) for determination of GHG emission reductions or removals	Information flow from data generation and aggregation, to recording, calculation and final transposition into the MR	Appropriateness of implemented calibration frequency of monitoring equipment
Reporting workbooks	The main workbook originated from Project Personnel and was determined, after thorough testing, to be of high quality and highly reliable; quantity of workbooks provided to audit team was sufficient	The audit team traced, recalculated and confirmed the data contained in the monitoring report from the emission reductions calculation workbook back to their respective sources, which is recorded in	N/A

		references 10, 11, 12, 13, 14.	
Field Protocols	The field protocols were reviewed by the audit team, who confirmed that they are based on sound scientific data using best practices and are capable of capturing changes in carbon stock in conformance with the methodology.	The audit team reviewed the field protocols (reference 8 37) and confirmed that the QA/QC procedures provide checks and balances to ensure high quality data collection during the site visit.	N/A
Geospatial Data	All stratification information in workbooks and other spatial data was provided to the audit team, who confirmed that the data contained all the necessary information to recreate the processes employed by the project and found the calculations consistent with values stated in the project description, monitoring report and applied calculations.	The audit team re-calculated and confirmed the total project area, as well as the total area of each individual stratum-level analysis unit reported in the workbooks (reference 10, 18).	N/A

5 VALIDATION AND VERIFICATION CONCLUSION

Based on the review of the PD, standard operating procedures, calculation workbooks, supporting documentation, on-site visit, and interviews with the project personnel and local stakeholders, SCS concludes, with no qualifications or limitations, that the BigCoast project complies with the VCS validation and verification criteria for projects and their GHG emission reductions or removals set out in VCS Version 4 and the selected methodology (VM0012, v1.2).

Verification period: From 01-January-2018 to 31-December-2021

Verified GHG emission reductions and removals in the above verification period:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)	Buffer pool allocation	VCUs eligible for issuance
2018	-234,435	133,187	0.0	367,621	51,467	310,640
2019	-266,740	133,038	0.0	399,777	55,969	337,812
2020	-296,863	131,921	0.0	428,785	60,030	362,323
2021	-322,912	131,216	0.0	454,128	63,578	383,738
Total	-1,120,950	529,362	0.0	1,650,311	231,044	1,394,513

- Net change in carbon stocks: 1,650,311 tCO₂e
- Non-permanence risk rating (see Section 3.5 above): 14%
- Total number of buffer credits to be deposited into AFOLU pooled buffer account: 231,044 credits

APPENDIX A: LIST OF FINDINGS

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

The audit team closed all findings with respect to rules and requirements in VCS Standard 4.3, which was in effect at the end of the audit.

NCR 1 Dated 12 Aug 2022

Standard Reference: VCS Standard v4.3, VCS Joint Project Description & Monitoring Report Template v4.1

Document Reference: VCS_Joint_Project_Description_Monitoring_Report_BigCoast v1.0 (Jul'22).pdf

Finding: Section 3.4.3 of the VCS states “The project proponent shall use the VCS Monitoring Report Template or an approved combined monitoring report template available on the Verra website, as appropriate, and adhere to all instructional text within the template.” Moreover, the VCS Joint PD & MR Template, Section 5.2 “Data and Parameters Monitored” requires to “Complete the table below for all data and parameters to be monitored during the project crediting period (copy the table as necessary for each data/parameter). The values provided are used to estimate the net GHG emissions and removals for the project crediting period in Section 4 above. Data and parameters determined or available at validation are included in Section 5.1 (Data and Parameters Available at Validation) above”.

The audit team found that this section is not provided, and Section 5 of the report is not in conformance with the template requirements. Please provide this information and update the monitoring report accordingly.

Project Personnel Response: VCS PDD and Monitoring Report has been updated with the inclusion of Section 5.2, Data and Parameters Monitored.

Refer to document titled "VCS_Joint_Project_Description_Monitoring_Report_BigCoast v2.0.doc".

01-Client Share\02-Finding Response (08-15-22)\VCS\Finding 01 - "READ ME.txt"

Auditor Response: The assessment team confirmed this section was included in the PD and the numbering of the sections has been corrected. This finding is closed.

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

NIR 2 Dated 12 Aug 2022

Standard Reference: AFOLU_Non-Permanence_Risk-Tool_v4.0.pdf

Document Reference: Mosaic - VCS-Risk-Report-Calculation-Tool-v4.0 (Jul '22) - Final.xlsx, VCS-Non-Permanence-Risk-Report-Short-Form-BigCoast v1.0 (Jun '22).pdf

Finding: The Mosaic - VCS-Risk-Report-Calculation-Tool-v4.0 (Jul '22) - Final.xlsx, cell D15 states “Mitigation: Management team includes individuals with significant experience in AFOLU project design and implementation, carbon accounting and reporting (eg, individuals who have successfully managed projects through validation, verification and issuance of GHG credits) under the VCS Program or other approved GHG programs.” To claim this mitigation, the client must provide direct evidence of the team management experience. Please provide the CVs of those individuals in the management team that comply with the qualifications required for this specific project activity “significant experience in AFOLU project design and implementation”.

Project Personnel Response: A corporate resume has been provided for key GreenRaise/Zimmfor project development and implementation team members.

01-Client Share\02-Finding Response (08-15-22)\VCS\Finding 02

Auditor Response: The assessment team has reviewed the corporate resume and confirmed that the project development team comply with the qualifications required. This finding is closed.

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

NCR 3 Dated 12 Aug 2022

Standard Reference: AFOLU_Non-Permanence_Risk-Tool_v4.0.pdf

Document Reference: Non-Permanence Risk Report - NPV Analysis (incl Project Cash Flow Forecast).xlsx

Finding: The AFOLU_Non-Permanence_Risk-Tool_v4.0.pdf NPRR, section 2.2.3 part 1) states, “The opportunity cost analysis shall include a net present value (NPV) analysis, covering the project crediting period, of such alternatives as compared to the project, taking into consideration a conservative estimate of revenue from GHG credit sales and other project revenue streams, and potential price fluctuations of commodities impacted by the project. The financial discount rates used shall be based on published sources and represent the appropriate risk for the relevant land use scenario. Estimates of prices for GHG credit sales shall be based on published sources such as market intelligence reports. The analysis shall be undertaken in a transparent manner and shall provide all relevant assumptions, parameters, and data sources such that a reader may reproduce the analysis and determine the same results.”

In the workbook Non-Permanence Risk Report - NPV Analysis (incl Project Cash Flow Forecast).xlsx, sheet Project – Estimated VCU’s cells E7:E36 do not correspond to those calculated in the workbook Final GHG Estimate (July 6, 2022).xlsx, sheet1, column W or those reported in the Project Description and Monitoring Report, section 6.5.4 Table 22 for the years 2018-2021 and therefore is not in conformance with the requirements. Please update accordingly

Project Personnel Response: Non-Perm Risk Report - NPV Analysis (2022-07-06) contains correct data. Refer to MS Excel file provided.

01-Client Share\02-Finding Response (08-15-22)\VCS\Finding 03

Please note that the NPV Cash Flow Analysis (2022-08-17) and the VCUs referenced have been modified consistent with additional Findings 11 (emissions) and 12 (HWP).

Auditor Response: The assessment team was able to verify the changes provided. This finding is closed.

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

NIR 4 Dated 12 Aug 2022

Standard Reference: AFOLU_Non-Permanence_Risk-Tool_v4.0.pdf

Document Reference: Non-Permanence Risk Report - NPV Analysis (incl Project Cash Flow Forecast).xlsx, VCS-Non-Permanence-Risk-Report-Short-Form-BigCoast v1.0 (Jun '22).pdf

Finding: In the NPRR VCS-Non-Permanence-Risk-Report-Short-Form-BigCoast v1.0 (Jun '22).pdf Section 1.3 d) it is stated that “An initial assessment of the project scenario under similar carbon pricing scenarios found on similar VCS Registry was used to determine a price of approximately XX*. Moreover, in the NPV workbook provided “Non-Permanence Risk Report - NPV Analysis (incl Project Cash Flow Forecast).xlsx”, an estimate of \$ XX*/tonne C was used in the projected cash flow analysis (low) and \$ XX*/tonne C for a moderate scenario. It is unclear as to whether \$ XX*/tonne C, \$ XX*/tonne C is a low/conservative estimate and \$ XX*/tonne C is moderate. In the following publication, the price per tonne C was \$7.53 in January 2022 (<https://www.bloomberg.com/professional/blog/carbon-offsets-price-may-rise-3000-by-2029-under-tighter-rules/>).

Please provide further evidence and justification for why \$ XX*/tonne C is a low/conservative estimate for the sale of carbon offset credits and \$ XX* is moderate and how did you derived the annual price growth of XX*%.

Project Personnel Response: VCU Sales Price justification provided in MS Word document. Mosaic position paper (developed with support from Ernst & Young) concludes sales prices and annual price growth of XX*%.

Position further strengthened (as conservative) based on CARB May 2022 Auction Results (average sales prices of + \$30 USD).

01-Client Share\02-Finding Response (08-15-22)\VCS\Finding 04

Auditor Response: The assessment team reviewed the evidence provided and confirmed the information provides good justification regarding the carbon price selected.

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

* The real values have been omitted as is deemed commercially sensitive information.

NIR 5 Dated 12 Aug 2022**Standard Reference:** AFOLU_Non-Permanence_Risk-Tool_v4.0.pdf**Document Reference:** Non-Permanence Risk Report - NPV Analysis (incl Project Cash Flow Forecast).xlsx

Finding: The AFOLU_Non-Permanence_Risk-Tool_v4.0.pdf NPRR, section 2.2.3 part 1) states, “The opportunity cost analysis shall include a net present value (NPV) analysis, covering the project crediting period, of such alternatives as compared to the project, taking into consideration a conservative estimate of revenue from GHG credit sales and other project revenue streams, and potential price fluctuations of commodities impacted by the project. The financial discount rates used shall be based on published sources and represent the appropriate risk for the relevant land use scenario. Estimates of prices for GHG credit sales shall be based on published sources such as market intelligence reports. The analysis shall be undertaken in a transparent manner and shall provide all relevant assumptions, parameters, and data sources such that a reader may reproduce the analysis and determine the same results.”

In the NPV workbook provided “Non-Permanence Risk Report - NPV Analysis (incl Project Cash Flow Forecast).xlsx”, sheet “Baseline Cash Flow”, cell E22 shows a discount rate of 5.75% is being used, and cells D34:AG34 use an incremental discount factor of 0.5. Additionally, the audit team couldn’t identify which conversion rate was used for 2021 in cells H6:H10 and H15. Please provide further evidence/justification as for why these factors and assumptions were used.

Project Personnel Response: The NPV analysis uses a discount rate of XX*% (cell E22). Refer to MS Word Justification references the PriceWaterhouse Coopers "Unrealized Synergies Assessment" Report.

The values in cells D34:AG34 (which were labelled as the 'discount factor') actually refer to the time period number that was used in calculating the discount factor in cells D44:AG44.

01-Client Share\02-Finding Response (08-15-22)\VCS\Finding 05

Auditor Response: Thank you for your response. The audit team was able to review and confirm the information provided and hence, this finding is closed.

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

* The real values have been omitted as is deemed commercially sensitive information.

NIR 6 Dated 12 Aug 2022

Standard Reference: AFOLU_Non-Permanence_Risk-Tool_v4.0.pdf

Document Reference: Non-Permanence Risk Report - NPV Analysis (incl Project Cash Flow Forecast).xlsx, 2022 Ecora Woodstock Final PRJ.xls

Finding: The AFOLU_Non-Permanence_Risk-Tool_v4.0.pdf NPRR, section 2.2.3 part 1) states, “The analysis shall be undertaken in a transparent manner and shall provide all relevant assumptions, parameters, and data sources such that a reader may reproduce the analysis and determine the same results.”

In the file In the NPV workbook provided “Non-Permanence Risk Report - NPV Analysis (incl Project Cash Flow Forecast).xlsx”, sheet “Baseline – Revenue & Costs”, the harvest volume and revenue from Period 1 to 2 increases significantly (more than 200%) as compared to the other periods. The NPRR Analysis provides an explanation in cells B27:B29 that “Revenue (CAD) & as per Woodstock Model - model run titled ACTIVITY_C_BASELINE_MOSAIC_v5_SOFTFORCE1TO6_2018’

Mosaic's Corporate Model is the source for the sales prices used in the Woodstock Model

It is assumed that sales revenue will flow evenly for each year within the period”, including the summary presented in the file “2022 Ecora Woodstock Final PRJ.xls”, sheet Pivot (harv_area_vol_cost) and sheet Vol_Spe_Pro. However, it is unclear to the audit team why there is this significant increase in the modeling estimates. Please provide additional information/evidence of the modeled parameters used by Ecora Woodstock, that help explain such significant increase in the harvest projections over that period and additional evidence of the revenue estimates.

Project Personnel Response: With reference to evenflow, Woodstock modelling was completed as a whole across the entire Mosaic landbase (Theme 13 - include all 0 & 1).

There is no 200% change in revenue across the entire land base. Please note that a period is defined as 5 years. Evidence of evenflow can be confirmed by removing the filter (i.e, 0 and 1) from theme 13.

The overall volume harvest and revenue remains as "even flow" between the periods (5 yrs) across the entire landbase. Woodstock modelling resulted in a higher volume projected to be harvested from the Project Activity Instances in period 2.

The reference to evenflow relates to revenue flow 'within' each individual year of the period (i.e. 1/5th). For modelling between periods there are also Woodstock conditions that limit period variation on the landbase as a whole. This can be seen once the theme 13 filter is removed to view the entire model results that show a even flow. Specific to the project landbase the woodstock allocates harvest based on maximizing Net present Value (NPV).

Refer to MS Excel "2022 Ecora Woodstock Final PRJ.xls" in intial Client Share folder.

Auditor Response: The assessment team was able to confirm the period variations on the Ecora Woodstock file. This finding is closed.

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

NIR 7 Dated 12 Aug 2022

Standard Reference: VT0001v3.0_Tool_Additionality_VCS_AFOLU.pdf, Non-Permanence Risk Report - NPV Analysis (incl Project Cash Flow Forecast).xlsx

Document Reference: VCS_Joint_Project_Description_Monitoring_Report_BigCoast v1.0 (Jul'22).pdf

Finding: The VT0001v3.0 Additionality Tool, Section 1.1.3 states the following: “In validating the application of this tool to a proposed project activity, validation/verification bodies 1.1.3 should assess credibility of all data, rationales, assumptions, justifications and documentation provided by project proponent(s) to support the selection of the baseline and demonstration of additionality.” Moreover, Section 2.2.2 requires to “Document the costs associated with the VCS AFOLU project and demonstrate that the activity produces no financial benefits other than VCS related income.”. In the PD & MR report, Section 3.5.5 states “The operating costs of the carbon project specific to the carbon project itself are projected to be approximately \$ XX* CAD3 in the first year (including verification, issuance and registration, project management) and an estimated \$ XX* CAD/ year (not including capital costs, management overhead costs, road costs, conservation activities costs, or taxes) for maintenance.” The audit team couldn’t determine how these estimates were derived from the NPV Analysis. Please provide further evidence and a financial breakdown of the costs included in these estimates (\$XX* CAD costs of the carbon project, and estimated \$ XX* CAD/year for maintenance).

Project Personnel Response: Project Description Document (PDD) has been updated to remove the inconsistent values noted in the Non-Perm Risk Report - NPV Analysis.xls; and agreed as Commercially Sensitive Information.

Supporting data for costs noted within "Non-Perm Risk Report - NPV Analysis (incl Project Cash Flow Forecast) - 2022-07-06.xls"; worksheets titled "Implementation Costs" and "Maintenance Costs".

Refer to revised PDD.

Auditor Response: Thank you for your explanation and changes provided. The audit team was able to confirm the changes provided in the Monitoring Report and the corresponding workbooks. This finding is closed.

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

* The real values have been omitted as is deemed commercially sensitive information.

OBS 8 Dated 12 Aug 2022

Standard Reference: VCS Standard v4.3, VCS Joint Project Description & Monitoring Report Template v4.1

Document Reference: VCS_Joint_Project_Description_Monitoring_Report_BigCoast v1.0 (Jul'22).pdf

Finding: The VCS, section 3.15.1 Data and Parameters states that “Data and parameters used for the quantification of GHG emission reductions and/or removals shall be provided in accordance with the methodology.” The following observation is stated in reference to Section 5.1 of the PD “Data and Parameters at Validation”, Data/Parameter Carbon Fraction. In the VM0012, Section 9.1 the Parameter Carbon Fraction is defined as “IPCC default value = 0.5, if more relevant values are not available”. In Section 5.1 of the PD & MR, Parameter Carbon Fraction (CF), the Source of data is stated as “IPCC 2006 default value”, with a value of “0.5”. However, the IPCC 2006, Chapter 4, Table 4.3 states that the “Carbon Fraction of aboveground forest biomass” is “0.47 tonne C (tonne d.m.)-1”. No further action is required, this is just an observation for future reference.

Project Personnel Response: N/A - no change made as a result

Auditor Response:

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

NCR 9 Dated 15 Aug 2022

Standard Reference: VCS Standard v4.3, VCS Joint Project Description & Monitoring Report Template v4.1

Document Reference: VCS_Joint_Project_Description_Monitoring_Report_BigCoast v1.0 (Jul'22).pdf

Finding: The VCS Standard, section 3.10.2 states “The project location for AFOLU projects shall be specified in the project description in terms of its project area. The spatial extent of the project shall be clearly specified to facilitate accurate monitoring, reporting and verification of GHG emission reductions and removals and to demonstrate that the project meets the eligibility criteria of the relevant project category. The description of the project location shall include the following information:

- 1) Name of the project area (e.g., compartment number, allotment number and local name).
- 2) Maps of the project area.
- 3) A KML file with geodetic polygons that precisely delineate the boundary of the AFOLU project area generating emission reductions and removals.
 - a) Where the project area is comprised of multiple polygons (parcels), the project location details of each polygon/parcel shall be included in the project description.
 - b) Grouped projects and non-grouped projects with multiple project activity instances shall provide geodetic polygons showing the boundary of each instance included in the project. Non-contiguous project activity instances shall be reflected in the polygons in the KML file.
 - c) KML files (polygons of the project area/instances) shall exclude:
 - i) Any non-eligible areas (e.g., if a project activity relates to improved crop management, the KML file should only be for the participating croplands and should exclude any surrounding land that may be part of the property), and
 - ii) Areas not part of the project area, as defined by the applied methodology (e.g., roads, water bodies, water ways, settlements, etc.).
- 4) Total size of the project area.
- 5) Details of ownership. ”

When assessing the spatial layer provided BigCoast_ProjectInstances_May0522.shp, the assessment team couldn't confirm the project area reported in the calculation workbook “AU Areas CarbonProject_May0522.xlsx”, sheet CarbonProject_May0522, cell B40, “Total area” (sum of gha). The audit team found a value of 44,022ha vs 45,243 accounted in the calculation workbook and reported in the PD, section 3.4.2, where the area reported for Old Forest is XX*ha, vs XX*ha reported in the file AU Areas CarbonProject_Aug0922.xlsx, XX*ha reported of Second Growth vs XX*ha found and XX* of Non-Productive Forest reported vs XX* found and therefore this is in non conformance with the program requirements. Please provide evidence, demonstration as of how the gross harvestable area (gha) and the project area is calculated and update the PD and calculations where necessary.

Project Personnel Response: Values for gha, pha, and nha have been verified with Mosaic and in ArcMap. All area references in the PDD and Monitoring Report have been updated to reflect "AU Areas CarbonProject_Aug1722.xls" revised values, see Area Summaries tab.

Discussion with Mosaic led to further clarification on how gha, pha, and nha are calculated when they receive TSA project data from GreenRaise; spatial and tabular data mentioned above have been updated using calculations and criteria as set out in the Data Definitions tab in Areas CarbonProject_Aug1722.xls.

Updated tables and spatial data (BigCoastSpatial_Aug1822.gdb - BigCoast_ProjectInstances_Aug1822) reside here:

01-Client Share\02-Finding Response (08-15-22)\VCS\Finding 09.

Due to different systems handling multipart polygons, Mosaic's modelling of inventory reports a gha of 44,060ha compared to the TSA data of 44,022 ha, and a pha of 41,359 ha compared to the TSA data of 41,322. The 37-38 hectare difference does not affect the actual project footprint (TSA is the accurate source), nor the modelling output.

Updated Uncertainty Calculations with the revised areas (see spreadsheet 'VM0012 - Uncertainty Calculator (Aug'22).xlsx' filed in Finding 9 folder.

Uncertainty references in the PDD have been updated as well. No change in uncertainty results.

Auditor Response: Thank you for the thorough review, updates and corrections provided. The assessment team has been able to verify and confirm the project area in Monitoring Report, the spatial layers and the calculation workbooks provided. This finding is closed.

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

* The real values have been omitted as is deemed commercially sensitive information.

NIR 10 Dated 12 Aug 2022

Standard Reference: VCS Standard v4.3, VM0012-IFM v1.2 module

Document Reference: Emissions_BSL_Estimate (Jun '22).xlsx

Finding: The VCS standard, Section 3.12 states “The baseline scenario shall be accurately determined so that an accurate comparison can be made between the GHG emissions that would have occurred under the baseline scenario and the GHG emission reductions and/or removals that were achieved by project activities.”. In the verification and recalculation of the estimates of equation 24 CBSL, Emitfossil, the audit team couldn’t replicate the estimates from the file Emissions_BSL_Estimate (Jun '22).xlsx for the different species. It is unclear why the estimates of period 5 are considering only 4 years over the period, (cells A23:A26 of each of the sheets of the species). Please provide further evidence and explain the rationale applied here.

Project Personnel Response: This was an oversight in the original spreadsheet build out. Error was built into each species calculations. Error has been corrected.

See revised spreadsheet 'Emissions_BSL_Estimate (Aug '22).xls. Resulting update to final VCU calculation ('Final GHG Estimate (Aug 17, 2022')) and the PPD have been made.

Non-Permanence Assessment and NPV Financial Analysis have each been updated with revised VCUs.

01-Client Share\02-Finding Response (08-15-22)\VCS\Finding 10.

Auditor Response: Thank you for the corrections provided. The assessment team has been able to verify the changes and information provided. This finding is closed.

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

NCR 11 Dated 12 Aug 2022

Standard Reference: VCS Standard v4.3, VCS Joint Project Description & Monitoring Report Template v4.1

Document Reference: VCS_Joint_Project_Description_Monitoring_Report_BigCoast v1.0 (Jul'22).pdf

Finding: Section 3.4.3 of the VCS states “The project proponent shall use the VCS Monitoring Report Template or an approved combined monitoring report template available on the Verra website, as appropriate, and adhere to all instructional text within the template.” Moreover, the VCS Joint PD & MR Template, Section 5.2 “Data and Parameters at Validation” requires to “Complete the table below for all data and parameters that are determined or available at validation, and remain fixed throughout the project crediting period (copy the table as necessary for each data/parameter). The values provided are used to estimate the net GHG emissions and removals for the project crediting period in Section 4 above”.

The audit team found the parameter “BEF Biomass Expansion Factor” was not provided and hence, this is not in conformance with the template requirements. Please provide this information and update the monitoring report accordingly.

Project Personnel Response: Refer to updated PDD update; BEF added to Section 5.1 - BEF now references 'CBM-CFS3 calculates the Biomass Expansion Factor as a function of jurisdiction, ecozone and tree species'. (Pg 54)

Auditor Response: The assessment team confirmed the information provided. This finding is closed.

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

NIR 12 Dated 12 Aug 2022**Standard Reference:** VCS Standard v4.3, VM0012-IFM v1.2 module**Document Reference:** Mosaic - BSL HWP (Jun '22).xlsx

Finding: The VCS standard, Section 3.12 states “The baseline scenario shall be accurately determined so that an accurate comparison can be made between the GHG emissions that would have occurred under the baseline scenario and the GHG emission reductions and/or removals that were achieved by project activities.”. In the verification and recalculation of the estimates of equation 19 CBSL, STORHWP, the audit team couldn’t confirm the estimates from the file Mosaic - BSL HWP (Jun '22).xlsx, sheet “Step 3”, Column Y “Change C (Eq. 19) tC”. Please explain the rationale used in the application of Equation 19 why $T = 2$? “ $T =$ number of years between monitoring t_1 and t_2 ”. Furthermore, the Final calculations of GHG in file Final GHG Estimate (July 6, 2022).xlss, sheet1, Column D and E, show that for year 2018, 2019... you have “ $\Delta\text{CBSL,EMITFOSSIL,t} =$ the annual change in fossil fuel emissions from harvesting (logging and log transport) and processing of the various wood products.”, but you have no C in HWP for those years. Please elaborate and explain the rationale on the application of Equation 19.

Project Personnel Response: The calculation of HWP is based on the inter-year difference in harvest rates, subsequent manufacturing into wood products (carbon sequestration) and the related decay (carbon emissions) of the wood products. Specific to Eq. 19 monitoring for the project has been carried out annually and thus a 1 year period is used in column 'I' (i.e. STORHWP2019 - STORHWP2018). Using BSL harvest scenarios developed by Woodstock modelling and a 5 year period, harvest in any single year is simply 1/5th and thus allocated an equal harvest volume for each year. Thus change in HWP between monitoring years is zero (0m3).

The emission change is only noted between Woodstock periods where less/ more volume is allocated to the HWP pools.

The spreadsheet has been revised to reflect Eq. 19 as follows (i.e. (STORHWP2021 - STORHWP2018)/4). See revised spreadsheet 'Mosaic - BSL HWP (Aug '22.xls)'

Non-Permanence Assessment and NPV Financial Analysis have each been updated with revised VCUs.

01-Client Share\02-Finding Response (08-15-22)\VCS\Finding 10.

Auditor Response: Thank you for your response. However, It is unclear why in file Mosaic - BSL HWP (Aug '22).xlsx, sheet “Step 3 (K - In use)”, in cell Y19 you change the equation for year 2021 and do not apply the same criteria and equation used for the years before that. Moreover, it is still unclear why you divide by 2, e.g. cell Y24, when there is only 1 year of difference between 2027 and 2026 and so on (“T = number of years between monitoring t1 and t2”), not 2.

Please clarify.

Project Personnel Response 2: Revision have been made to file ‘Mosaic - BSL HWP (Sept '22).xls’ to reflect the years between monitoring for Ex-Anti calculations (1 year). Changes have been carried forward into the final GHG estimate (see finding 15).

Auditor Response 2: The assessment team was able to verify the changes provided, this finding is closed.

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

NIR 13 Dated 15 Aug 2022**Standard Reference:** VCS Standard v4.3**Document Reference:** BigCoast_ProjectInstances_May0522.shp, pmbc_parcel_fabric_poly_svw.gdb, MF land title agreements**Finding:** The VCS standard, Section 3.10.3 states “The project proponent shall demonstrate control over the entire project area with documentary evidence establishing project ownership”. When verifying the ownership of the parcels, the audit team couldn’t confirm some of ownership parcels (e.g. 008738785, 008738165, 015695492, 015695387, 015695387, 015695361, 015813347, etc).

The audit team requests the following:

- a) Please provide a list of parcel IDs in excel format or any other format that can allow for a more efficient way to locate the Parcel ID.
- b) Please explain why are there areas(polygons) that have no Licencse or are labeled as “non-MFU”.
- c) Please provide a legal title agreement that demonstrates ownership of the parcels contained in the MFU76.

Project Personnel Response: The Managed Forest (aka - Managed Forest Council Management Commitment) Documents were originally provided as scanned PDF documents. Appendices for each Document have been provided in MS Excel formal.

Refer to MS Excel document titled "Finding 13 - Mosaic MF PID Summary (Aug '22).xls"

01-Client Share\02-Findiing Response (08-15-22)\VCS\Finding 13

Auditor Response: Thank you for your response. The assessment team couldn’t verify and confirm some of the parcel IDs provided in the Land Title of MFU76.

- 1) Please provide a list of parcel IDs contained in MFU76 in excel format or any other format that can allow for a more efficient way to locate the Parcel ID.
- 2) Please explain why are there areas(polygons) that have no Licencse or are labeled as “non-MFU”.

Project Personnel Response 2: 1.) The list of parcel IDs for each Managed Forest was provided in response to Findings Round # 1; Finding 13. Please refer to the MS Excel spreadsheet "Finding 13-Mosaic MF PIDs Summary (Aug '22).xls."

2.) Polygons noted as "non-MFU" or have no licence number indicated the polygons are either Private Land Timber holdings not included or participating the provincial Managed Forest program (for tax purposes) or are polygons whereby only the timber resources are owned by IT/TW.

To illustrate "non-MFU", Auditor selected Polygons (Object IDs) 952030, 952031, 952071, 952070 and 952072; PID was identified for these polygons (XX*); Title Search provided noting TimberWest Forest II as the registered owner of fee simple property. Refer to document titled "TITLE-XX*.pdf".

To illustrate "no licence number" Object ID 7281412 (Langley Lake) was selected; PID for this Polygon was identified (XX*); Title Search provided noted as Island Timberlands as having a "Timber Agreement" (pg 2; Registration Number XX*). Refer to documents titled "TITLE- XX*.pdf" and "H-2419 Langley Lake.pdf; pg 1 Timber Registration Number XX* .

Auditor Response 2: The assessment team was able to confirm the ownership in the new files provided, this finding is closed.

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

* The real values have been omitted as is deemed commercially sensitive information

NIR 14 Dated 12 Aug 2022**Standard Reference:** VCS Standard v4.3**Document Reference:** VCS_Joint_Project_Description_Monitoring_Report_BigCoast v1.0 (Jul'22).pdf**Finding:** Section 8.1.1 “Model selection and use”, states “Project proponents will make available, at validator/verifier request, documentation of:

1. The appropriateness of the selected model(s) to the particular project application;
2. A listing and explanation of all input data, output data, and model parameters/assumptions. ”. The PD, section 4.1.4 states “The CBM model was used to create a series of stand attribute curves for each analysis unit to predict/ simulate forest development, merchantable timber volume, and carbon storage and dynamics by carbon pool over time. Existing yield curves/ carbon curves were developed historically by Timberwest and Island Timberlands for their respective land bases and are used with Remsoft/ Woodstock modelling. Data from the Project Proponent’s standard Woodstock Model runs were used to set a representative yield curve for all forest polygons within Analysis Units (AUs)”. The assessment team requests additional evidence of the model parameters and assumptions used in the estimation of the baseline scenario and the project scenario, i.e. the “master table” or SIT tables, or any other files that contain a description of the parameters and assumptions used as input data for each of both modeling scenarios.

Project Personnel Response: 1. Appropriateness of the selected model was determined via methodology requirements listed in VM0012-Improved Forest Management Projects in Temperate and Boreal Forests LtPF v1.2, Section 8.1.1 Model Selection and Use. Within the CBM3 User Guide and Kurz et al. 1995 (provided on Client share within "Finding 14 - CBM Data"):

1. Well Established

i. CBM-CFS3 was developed for carbon modelling purposes in 2001 by the Carbon Accounting Team of the Canadian Forest Service.

2. Generates values on an annual basis, or at intervals not exceeding 10 years

i. CBM-CFS3 can generate values in annual time-steps.

3. Include a reasonable representation of mortality from stand-self thinning and natural disturbance agents that are regionally appropriate.

i. From the CB3-CFS3 User Guide: "The CBM-CFS3 allows users to explore a range of situations, including the effects of different levels of natural disturbances and management actions, and changes to growth and yield on forest ecosystem carbon stocks."

4. Output units expressed in carbon units (tC/ha) or as biomass (t/ha) and are calculated for each of the required carbon pools.

i. Output units of tC/ha were generated by the BigCoast project from CBM-CFS3 (refer to CMB outputs previously provided).

5. Well Documented and expert reviewed:

i. Google Search results in 39,200 articles referencing "Carbon Budget Model Canadian Forest Sector" with the most recent publication occurring in January of 2022.

6. Parameterized, calibrated, and tested for the specific conditions in the project

i. Spatial Units and Boundaries within CBM-CFS3 model for the BigCoast project: British Columbia - Pacific Maritime

ii. Model was built specifically for Canadian Forests and has been used numerous times on other Canadian projects.

2. All input SIT files, including MASTER_YIELD provided on Client Share "Finding 14 - CBM Data" folders. Woodstock modelling output, provided within "Finding 14 - Woodstock".

- Refer to CBM Summary files for model parameters and assumptions:

§ Forest Carbon Budget Model Project Summary_BSL, Forest Carbon Budget Model Project Summary_PRJ

Regarding area, when summary the "area" column within the Inventory spreadsheet for a single period only, the sum is equal to the pha (refer to finding 9).

Auditor Response: Thanks for your response and the evidence provided. The assessment team was able to verify the data and information provided, and hence this finding is closed.

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

NCR 15 Dated 1 Sep 2022

Standard Reference: VCS Standard v4.3, VM0012-IFM v1.2 module

Document Reference: Final GHG Estimate (Aug 17, 2022).xls

Finding: Section 8.5.2 of the VM0012-IFM v1.2 module, states “BRy is calculated by multiplying the most current verified permanence risk Buffer Withholding Percentage for the project by the change in carbon stocks (difference between baseline and project scenario) for the project area as per the latest approved VCS AFOLU Requirements (Voluntary Carbon Standard, 2008a).”.

In the verification of the Final GHG estimates, the assessment team found that in the file “Final GHG Estimate (Aug 17, 2022).xls”, sheet1, Column R, the Buffer Withholding Percentage is multiplied by Column Q, which corresponds to “Ery -Uncert” and is not directly multiplied by the resulting “change in carbon stocks (difference between baseline and project scenario)”. Hence this is in no conformance with the program requirements, please correct accordingly.

Project Personnel Response: File ‘Final GHG Estimate (Sept 6, 2022).xls’ has been modified to reflect recalculation of BRy as calculated by using the difference between baseline and project scenario (i.e. ERy (Eq 58) as presented in column ‘P’).

Auditor Response: The assessment team was able to verify the changes provided in the new files, this finding is closed.

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

NIR 16 Dated 1 Sep 2022

Standard Reference: VCS Standard v4.3, VM0012-IFM v1.2 module

Document Reference: VM0012 - Uncertainty Calculator (Aug'22).xlsx

Finding: Section 8.5.3 of the VM0012-IFM v1.2 module states that “Use of conservative estimates, peer-reviewed scientific data and analysis, and high quality inventory sampling procedures, will mitigate uncertainty, and improve accuracy as new and reliable data are acquired over time.”.

In the assessment of the uncertainty factor recalculation, the audit team couldn't confirm the values used in file VM0012 - Uncertainty Calculator (Aug'22).xlsx, sheet “Plot Values”, for the estimates of $y_{m,h,i}$ and $y_{p,h,i}$. Please provide additional evidence of how the $y_{m,h,i}$ values were derived from file Input - ZIMFOR_COMP_V3.xlsx and the $y_{p,h,i}$ values were derived from the CBM results.

Project Personnel Response: Several files have been added to the 'Findings' folder that clarify the values used in file 'VM0012 - Uncertainty Calculator (Aug'22)'.

$y_{m,h,i}$ (measured values):

Values from 'Zimfor_COMP_V3.xls' and 'Input - CWD_TRANSECT_COMPILER_43PLOTS.xls' are used as initial input for plots located in each analysis unit. There is one file for each analysis unit (e.g. 'AU2 Volume-Biomass Calculations.xls') for which there are several tabs for each of the pools that are monitoring and to be compared.

References used:

-Allometric equations for volume (m³/ha) to tons of Carbon (tC/ha): Boudewyn et al 2007. Model-based, volume-to-biomass conversion for forested and vegetated land in Canada. Alder Species Code = 1802 - values pg. 25 (APPENDIX 2).

-CWD Decay Constants: Harmon, M.E., Woodall, C.W., Fasth, B., and Sexton, J. 2008. Woody Detritus Density and Density Reduction Factors for Tree Species in the United States: A synthesis. USDA Forest Service.

$y_{p,h,i}$ (predicted values):

Predicted values are the resultants of CBM model runs and related growth curve (as converted to biomass). The biomass predicted in each Analysis unit/ plot uses Mosaic growth curves that are in turn converted from volume (m³/ha) to tons of Carbon (tC/ha) via Boudewyn et al 2007 (as above). For each plot, TSA attributes are in file 'SamplePlots_TSACarbon_JOIN_May0922' are used to 'filter' the CBM export file for each pool predicted. At the specific 'TSA_Age' the biomass is transferred as the ' $y_{p,h,i}$ '

Auditor Response: Thank you for the evidence provided. However, the assessment team hasn't been able to confirm the following:

- 1) Why in the application of the methodology VM0012, in the calculation workbook VM0012 - Uncertainty Calculator (Aug'22).xlsx, equation 60b " $y_{d,h,i} = APR_{J,h} \cdot (y_{m,h,i} - y_{p,h,i})$ ", you divide the values by Column C27?
- 2) The assessment team was unable to verify the subsequent calculations of the Model Error E_m (equation 60a), Project Error E_p (equation 60f) etc. Please review and correct accordingly.
- 3) Additionally, how you determine the leading species in the calculation workbooks "AUX Volume-Biomass Calculations.xlsx" (e.g. for AU2, AU4, the model parameters used for the leading species are from Alder, why?).

Project Personnel Response 2: Q1 - This is a short coming of the in the formula notation for 60b. As written $y_{d,h,i}$ = "the area-weighted difference between measured and predicted carbon storage in analysis unit, h, plot observation, i (t C)" (my emphasis added). As such, we divide the value by the area of the project instances (cell B23) to get an area-weighted value. This is consistent with Winrock's 'Sourcebook for Land Use, Land-Use Change and Forestry Projects' and UNFCCC's 'Calculation of the number of sample plots for measurements within A/R CDM project activities' (Source respectively at: Winrock-BioCarbon_Fund_Sourcebook-compressed.pdf & <https://cdm.unfccc.int/methodologies/ARmethodologies/tools/ar-am-tool-03-v2.1.0.pdf>) where the "Relative weight of the area of stratum i (i.e. the area of the stratum i divided by the project area); dimensionless" is used. Disregarding this denominator (cell B23) leads to illogical numbers in all following equations as noted in Q2.

Q2 - Assume a result of the above.

Q3 - The purpose of monitoring is both forward looking and retrospective. Although a plot maybe of a different species the volume (m³/ha) is attributed to the larger analysis unit (i.e. TSA polygon) based on the Leading Species of the Analysis Unit. Almost all stands (project instances) have some mixed species component. Plot volumes are derived from species specific allometric formulas as provided by Dr. Ian Moss. Retrospectively, to avoid bias the same Boudewyn Species Code was used as applied to the volume as used within the CBM modeling process for the Analysis Unit (CBM inventory file). CBM as a limitation requires 'Classifier 1' to be the leading species for which biomass equations will be applied. As a forward-looking process plots are used to help refine/ define TSA polygons for subsequent modelling proceses.

Auditor Response 2: The audit team agrees with the client that this is a shortcoming in the equation. The audit team was able to verify the area-weighted calculation in ancillary science-based sources. This finding is closed.

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

NCR 17 Dated 25 Oct 2022

Standard Reference: VCS Standard v4.3

Document Reference: VCS_Joint_Project_Description_Monitoring_Report_BigCoast v1.0 (Sep'22).pdf

Finding: Section 1.18.2 of the the VCS PD/MR template requires the following: "Indicate whether any commercially sensitive information has been excluded from the public version of the project description and briefly describe the items to which such information pertains.

Note - Information related to the determination of the baseline scenario, demonstration of additionality, and estimation and monitoring of GHG emission reductions and removals (including operational and capital expenditures) cannot be considered to be commercially sensitive and must be provided in the public versions of the project documents."

BigCoast PD/MR states "Commercially sensitive information may have been excluded from the public version of the project description."

Please disclose the list of commercially sensitive information that has being excluded from the public according to the requirements, and explain why the description of this section is in future tense and/or correct accordingly.

Project Personnel Response: This finding was addressed outside the cover of the workbook. The audit team confirmed that the project proponent updated Section 1.18.2 accordingly to meet with the template requirements.

Auditor Response:

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

NCR 18 Dated 25 Oct 2022

Standard Reference: VCS Standard v4.3

Document Reference: VCS_Joint_Project_Description_Monitoring_Report_BigCoast v1.0 (Sep'22).pdf

Finding: Section 1.1 of the PD/MR requires "An estimate of annual average and total GHG emission reductions and removals" be provided. Section 1.1 of the PD/MR includes an estimate of the TOTAL emissions reductions but not the average annual. Please update this to be in conformance with the template requirements.

Project Personnel Response: This finding was addressed outside the cover of the workbook. The audit team confirmed that the project proponent updated Section 1.1 accordingly to meet with the template requirements.

Auditor Response:

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

NCR 19 Dated 25 Oct 2022**Standard Reference:** VCS Standard v4.3**Document Reference:** VCS_Joint_Project_Description_Monitoring_Report_BigCoast v1.0 (Sep'22).pdf**Finding:** Section 5.3 of the PD/MR template requires the following to be provided "The organizational structure, responsibilities and competencies of the personnel that carried out monitoring activities."

Section 5.3 of the PD states "Ongoing monitoring is the primary operational task for the project, which will be completed by the Project Proponent and supported by the Project Developer and Implementation Partner. Additional field monitoring may require the hiring of external field crews, all of which will be experienced in forest mensuration. The Project Proponent's onsite supervisor, Project Developer and Implementation Partner will be responsible for the adequate training of these external contractors, ensuring that all individuals involved are familiar with the sampling standard operating procedures."

However, this section does not explicitly provide an organizational structure or list the competencies of those individuals conducting the monitoring.

Please update this section to meet with the program requirements.

Project Personnel Response: This finding was addressed outside the cover of the workbook. The audit team confirmed that the project proponent updated Section 5.3 accordingly to meet with the template requirements.

Auditor Response:

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

NIR 20 Dated 25 Oct 2022**Standard Reference:** VCS Standard v4.3**Document Reference:** VCS_Joint_Project_Description_Monitoring_Report_BigCoast v1.0 (Sep'22).pdf

Finding: Section 1.18.1 of the PD/MR states "The Project Proponent will provide evidence that no compensatory harvesting has been initiated to account for lost timber volumes incurred during the carbon project. Supporting evidence may include harvest volume summaries or financial statements to show that no additional land acquisition will be made with the sole intention of replacing harvest which has been deferred through the creation of BigCoast. Further information regarding a leakage monitoring plan will be provided within the Section 5.3."

Please provide the aforementioned supporting evidence. Additionally, please provide an explanation of why you use modeled data to estimate the activity shifting leakage and not historical harvesting records.

Project Personnel Response: This finding was addressed outside the cover of the workbook. The audit team found the evidence and provided explanation that the project proponent provided to be adequate and in conformance with the requirements: "Due to the project lands being privately owned, the annual maximum allowable harvest rates are determined through Woodstock analysis (modelling). Harvesting from year to year can be influenced by several external factors such as market demand, natural disturbance, changes in costs & revenues etc. Therefore, utilizing historical harvest rates would not accurately reflect the maximum capacity of the landbase and would not provide a true analysis of harvest shifting due to the implementation of the carbon project alone."

The intention of section 4.3.1 was to outline how activity shifting leakage would be monitored for the lifetime of the project, and therefore is meant to outline the "process".

The results of the activity shifting leakage assessment are summarized within the Monitoring portion of the PDD within Section 6.4.1."

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