



VALIDATION/VERIFICATION REPORT

ACR VALIDATION/VERIFICATION OF THE FINITE CARBON – L.D. O’ROURKE
FOUNDATION IFM
(ACR672)

REPORTING PERIOD 1

Date: 2/23/2023
Version 2.0

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Project Name	Finite Carbon – L.D. O’Rourke Foundation IFM
Project ID	ACR 672
Reporting Period	3/12/2020 – 6/3/2021
Client	Finite Carbon
Date of Issue	2/23/2023
Prepared By	S&A Carbon, LLC
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Summary

Located on California's beautiful northern Pacific coast, the LD O'Rourke Foundation (LDO) property offers a bounty of mesmerizingly tall conifers and a vast array of unique habitat conditions. Supported by LDO's sustainable forest management, these diverse habitats attract and sustain a wide variety of birds, mammals, and other wildlife. The property also supports a variety of streams and other water features.

The PP's management provides significant recreational, ecological, and environmental benefits, including the maintenance of large blocks of forest and wildlife habitat. Previous management included opportunistic harvesting of conventional forest products as market opportunities arose in the Pacific Coast region. Now, through a commitment to maintaining and enhancing forest carbon stocks above the baseline level, the project will provide significant climate benefits through carbon sequestration. The project will achieve GHG removals by sequestering more atmospheric CO₂ than a baseline scenario in live aboveground biomass, belowground biomass, and standing dead wood. Actions include, but are not limited to, deferred harvesting, lengthened rotations, retention of standing dead wood during timber harvests, and protection of riparian areas, wetlands, and significant natural communities. Forest management will maintain and enhance habitat for a variety of wildlife through snag retention, retention of mast-bearing species, recruitment of coarse woody debris, and the maintenance of wildlife corridors. Water and soil quality will be protected through management that meets or exceeds regulatory Forest Practices in the state of California.

This report presents the results of the project's validation and initial verification to the American Carbon Registry (ACR) Standards. Its purpose is to systematically assess and report the Project's conformance with the ACR standard requirements corresponding to the first reporting period from 3/12/2020 – 6/3/2021. The evaluation involved; document analysis, interviews with interested parties; relevant actors, as well as observations and measurements made directly in the field, while considering a representative sample of the project activities and sites. Validation activities included forest inventory checks, interviews with project managers, contractors and other relevant stakeholders. The context of the surrounding landscape conditions under the baseline and project scenarios was also assessed. The scope of the verification included the ACR verification of the project's initial monitoring period to determine the project's conformance with the ACR Standard version 7.0, the applied ACR Methodology, supporting ACR Program documents, and implementation of the validated GHG Plan.

The verification was performed through a combination of document review, interviews and communications with relevant personnel, as well as on-site inspections. The site visit to the project was conducted on 22 February 2022, in Ferndale, California USA. The verification process included several official and documented exchanges between the verifier team and the PP in order to gather additional information for review and for examination of compliance with all applicable criteria. These exchanges included 2 rounds of an Issues Log produced by S&A to which the PP were required to respond, and for which 6 Non-Conformances, 8 Clarification requests, and 5 New Information Requests were identified. Verifiers confirmed in an email to the PP dated 28 October 2022 that all remaining issues were satisfied in the responses provided in the Issues Log.

Once all identified issues were adequately resolved, S&A Carbon drafted this final combined validation & verification report and deems, with a reasonable level of assurance, that the project is in conformance with all of the requirements in the ACR Standards version 7.0, without qualifications or limitations. The Project has been implemented in accordance with the validated GHG Plan over the

initial monitoring period with no deviations from the described project activities in the GHG Plan or from the applied ACR methodology.

S&A Carbon is thus able to issue a positive validation opinion of the project's design as outlined in the GHG Plan dated 17 October 2022 and the projected ex-ante GHG emission reductions of 508,023 tCO₂e over the first 20 year crediting period. S&A Carbon is also able to issue a positive verification opinion for the 250,833 tCO₂e of verified emissions reductions, as reported in the Initial Monitoring Report dated 15 November 2022. The verification assessment covered the reporting period from 12 March 2020 to 3 June 2021 and verified that calculated emission reductions were achieved during the monitoring period with a reasonable level of assurance. The overall risk rating was 18.78%. Therefore, the total number of credits to be deposited in the buffer account for the initial monitoring period is 47,107 ERTs and the total ERTs to be issued are 203,726 tCO₂e.

Abbreviations

ACR	American Carbon Registry
ANAB	ANSI (American National Standards Institute) National Accreditation Board
BMP	Best Management Practices
CO ₂ e	Carbon Dioxide Equivalent
CP	Common Practice
EPA	Environmental Protection Agency
ERTs	Emission Reduction Tons
FPP	Forest Project Protocol
GHG	Greenhouse Gas
HWP	Harvested Wood Products
ICS	Initial Carbon Stocks
IFM	Improved Forest Management
NRCS	USDA Natural Resource Conservation Service
PD	Project Developer
PP	Project Participants
RPF	Registered Professional Forester
S&A	S&A Carbon
SDG	Sustainable Development Goals
t	Metric Tonnes
U.S.A	United States of America
USDA	United States Department of Agriculture
WLPZ	Watercourse & Lake Protection Zone

1 Introduction

S&A Carbon (S&A) has been asked by Finite Carbon to verify the emission reductions generated by the Finite Carbon – L.D. O’Rourke Foundation IFM (the Project). The validation/verification process is required by the American Carbon Registry’s Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal U.S. Forestlands (ACR IFM Methodology), version 1.3. S&A validation/verification activities began on 2/10/2022. This report presents the findings from the validation/verification of the project’s greenhouse gas (GHG) emission reductions/enhancements.

The Offset Project Registry (OPR) for this project is the American Carbon Registry (ACR), listed as ACR672.

1.1 Project Participants

Role	Organization Name	Main Contact Information and Person
PP & Landowner	L.D. O’Rourke Foundation LLC	Don Hindley 3005 G Street Eureka, CA 95501 (707) 786 9236
Offset Developer & Technical Consultant	Finite Carbon	Nate Hanzelka 435 Devon Park Drive 700 Building Wayne, PA 19087 (763) 744 7556
Contractor – Forest Inventory	Western Timber Services	Carl (Andy) Anderson P.O. Box 1136 Arcata, CA 95518-1136 (707) 822 3628

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

1.2 Description of Project

The Finite Carbon – L.D. O’Rourke Foundation IFM (ACR672) (the Project) is an Improved Forest Management Project, consisting of 2,955.35 acres of forestland in the state of California. Located on California’s beautiful northern Pacific coast, the LD O’Rourke Foundation (LDO) property offers a bounty of mesmerizingly tall conifers and a vast array of unique habitat conditions. Supported by LDO’s sustainable forest management, these diverse habitats attract and sustain a wide variety of birds, mammals, and other wildlife. The property also supports a variety of streams and other water features.

The PP’s management provides significant recreational, ecological, and environmental benefits, including the maintenance of large blocks of forest and wildlife habitat. Previous management included opportunistic harvesting of conventional forest products as market opportunities arose in the

Pacific Coast region. Now, through a commitment to maintaining and enhancing forest carbon stocks above the baseline level, the project will provide significant climate benefits through carbon sequestration. The project will achieve GHG removals by sequestering more atmospheric CO₂ than a baseline scenario in live aboveground biomass, belowground biomass, and standing dead wood. Actions include, but are not limited to, deferred harvesting, lengthened rotations, retention of standing dead wood during timber harvests, and protection of riparian areas, wetlands, and significant natural communities. Forest management will maintain and enhance habitat for a variety of wildlife through snag retention, retention of mast-bearing species, recruitment of coarse woody debris, and the maintenance of wildlife corridors. Water and soil quality will be protected through management that meets or exceeds regulatory Forest Practices in the state of California.

Date Description	Date
Project Commencement Date	3/12/2020
Reporting Period Start Date	3/12/2020
Reporting Period End Date	6/3/2021
Crediting Period Start Date	3/12/2020
Crediting Period End Date	3/11/2040
Validation/Verification Start Date	2/10/2022

1.3 Validation/Verification Objectives

This is the Project's ACR validation and initial verification. This will be a combined Project validation and full initial verification, including a site visit to assess the Project's conformance with the ACR criteria outlined below, corresponding to the first reporting period from 3/12/2020 – 6/3/2021.

The objectives of validation are to evaluate:

- Conformance to the ACR Standard;
- GHG emissions reduction project planning information and documentation in accordance with the applicable ACR-approved methodology, including the project description, baseline, eligibility criteria, monitoring and reporting procedures, and quality assurance/quality control (QA/QC) procedures;
- Reported GHG baseline, ex ante estimated project emissions and emission reductions/removal enhancements, leakage assessment, and impermanence risk assessment and mitigation (if applicable).

The objectives of verification are to evaluate the following:

- Reported GHG baseline, project emissions and emission reductions/removal enhancements, leakage assessment, and impermanence risk assessment and mitigation (if applicable);
- Any significant changes to the project procedures or criteria since the last verification (N/A); and
- Any significant changes in the GHG project's baseline emissions and emission reductions/removal enhancements since the last verification (N/A).

Further, S&A will review the GHG Project Plan, GHG Assertion and any additional relevant documentation to determine:

- That the reported emissions reductions and/or removal enhancements are real;
- Degree of confidence in and completeness of the GHG assertion;

- That project implementation is consistent with the GHG Project Plan;
- Eligibility for registration on ACR; and
- Sources and magnitude of potential errors, omissions, and misrepresentations, including:
 - o Inherent risk of material misstatement; and
 - o Risk that the existing controls of the GHG project will not prevent or detect a material misstatement

1.4 Validation/Verification Scope and Criteria

Validation shall include examination of all the following elements of a GHG Project Plan:

- Project boundary and procedures for establishing the project boundary;
- Physical infrastructure, activities, technologies, and processes of the project;
- GHGs, sources, and sinks within the project boundary;
- Temporal boundary;
- Description of and justification for the baseline scenario;
- Demonstration of additionality;
- Methodologies, algorithms, and calculations that will be used to generate estimates of emissions and emission reductions/removal enhancements;
- Process information, source identification/counts, and operational details;
- Data management systems;
- QA/QC procedures;
- Processes for uncertainty assessments; and
- Project-specific conformance to ACR eligibility criteria

Verification shall include examination of some or all of the following elements of a GHG Project Plan:

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

The criteria for the offset verification services are:

- The American Carbon Registry Standard, v7.0, December 2020
- The ACR Validation and Verification Standard, v1.1, May 2018
- The Improved Forest Management (IFM) Methodology for Non-Federal U.S. Forestlands, v1.3, April 2018
- Errata and Clarifications for ACR IFM Methodology v1.3, July 27, 2020
- ISO Standards 14064-2 and 14064-3, 2006

- ACR Tool for Risk Analysis and Buffer Determination v1.0

1.5 Materiality

The verification team must state with reasonable assurance that the percent overstatement of the total reported GHG emission reductions and removal enhancements are no more than a 5.00% overstatement of the “true” GHG emission reductions and removal enhancements, as calculated by the verifier using the equation below. The analysis must consider all errors, omissions or misstatements for the subset of data included in the data checks.

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

1.6 Level of Assurance

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

1.7 Audit Team

Role	Name
Lead Validator/Verifier	Pablo Reed
Lead Validators/Verifiers (under observation)	Eduardo Paixão, Dwight Chapman
Technical Reviewer	Lawson Henderson
Technical Reviewer v1.5	Bill Stack
Biometrician	Elizabeth McGarrigle
Site Visit Team	Alexa Kandarís, Alex Powell
Project Manager/Approver	Alexa Kandarís

2 Audit Process and Methodology

S&A’s audit included the following activities:

2.1 Desk Review

A kickoff conference call was held on 2/10/2022. The project team and verifiers discussed Project specifics and initial findings from a high-level desk review of submitted documents, targeting aspects of the project and supporting information that might affect the evaluation.

The GHG Plan and Monitoring Report were provided to the verification team. The verifiers reviewed these documents and assessed the eligibility criteria required to design, measure, and monitor the Project to the requirements of the ACR standard and methodology. Verifiers confirmed that the ACR eligibility requirements were met. The Verification Plan was completed and sent to the PP.

A draft Sampling Plan was prepared based on information available from the PP. The Sampling Plan evaluates the credibility and rigor of the verification methodology items. A risk evaluation was conducted assessing the Inventory Methodology Verification Items of the ACR Standard. Finally, the plan outlined a sampling scheme, based on the risk assessment and document reviews, to evaluate

the projects monitoring system's compliance with the ACR Standard. The final Sampling Plan summarizes the results of the sampling and the data checks performed on the sampled data.

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

2.2 Site Visit

A site visit was conducted by Alexa Kandarlis and Alex Powell on 2/22/2022. An opening meeting was conducted on 2/22/2022. Attendees of the opening meeting are as follows:

Attendee	Company	Role	Attend Opening Meeting	Attend Field Sampling	Attend Closing Meeting
Alexa Kandarlis	S&A Carbon	Site Visit Lead	X	X	X
Alex Powell	S&A Carbon	Site Visit Support	X	X	X
Eric Downing	Finite Carbon	Offset Developer/ Technical Consultant	X	X	X
Paul Noah	Finite Carbon	Offset Developer/ Technical Consultant	X	X	X
Carl (Andy) Anderson	Western Timber Services	Contractor, Forest Inventory	X	X	X

During the opening meeting, the objectives of the site visit and overall validation/verification process were presented by the verification team including an overview of the statistical t-test required for verification of the forest inventory; the qualifications of the PP were confirmed; inventory procedures and QA/QC were discussed and clarified; and site visit logistics & safety, personnel and vehicles/transport, and schedules were discussed and planned.

Over the course of the day, verification team activities included the measurement of five randomly selected forest inventory plots across the project area. Following plot data collection, the verifiers ran their verification data through the t-test. The analysis showed that the project's inventory was verifiable at a confidence interval of 90%. Furthermore, throughout the site visit, GPS data was collected, forested conditions observed (e.g., species composition, age class, canopy cover), and baseline common practice forest management practices in the surrounding region were assessed.

A closing meeting for the site visit was held the evening of 2/22/2022. Attendees are described in the table above. Other topics also discussed included preparation of the Issue Log, scheduling of the baseline model review call, and drafting of the validation/verification report and proposed schedule, and reflections and learnings from the site visit.

2.3 Quantitative Review (only required for verification)

S&A conducted various quantitative analyses of the project & baseline carbon stocks, covering the relevant carbon pools quantified by the PP, and the inputs used in the calculation of the projected ex-ante emission reductions over the first 20-year crediting period as well as the actual ex-post emission reductions for the initial reporting period (3/12/2020 – 6/3/2021). The audit team implemented a

detailed review of all aspects of the carbon stock modeling, including the stratification process, forest inventory design and specifications, measurement techniques used by the PP's inventory crew review of the species in the inventory and the correct assignment of volume and biomass equations, and checks to confirm that modeled growth used to project carbon stocks forward have been calculated and applied correctly. The modeling methods were assessed to ensure an approved model was used, that it was appropriately calibrated for the region, and inventory data flow through the modeling system was reviewed.

The reported ex-post emission reductions were confirmed by tracking all components of the PP's emission reduction calculation workbooks. This included checks that the entries for initial carbon stocks, confidence deduction, baseline stocks, baseline and project harvested wood products, and the reversal risk determinations, leakage and uncertainty are all entered and calculated correctly from their computed sources, as well as confirming the accuracy of their sources. The entire inventory treelist was independently recalculated by the verifiers for tCO₂e and the results were compared to the PP's reported carbon stocks. Uncertainty and associated deductions were also independently calculated by the verifier. The verifier's methods are considered a complete check of the inventory data on a plot-by-plot level, using the PP's raw data and verification of all the PP's calculations for accuracy and completeness.

For projects where re-sampling is required during verification, guidance received from ACR indicated that VVBs shall resample a minimum of 5% of plots ensuring representation of all strata, and ensuring statistical agreement using a t-test at 90% confidence interval. This minimum sampling intensity was considered in the selection of sample plots to be measured by the verifiers along with allocation of sample plots among individual project strata based on risk. All trees on the selected sample plots were re-measured by the verifiers. In/out status and all diameters, species calls, defect calls, live/dead calls, and all heights were independently measured using tools identical or comparable to those used by the PP. Inventory re-measurement was confirmed to meet the ACR recommendations and all measurement methods were conformed to be consistent with the PP's inventory specification. Carbon per plot and across the project area was calculated from the sampled plots and compared to the PP's inventory for the same plots. The verifier calculations and the PP's calculations were entered into a t-test worksheet, using the paired plot method (two-tailed t-test, at the 90% confidence interval), and confirmed to meet the statistical standards expected by ACR for projects that require independent re-measurement for verification.

2.4 Interviews

The following is a list of the people interviewed as part of the validation/verification. The interviewees included those people directly, and in some cases indirectly, involved and/or affected by the project activities. The training and qualifications of the PP team was confirmed by referencing bios for the team on the PP website on 4 November 2022 (<https://www.finitecarbon.com/#>). The verification team also confirmed these qualifications during interviews with PP Staff throughout the validation/verification site visit.

Date	Name	Title
Throughout Verification	Eric Downing	Vice President of Project Development, Finite Carbon
Throughout Verification	Nathan Hanzelka	Forest Carbon Analyst, Finite Carbon

Throughout Verification	Brian Sharer	Forest Analytics Manager, Finite Carbon
Site Visit	Paul Noah	Forest Carbon Analyst, Finite Carbon
Site Visit	Carl (Andy) Anderson	Consulting Forester, Western Timber Services

2.5 Findings

Throughout the validation/verification, findings were recorded by the audit team as per guidance outlined in the ACR standards and supporting documents cited above. Any discrepancies identified by the validation/verification team were documented in the Issues Log. The validation/verification team has also documented in the Issues Log the source of any difference identified, including whether the difference results in a correctable error. The Issues Log was submitted to the client. Prior to completion of the validation/verification, all identified non-conformances were required to be addressed, and correctable errors were required to be fixed. The client submitted additional evidence for S&A's evaluation for conformance. The client corrected all correctable issues.

2.6 Audit Schedule

The following table summarizes the key audit milestones:

Verification Activity	Proposed Date	Actual Date
Kick-off meeting	2/10/2022	2/10/2022
Site visit	2/22/2022 2/24/2022	– 2/22/2022
S&A Carbon submits issues log v1.0	4/4/2022	6/29/2022
TC response to issues	4/18/2022	8/31/2022
S&A Carbon submits issues log v2.0	5/2/2022	10/13/2022
TC response to issues	5/16/2022	10/17/2022
S&A Carbon closes out issues log	5/30/2022	10/28/2022
S&A Carbon submits validation/verification report for Technical Review	6/6/2022	11/8/2022
S&A Carbon submits verification report for TC review/approval	6/13/2022	11/16/2022
S&A Carbon submits final validation/verification documents to ACR	6/16/2022	11/16/2022

2.7 Validation Activities

The validation and concurrent verification were performed through a combination of document review, interviews and communications with relevant personnel, as well as on-site inspections. The site visit to the project was conducted on 22 February 2022 in Ferndale, California USA. The validation/verification process included several official and documented exchanges between the verifier team and the PP in order to gather additional information for review and for examination of compliance with all applicable criteria. These exchanges included 2 rounds of an Issues Log produced by S&A to which the PP were required to respond, and for which 6 Non-Conformances, 8 Clarification requests, and 5 New Information Requests were identified. Verifiers confirmed in an email to the PP dated 28 October 2022 that all remaining issues were satisfied in the responses provided in the Issues Log.

2.8 Eligibility Requirements

The project applied an ACR approved methodology, Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal U.S. Forestlands, v1.3. The Project was found to meet the eligibility requirements of the ACR Standards in terms of its Start Date, Minimum Project Term, Crediting Period length, Land Eligibility & Title/Ownership, Adherence to Natural Forest Management Requirements and the Permanence of the generated GHG emission reductions. It was also found to meet the applicability conditions of this methodology in terms of land ownership type, legality of harvesting activities, types of project activities and natural forest management criteria.

The Project start date of 12 March 2020 is after 1 November 1997, is therefore considered eligible and is within one year of the date in which the initial GHG Plan was submitted to ACR (13 December 2019). The start date is denoted by the date the PP entered into a contractual relationship to implement the carbon project, with supporting documentation provided, and is the same date as the beginning of the first crediting period. The project is expected to achieve validation against the ACR standards within 3 years of the project start date. The minimum project term stated in the GHG Plan is 40 years as required by the methodology. The Crediting period is 20 years, consistent with the applied methodology.

The project is an Improved Forest Management (IFM) project type, and as demonstrated through review of historic imagery, it has consisted of forest cover through the project start date and initiation. The current project activities do not involve any commercial harvesting, and currently no such harvesting is anticipated in the future. The verifiers are reasonably assured that the project area is located on non-federally owned lands within the state of CA, USA. The LD O'Rourke Foundation IFM Project is located on approximately 2,955.35 acres of forestland in Humboldt County in the state of California.

The project area is composed of forest cover made up of 100% native species, with Douglas-fir being the most prevalent species at nearly 32.3% by BA followed by Sitka spruce at 23.94%. Other species include grand fir, redwood, western red cedar, bigleaf maple, red alder, and California laurel.

The project's GHG Plan outlines a risk assessment conducted in accordance with the ACR Tool for Risk Analysis and Buffer Determination. Percent contributions for each risk category have been applied based on guidance in the tool. Mostly, default risk values have been applied consistent with the tool. The Minimum Buffer Percentage for the project is 18.78%, and the projected Buffer Contribution amount for the initial 20-year baseline period is 95,417 mt CO₂e. This percentage includes a proportional allocation for project area that lies within the a 'High Risk' fire region per the USFS Wildfire Hazard Potential guidance. Prior to the closure of all findings, the PP informed the verifiers that ACR had provided guidance on October 25, 2022 confirming the approach to calculating the risk rating based on a weighted average. Further, the review of the National Insect & Disease Risk "Conditions" Map from the USFS revealed that the project area appears to be located in the area that shows Sudden Oak death symptoms. However, the review of the inventory data confirmed that no oaks and only one single tanoak tree were identified in the project area. The verifiers agree with PP that the project area does not support the suitable presence of host species and thus the project is not located in a region with the presence of an epidemic disease or infestation.

Following ACR guidance on the fire risk calculation based on a weighted average, in total, 18.78% of the gross emission reductions will be deposited into the ACR pooled buffer account. This deduction is made to the gross ERT calculations produced by the PP's to determine the total tradeable balance of ERTs generated by the project over the initial reporting period. Carbon stocks are projected to increase compared to the baseline conditions, through maintenance of stocks, and continued forest growth over time, and the supporting quantification materials have shown an increase in on-site carbon stocks over the initial reporting period.

The table below presents the verifiers' findings pertaining to the Project's Permanence Risk Rating, following the guidance in the ACR Tool for Risk and Analysis and Buffer Determination. The verifiers concur with the assessment offered in the reviewed GHG Plan (dated October 17, 2022) and found that it conforms with ACR guidance for each risk type. The table summarizes the evidence used to support each risk level.

Risk Type	Conform	Finding	GHG Plan	Verifier Check
Financial	Y	Default	4%	4%
Project Management	Y	Default	4%	4%
Social/Policy	Y	Default	2%	2%
Conservation Easement Deduction	Y	Default	0%	0%
Fire	Y	Low Fire Risk Region	2.78%	2.78%
Diseases and Pests	Y	Default	4%	4%
Levee Failure and Water Table Changes	Y	Default	0%	0%
Other Natural Disaster Events	Y	Default	2%	2%
Total Risk	Y		18.78%	18.78%

2.9 Additionality

In order to demonstrate the GHG emission reductions from the project are additional and considered to be above and beyond the "business as usual" scenario, it must pass the ACR three-prong additionality test to prove that it currently exceeds current effective and enforced laws and regulations; exceed common practice in the relevant industry sector and geographic region; and face at least one of the three implementation barriers (financial, technological or institutional). The project was found to be additional and the project activities are considered to be above and beyond the business-as-usual scenario for privately owned commercially managed forest lands in northern California.

The laws and regulations outlined in Section C1 of the GHG plan were found to comprehensively identify the applicable laws that could affect the project. The verifiers assessment of these laws determined that none of them impact the project activities, and require the PP to implement the project activities, thereby demonstrating regulatory surplus. The description of applicable laws and regulations in the GHG Plan was found to consider all of applicable laws and regulations in both the project and baseline activities. Applicable legal constraints were found to be adequately incorporated

into the modeled baseline harvest scenario, and the verifiers are reasonably assured all applicable laws and regulations have been considered in addressing the Regulatory Surplus Test. Applicable National, State and local laws assessed by the verifiers included the Federal Clean Water Act, the Federal Endangered Species Act, the National Environmental Policy Act, the National Wild and Scenic River Act, as well as the California Forest Practices Act. Acreage constraints for northern spotted owl (NSO) habitat ensured that minimum requirements for nesting and forage area were met per USFWS guidelines. Stocking constraints for WLPZ areas ensured that the applicable minimum basal area/crown cover levels were met per California Forest Practice Rules. The baseline model assumes that all harvest activity will be accompanied by an approved THP and its respective regulations. While Binding International Agreements are described in the GHG Plan, none are considered to impact the baseline scenario or the project activities.

The text in section C2 regarding common practice defines what is considered the common practice forest management in the region in which the project area is located. The section B and E give some further additional information about common practice baseline scenario. After request, the verifiers were provided with a supporting explanation of common practice silviculture in the region. PP explained that they received specific input from WTS Consulting Foresters and the comparison of project stocks to regional 'Common Practice' stocking levels derived from FIA data. Further, on September 27, 2022, verifiers contacted Finite carbon personnel to discuss the common practice within the region and forest management practices being utilized within the project area. Based on this conversation, verifiers concur with the PP's assessment of common practice. Additionally, the PP have shared a workbook for comparison of project stocks to regional 'Common Practice' stocking levels derived from FIA data. In the end of the credit period, the project should have at least 30% more carbon stocks than the regional common practice. Through these interviews, overall support for the common practice baseline harvesting regime as described in the GHG Plan and verifiers' internet searches for information pertaining to common silvicultural practices in northern California, the verifiers confirmed that, at this stage, the project was deemed to go beyond common practices.

Further, the verifiers conducted a coarse assessment on the extent to which the project activities (e.g. forest carbon offset projects) have penetrated the market to demonstrate the project activities aren't common practice. The verifiers found that of 16 registered/listed projects in the CAR database only for the Humboldt County in California. While there are other carbon projects in the region, the total acreage of these projects with similar ownership classes is relatively small compared to the overall forest acreage. Therefore, verifiers are reasonably assured that the project, and associated project activities, in which there is no current or future commercial harvesting exceed common practice in the timber industry in northern California, including private lands.

The PP has elected to demonstrate there are financial barriers to implementation of the project activities and adherence to the ACR Implementation Barrier Test for additionality. The verifiers consider the Net Present Value (NPV) Analysis presented by the PP as relevant to this topic. The projected baseline scenario yields an NPV of approximately \$11 million over the 100 year modeling period as required by the applied methodology. The PP asserts the landowner requires the carbon revenue as a key driver for the financial viability of the project's action and the landowner's long-term sustainability goals. It is clear that the projected baseline scenario would be the most financially viable option for the PP. The verifiers therefore feel that the PP's pursuit of the carbon project does impose limits in their access to capital compared to the projected baseline scenario and therefore implementation of the project activity does face a financial barrier.

2.10 Permanence and Risk Mitigation

The project's GHG Plan outlines a risk assessment conducted in accordance with the ACR Tool for Risk Analysis and Buffer Determination. As explained above, percent contributions for each risk category have been applied based on guidance in the tool. Mostly, the default risk values have been applied consistent with the tool. However, at least 1/3 of the property lies within the 'High Risk' fire region per the USFS Wildfire Hazard (version 2020). Following the closure of all findings, and prior to the submission of the final validation/verification materials for Technical Review, the PP informed the verifiers that ACR had provided guidance on October 25, 2022 confirming the approach to calculating the risk rating based on a weighted average.

Section 5.B of the ACR Standard requires that "Project Proponents of AFOLU projects with risk of reversal shall enter into a legally binding Reversal Risk Mitigation Agreement with ACR/Winrock that allows them to select a reversal risk mitigation mechanism and details the requirements for reporting and compensating reversals." This Risk Mitigation Agreement must be executed upon completion of the final GHG Plan, which the verifiers understand to be the point in time when ACR approves the final GHG plan and is ready to register the validated project. Therefore, the verifiers determined that checking this executed agreement between the PP and ACR doesn't explicitly need to take place before their final submission to ACR, but that the verifiers will need to confirm it has been executed once ACR has reviewed & approved the project just prior to registration.

2.11 Baseline

The verifiers confirm that the baseline scenario represents an aggressive industrial harvest regime, targeted to maximize net present value at a 5% discount rate typical of practices in the project region on non-industrial private lands as described in the GHG Plan. The PP asserts that this type of management regime is by far the most common silvicultural practiced in northern California on private owned lands. The verifiers interviewed stakeholders and conduct internet searches to gain a better understanding of common practice management and harvesting practices in the region. Further, verifiers also conducted a coarse independent assessment on the extent to which forest carbon projects have been adopted in the Humboldt County in California. Through these interviews and analysis, overall support for the common practice baseline harvesting regime as described in the GHG Plan was communicated to the verifier. The verifiers are reasonably assured that the project, and associated project activities, in which there is no current or future commercial harvesting exceed common practice in the timber industry in northern California on private owned lands.

The baseline (and project) on-site carbon stocks found on the project area were determined through a forest inventory implemented on the project area. The carbon inventory was conducted in June 2021. The inventory employed a sample of 94 nested, fixed-radius circular plots. These were installed in a systematic grid established with a random starting point across the project area. Following sampling of the project area, the project area was post-stratified. Supported by plot data collected in the inventory, stratification of the defined project area utilized stand outlines based on general forest types, dominated by either red alder or mixed conifer forest types (Sitka spruce, Doug fir, grand fir, and others) and stand density characteristics. Given the range of stand density and stocking conditions present in the mixed conifer types, these areas were further divided into two separate classes (intermediate stocking and advanced stocking). The verifiers found the project's stratification methods to be reasonable, and the inventory methodology to follow standard industry practices.

Growth and yield projections were based on the US Forest Service Forest Vegetation Simulator (FVS), The Klamath Mountains (NC) variant. FVS is identified as an appropriate model in the ACR IFM methodology applied by the project. FVS was calibrated to the conditions of the project area and surrounding region. For this project, whose dominant conifer species was Douglas-fir with less than 20% of the basal area in redwood, PP used the McArdle, Meyer, Bruce (1961) site index values (McArdle et al. 1961). This approach is consistent with Timber Site Classification rules presented in Article 4 Section 1060 (Timber Site Classification) in the California Forest Practice Rules (CDF, 2021). For the subject property, however, no site index information was available in the downloaded SSURGO data for the intersected project area. The PP conducted linear regression to predict average forest site index using SSURGO data from the project vicinity. The PP used the soil survey data series CA600 (Humboldt County, Central Part). The dataset was filtered to only include Mapping Unit Keys (MUKEYs) that contained average site index values. All site indices, which comprised the site index systems of McArdle, Meyer, Bruce (1961) and King (1966) were transformed to King's (1966) 50-year Douglas-fir site index values using the transformation equations described in; these values represented the dependent variable. The highest predicted McArdle et al. 100-year Douglas-fir site index for MUKEYs in the subject property was 191. The lowest SI was 155. Thus, all property acreage classifies as Site II or Site III, summarized from Article 4 Section 1060 (Timber Site Classification) in the California Forest Practice Rules (CDF, 2021). Site II and Site III lands are subject to the same set of legal silviculture requirements under the FPR. Verifiers reviewed the soil survey data used, the calculations that resulted in the site index values and found the application and values reasonable.

The area (acres) to be cut in each prescription applied in the baseline model was determined using a linear programming model, which found the combination of harvest prescriptions that maximizes NPV over a 100-year period. The specific baseline harvest treatments were derived by applying the most common silvicultural prescriptions that are currently implemented in northern California as outlined in the GHG Plan. The primary constraint incorporated into the baseline model is the acreage constraints for northern spotted owl (NSO) habitat ensured that minimum requirements for nesting and forage area were met per USFWS guidelines. Then, stocking constraints for WLPZ areas ensured that the applicable minimum basal area/crown cover levels were met per California Forest Practice Rules. Table E1.3.9. and Table E1.3.10 of the GHG plan illustrate how the baseline model incorporates the requirements set forth in the CA FPRs regarding silvicultural requirements.

Baseline carbon in long-term storage in wood products was calculated based on projected harvest volume removals from the FVS model. Harvest volumes were converted to biomass by applying species-specific specific gravity values references in the USFS Handbook. Biomass values were then converted to units of tCO₂e using appropriate conversion factors. Carbon transferred into wood products was estimated by applying mill efficiency values sourced from the ACR IFM Methodology. Carbon in wood products was then summed across the established wood categories and distributed to various end wood product classes referenced from the ACR IFM Methodology's Reference Documents. Carbon in long-term storage was then summed for in-use wood products and wood products in landfills to produce annual total tCO₂e stored in in-use and landfill by applying the appropriate 100-year storage factors taken from the ACR IFM Methodology. Verifier checks of the baseline carbon storage in harvested wood confirmed the accuracy of the PP's calculations in accordance with the ACR IFM methodology.

2.12 Leakage

According to the ACR IFM Methodology, there may be no leakage beyond de minimis levels through activity shifting to other lands owned, or under management control, by the timber rights owner. If the project decreases wood product production by greater than 5% relative to the baseline then the PP and all associated landowners must demonstrate there is no leakage within their operations – i.e., on other lands they manage/operate outside the bounds of the ACR carbon project.

As described in the GHG Plan, quantification of leakage is limited to market leakage. Further, the PP does not own any forestland outside of the project area. In accordance with ERC published by ACR on 9-30-21, the demonstration of leakage within PP operations is not applicable if PP and associated landowners enroll all their forested landholdings, owned and under management control, within the ACR carbon project. The review of spatial data and deeds revealed that the landowner has indeed enrolled all the land within the ACR carbon project.

Quantification of leakage of the project is therefore limited to market leakage. Market leakage was determined by quantifying the merchantable carbon removal in both the baseline and with-project scenarios. Carbon in long-term storage in in-use wood products and landfills was used to assess relative amounts of total wood products produced in the baseline and project. No commercial timber harvesting is projected to occur in the implementation of the project. The decrease in wood production relative to the baseline was calculated to determine the applicable market leakage discount factor in accordance with the methodology. Since the project activities decrease total HWP produced by the project relative to the baseline by 25% or more over the crediting period, the leakage deduction is 40%. This leakage deduction was found to be correctly determined and correctly applied in the supporting ERT calculation workbook.

2.13 Monitoring Requirements

Section D of the GHG Plan outlines the project's monitoring plan. All appropriate data and parameters to be monitored over the life of the project are outlined including details on the unit of measurement for the data/parameter, a description of the parameter, the data source used, the measurement methodology, monitoring frequency, values applied, procedural and QA/QC references, the purpose of the data and the calculation method. The monitoring plan also indicates that each year, the project will sign and submit to ACR the required attestations confirming: the continuation of the project activities, that ownership of the project area remains clear and uncontested, and a disclosure of any negative environmental or community impacts and if necessary documented plans to mitigate any reported negative environmental or community impacts. A signed copy of this required Attestation was included in Section IX of the Project's monitoring report.

Project monitoring is generally focused on the project's on-site carbon stocks through updates to the project's forest inventory data. A full re-inventory of the project area will be conducted at intervals no greater than 10-years old following validation & initial verification to allow for calibration of the growth model and improve the project's carbon sequestration estimates. In addition, affected portions of the project area will be updated periodically in response to natural disturbance events of significant forest management activities. If impacts from such events are significant, the affected areas will be re-inventoried and the with-project scenario model will be adjusted to reflect current on-site carbon stocks. For those years in-between when an updated inventory is carried out, on-site carbon stocks will be monitored through forest growth and yield modeling. Beyond forest inventory updates, the PP will continually monitor the general health and condition of the forest through the course of

regular forest management activities including road maintenance, ecological studies or boundary maintenance.

QA/QC procedures have been established as part of the monitoring plan and are outlined in section D1 of the GHG Plan and in the inventory specifications. The field QA/QC process claims at least 10% of plots were visited in an audit of the inventory crews. Any consistent error will be resolved through discussion with the cruisers who carried out the original measurements or removal of the individual if deemed necessary.

The verifiers were provided with a Check Cruise summary workbook detailing the number of plots and trees checked, the number of errors identified by category (e.g., DBH, Height, Status, In/Out), and the percent error by error category. The workbook also includes all of the original plot/tree data for the check cruised plots, as well as the check cruise data. In total, greater than 10% of the forest inventory plots were check cruised (14 out of the 94 total plots). The few errors & measurement issues found during the check cruise appears to have been limited to incorrect species calls and difference in tree height measurements. There were not a significant amount of errors identified during the check cruise, nor was any systematic bias or error found with any particular cruiser. The verifiers were provided with a QA/QC Summary Report document outlining the timing of the QA/QC activities, responsible individuals, identification of the key issues identified, outputs from the automated data quality checks performed and a brief summary of the revisions and updates made as a result of the quality reviews. While the verifiers did uncover some issues during the verification that were apparently not caught during the project's QA/QC process, the requested detail on the QA/QC procedures has been provided, and the verifiers find no reason to further question the implementation or effectiveness of the established QA/QC mechanisms.

2.14 Community and Environmental Impacts

As part of the GHG Plan, ACR requires all projects to prepare and disclose an environmental and community impact assessment which should adhere to the UN SDG's. Section F1 of the project's GHG Plan outlines the Community and Environmental Impact Assessment addressing the requirements of the ACR Standard in accordance with the UN SDG's.

The project activity is improved forest management. Finite Carbon – LD O'Rourke Foundation IFM represent a significant improvement in carbon storage and conservation value when compared to industrial private lands in the region that emphasize higher financial return and management regimes characterized by shorter, even-aged rotations. By committing to maintain forest CO₂ stocks above the regional baseline level, the project will provide significant climate benefits through carbon sequestration.

The project area is solely owned by L.D. O'Rourke Foundation, as a private forestland owner, the PP asserts that there are no communities or other stakeholders affected by the project activities. The GHG Plan explains that if PP is contacted by any persons or entities regarding the project, PP will provide references to the publicly available documentation for the project.

As a result of the project area being privately owned and since no communities or other stakeholders are affected by the project activities, there isn't a detailed community consultation and communications plan. Information on the project will be available upon request which the verifiers deem to be sufficient in addressing this requirement. The GHG Plan indicates that the project is not

a community-based project. The verifiers agree with this determination considering the project ownership and design.

The GHG Plan gives a general assessment of the project's environmental risks and impacts, covering the relevant factors outlined in the standard. Impacts have all been categorized as positive, and the verifiers agree with these determinations. As such, there is no need to describe how negative impacts will be avoided or minimized. Monitoring of the risks and impacts is covered in section D.1 and D.2 of the GHG Plan which gives an outline of forest inventory monitoring through on-the-ground measurements and through forest growth and yield monitoring. In addition, management staff will consistently monitor the general health and condition of the forest through the course of normal management activities. Since the project activities are projected to not include any timber harvesting, these monitoring methods are considered to be sufficient. The Impact Assessment includes a description on how the positive impacts contribute to the SDGs as required.

2.15 Stakeholder Comments

The GHG Plan asserts that Stakeholder comments are non-applicable. The PP, L.D. O'Rourke Foundation is a private forestland owner and adhered to their internally agreed upon practices of project consultation and notification on associated decision making. The PP indicates that as a result of the project area being privately owned and since no communities or other stakeholders are affected by the project activities, there isn't a detailed community consultation and communications plan. Information on the project will be available upon request which the verifiers deem to be sufficient in addressing this requirement. The GHG Plan indicates that the project is not a community-based project. The verifiers agree with this determination considering the project ownership and design.

2.16 Validation Conclusion

During the validation assessment the verifiers identified 6 Non-Conformances, 8 Clarification requests, and 5 New Information Requests. All audit findings were responded to and addressed to the satisfaction of the verifiers. Once all identified issues were adequately resolved, S&A Carbon drafted this final combined validation & verification report. After reviewing the final GHG Plan dated 17 October 2022 and all supporting documentation, the verifiers concluded with a reasonable level of assurance that the project is in conformance with all applicable requirements of the ACR Standard version 7.0. The findings in this report represent the final determinations of the project's conformance with the standard criteria included in the scope of this validation audit. S&A Carbon is thus able to issue a positive validation opinion of the project's design as outlined in the GHG Plan dated 17 October 2022 and the projected ex-ante GHG emission reductions of 508,023 tCO₂e over the first 20-year crediting period.

3 Verification Activities

3.1 Project Implementation Status

As previously described in this report, the project's initial verification took place concurrently with the project's validation. The verifiers determined that the project activities were implemented over the initial reporting period corresponding to the dates 3/12/2020 – 6/3/2021 in accordance with the project design established in the GHG Plan. The PP submitted a completed copy of the Monitoring Report (MR) that provides the information required in the ACR monitoring report template. The verifiers are reasonably assured there were no changes to the landowner, project area or inventory over the reporting period, and estimates of the current on-site carbon stocks based on the inventory data are provided. There was no commercial harvesting over the initial reporting period, and the carbon stock data shows no decrease in carbon stocks. No project deviations occurred during the initial reporting period.

The MR outlines the data and parameters monitored over the reporting period, which are found to be consistent with the data and parameters included in the monitoring plan of the GHG Plan. The MR also includes updated reporting on the project's GHG emission reductions including baseline emissions, project emissions, leakage emissions contributions to the buffer pool, and a summary of the net GHG emission reductions at the end of the reporting period. The verifiers confirmed the accuracy of the ERT calculations and consistency with the final values reported in the MR with the supporting ERT calculation workbook.

The initial project inventory was conducted in the field in June 2021. The initial reporting period start date is March 12, 2020. The average of all inventory collection dates was June 3, 2021. Per growing season data from the Farmer's Almanac, the average growing season is 308 days long and starts around February 7th. Using this information, PP estimated the number of years to "degrow" the field collected inventory from collection date to the start of the first reporting period was 1.31 years. Average annual growth was modeled by growing the inventory forward five years (the default cycle length for the NC variant) and determining the annual diameter and height increment for each individual tree record. The increments were multiplied by 1.31 to capture the fractional year growth prior to June 2020, then the adjusted annual increment was subtracted from each tree in the inventory tree list (2021 vintage) to create a March 2020 tree list. Plot-level carbon results were then calculated for the March 2020 tree list. These plot-level results for the beginning of RP1 were then rolled up to strata averages and multiplied by strata acreages to determine total carbon stocks on the project at the beginning of RP1, i.e., as of March 2020. No burning of any biomass occurred so emissions from the burning of logging slash is considered to be zero. No commercial harvesting took place, so project harvested wood products also equals zero.

The verifiers performed checks on the ERT calculations for the initial reporting period to confirm the accuracy of the PP's calculations. Reporting period ERTs were also calculated using the verifier's internal calculations of end of reporting period onsite carbon stocks as the basis for the materiality checks as presented below.

3.2 Data-Checks & Materiality

A summary of selected data checks for project are provided below. The assigned ranking reflects both the size and uncertainty associated with these sources, sinks and reservoirs (SSRs). These and other

data checks performed (along with narrative details of the check and results) are included in the verifiers data check log.

SSR (rank)	Data reviewed	Reported (PP) tCO ₂ e	Calculated (VB) tCO ₂ e	Dis- crepancy tCO ₂ e	Impact on misstatem ent/ conforman ce
	Checks performed				
Rank 1 Sum of Project stocks; end of RP (CP,TREE,t, CP,DEAD,t, CP,HWP,t, GHGP,t)	Inventory, volume and biomass estimates, grown modeling results, grown tree list. Carbon calculations on inventory. Model appropriateness and use. Data systems.	838,778	838,871	(93)	Impact on materiality
	Model performance against independent benchmarks. Checks of accumulations and correct transfer to Monitoring Report				
Comment: Discrepancy due to slight differences in strata averages and rounding. This difference is not included in the materiality check. Materiality is based on the difference between the PP and VVB ERT calculation consistent with the ACR standard. The VB's ERT calculation is based on their internal calculations of the sum of project stocks.					
Rank 2 Sum of Project stocks; beginning of RP (CP,TREE,t, CP,DEAD,t, CP,HWP,t, GHGP,t)	Inventory, volume and biomass equations, calculation methods	814,231	814,231	0	No impact on materiality
	Calculate carbon stocks from inventory.				
Comment: NA					
Rank 3 20 Yr Average Baseline stocks (live and dead tree CO ₂ e) CBSL,AVE (total)	Monitoring Report and supporting modeling documents, web-based review of methods. Model appropriateness and use. Data systems.	352,658	352,658	0	No impact on materiality
	Model calibration. Model performance against independent benchmarks. Checks of accumulations and correct transfer to Monitoring Report				
Comment: NA					

Rank 4 Total Uncertainty (UNct)	Monitoring Report supporting worksheets	8.29%	8.98%	0.69%	No impact on materiality
	Use PP data for initial stocks; checks the calculation of total uncertainty was done correctly. Recalculated from initial inventory.				
Comment: Total Uncertainty is below the 10% threshold, so uncertainty discount is not applied.					
Rank 5 Emissions Reduction at t (before buffer deduction) (CACR,t)	Monitoring Report	250,833 Being removals 14,729 and emissions reductions 236,104	250,889 Being removals 14,784 and emissions reductions 236,104	(56)	No impact on materiality
	Checks that all PP entries are correct. Check sources. Checks that calculations within the worksheet are correct. Calculation check uses PP values.				
Comment: Discrepancy due to slight differences in strata averages and rounding. This difference is not included in the materiality check. Materiality is based on the difference between the PP and VVB ERT calculation consistent with the ACR standard using the net (after buffer deduction) ERT values . The VB's ERT calculation is based on their internal calculations of the sum of project stocks. The materiality check can be found below.					
Rank 6 HWP Baseline (CBSL,HWP,t)	Monitoring Report, supporting worksheets	71,997	71,997	0	No impact on materiality
	Model results, HWP worksheet. Confirm model projections and sums. Correct use of appropriate mill efficiencies, product classes and long-term storage factors.				
Comment: NA					
Rank 7 HWP Project (CP,HWP,t)	Monitoring Report, supporting worksheets	0	0	0	No impact on materiality
	On-site observations, GIS review, interviews with the PP.				
	Model results, HWP worksheet Confirm model projections and sums. Correct use of appropriate mill efficiencies, product				

	classes and long-term storage factors.				
Comment: NA					
Rank 8 Market Leakage Discount Factor (LK)	Monitoring Report, supporting documents.	40%	40%	0	No impact on OMM
	Confirm model projections and sums. Correct use of HWP worksheet				
Comment: NA					
Rank 9 Buffer Credits and Risk Rating (TBt)	Monitoring Report, calculation workbooks, supporting worksheets	47,107 18.78%	47,117 18.78%	(10)	No impact on OMM
	Checks that all PP entries are correct. Check risk rating and calculations have been calculated correctly.				
Comment: NA					

The verification team must state with reasonable assurance that the percent overstatement of the project's total reported GHG emission reductions and removal enhancements is no more than a 5.00% overstatement of the "true" GHG emission reductions and removal enhancements, as calculated by the verifier using the equation below. The analysis must consider all errors, omissions or misstatements, for the subset of data included in the data checks. Any errors, omissions or misstatements are identified separately in the table above.

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

$$\text{Percent Error} = \frac{(203,726.61 - 203,771.75)}{203,771.75} \times 100\% = -0.02\%$$

Project ERTs – Verifier ERTs*	Verifier ERTs (after buffer deductions) CACR,t	Calculated Materiality %
(45.14)	203,771.75	-0.02%

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

The materiality check was carried out according to ACR guidance using the equation above. The verifiers independently calculated the reporting period ERTs using their internal calculation of total project level stocks. The verifiers calculation of ERTs was 45.14 tCO₂e higher than the PP's calculation using their quantified parameter values. The Materiality Calculation shows that the project is 0.02%, under-reporting. Therefore, the project is less than the 5.0% materiality threshold.

3.3 Verification Conclusion

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

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

S&A has verified the PP's GHG assertion of 250,833 tCO₂e (236,105 tCO₂e Emission Reductions and 14,728 tCO₂e Removals Enhancements) for the Reporting Period of 3/12/2020 – 6/3/2021.

	Total ERTs (tCO₂e)	<u>Total Removal Enhancements (tCO₂e)</u>	Total ERTs to Buffer Pool (tCO₂e)	<u>ERTs and Removal Enhancements Net (tCO₂e)</u>
<i>Vintage 2020 Removals</i>	-	9,677	-	9,677
<i>Vintage 2020 Emission Reductions</i>	155,125	-	30,950	124,175
<i>Vintage 2021 Removals</i>	-	5,051	-	5,051
<i>Vintage 2021 Emission Reductions</i>	80,980		16,157	64,823
<i>Total for RP1</i>	236,105	14,728	47,107	203,726

Appendix A: Reference List

Project Documents

Document Description		Filename
Monitoring Report		ACR672 RP1 Monitoring Report_02202023_Vintage_E_ER.pdf
GHG Plan		ACR672 GHG Project Plan_Draft_020923_Revised.pdf
Calculation Workbooks	GHG Calculations	ACR672 GHGPP Calculations Draft_02172023_Vintage_E_ER.xlsx
	Site Index	ACR672 LD ORourke Baseline SiteIndex Workup.xlsx Site Index Databases.zip
	Common Practice	LDO Rourke SuperSection_CP.xlsx
Ownership		4-19-22 Timberlands Deed 2012-10066-5.pdf LDO_Ownership_AssessorNumbers.docx
Baseline		ACR672 LD ORourke Baseline Modeling Package v 1.1.zip ACR672 LD ORourke Baseline Regeneration Workup.xlsx ACR672 LD ORourke Baseline Harvest Schedule Calculation.xlsx
Modeling	Inputs	ACR672 LD ORourke FVS Input DB v1.0 02182022.accdb
	Outputs	LDO_FinalBaseline02172022.out ACR672 LD ORourke FVS Output DB v1.0 02182022.accdb
	FVS Keyword	ACR672 LD ORourke FVS Keyword v 1.0.xlsx
Inventory	Methodologies	ACR672 Inventory Specifications_Rev.pdf
	QA/QC	6-4-21 Final Error Report by Cruiser.pdf
	Treelist	ACR672 Inventory Data_Revised.xlsx
Spatial	Project geodatabase	ACR672_RP1_Revised2.gdb
	Maps	ACR672 Appendix C. Project Maps v1.0.zip
	Roads	LDO_Roads_021022.shp
Reference Documents		ACR672 Mill Capacity Data.xlsx 2019 cost survey final reduced.pdf
	Boundaries	LDO_ForestMapping_QAQC.xlsx
	Contract agreement confirming project start date	3-12-20 LDO Authorization for Carbon Test Plots WTS MEMO.pdf

Verifier Documents

Document Description	Filename
Project Specific COI Form	ACR672_COI.pdf
Validation/Verification Plan	ACR672_Validation-Verification Plan.docx
Sampling Plan	ACR672_Sampling Plan.docx
Data Check Log	ACR672_DataCheckLog_final.xlsx
Issues Log	ACR672_IssuesLog_v1.1_20221028-Closed.docx
Site Visit t-Test	LDORF_T-Test_Worksheet.xlsx

Appendix B: Findings List

Verifier Issue	Issue ID:	22-1	Status: Closed	Checked by: EP	Date Identified	21-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments
ACR Standard, v7.0, 6B; IFM Methodology v1.3, C2	E.1.2 Stratification	New information request. <i>May impact conformance; no materiality</i>	Verifiers understand the stratification process was based on the general forest type and stand density. Please review and revise to adequately describe the basis and process used to stratify the project area along with the associated results of this process (i.e., what is the threshold to define an intermediate - MixCon1 or advanced stocking - MixCon2?).			ACR672 GHG Project Plan_Draft_012122
ACR Standard, v7.0, 6B; IFM Methodology v1.3, C2			<u>September 7, 2022 Findings</u> PP provided further clarification about the stratification process. According to PP, several variables were considered as part of the strata determination, including species composition, stem density (TPA and BA/acre), volumetric computations, and physiognomic features. While it is evident the process used to stratify the project area between the stands dominated by either red alder or mixed conifer forest types, it still lacks information on the basis in delineating the mixed conifer types. For instance, GHG plan on page 27 reads: “Given the range of stand density and stocking conditions present in the mixed conifer types, these areas were further divided into two separate classes (intermediate stocking and advanced stocking).” Specifically, what criteria and/or threshold were used in delineating their associated boundaries? (i.e., what is the threshold to define an intermediate - MixCon1 or advanced stocking - MixCon2 and how are the boundaries determined?)? Please review and update the Carbon Plot Methodology as needed. This issue remains open.			ACR672 GHG Project Plan_Draft_083122_Revised.doc
ACR Standard, v7.0, 6B; IFM Methodology v1.3, C2			<u>October 25, 2022 Findings</u> PP provided further clarification about the stratification process for the two mixed conifer-dominant strata. Verifiers reviewed satellite imagery and confirmed that the spatial delineation of the strata are coherent with the differences observed in overall physiognomic features and apparent tree density. This issue is now closed.			ACR672_RP1_Revised.gdb <i>Aerial Imagery: USA NAIP 2018-2019</i>
PP Response						
Date	PP Comment			Additional evidence submitted for review by PP		

31-Aug-22	A number of variables were considered as part of the strata determination, including but not limited to: species composition, stem density (TPA and BA/acre), volumetric computations, and physiognomic features. The collective impact of these variables, combined with professional forester judgement, was used to inform the specified strata.	
14-Oct-22	In the determination of the two “levels” of mixed conifer-dominant strata (i.e., MixCon1 vs. MixCon2), it was not a <u>single</u> criteria or threshold used to determine the boundaries, but rather a combination of the variables that were previously described in the first response. In the spatial delineation of the strata, differences observed in physiognomic features (i.e., apparent differences in tree crown size, apparent stand boundaries, apparent tree density) were of particular help, though were not used as a standalone criteria.	

Verifier Issue	Issue ID:	22-2	Status: Closed	Checked by: EP	Date Identified 28-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description	Comments	
	GHG plan sections A3, table A3.1, H2, and Monitoring report section II	Clarification. <i>May impact materiality or conformance.</i>	<p>Verifiers note potential discrepancies, typos and/or needed clarifications within the GHG plan and Monitoring Report, which are listed below. Please review, clarify and/or revise as appropriate.</p> <ol style="list-style-type: none"> GHG plan, page 16, Section C, C1. Regulatory Surplus test: typo “Regulatory” GHG plan, page 16, Section C, C2. Common Practices: it seems that the word “industrial” is a typo in the text. GHG plan, page 56, Section H, H2. Project time: it is stated “End date of first crediting period March 11, 2020”. The date should be 20 years from the starting date. GHG plan and Monitoring report refer in different sections to ACR standard V6.0, however, the PP is being assessed against ACR standard V7.0 (e.g., see GHG plan sections A3, table A3.1, H2, and Monitoring report section II). Monitoring report says on section II, row #2 Project ID #562, however, project is listed as #672. 	<p>ACR672 GHG Project Plan_Draft_012122</p> <p>ACR672 RP1 Monitoring Report_Draft_011322</p>	
			<p>September 7, 2022 Findings</p> <p>Verifiers acknowledge the revised GHG plan and Monitoring Report in which the PP has:</p> <ol style="list-style-type: none"> Corrected the typo in Section C, C1. Regulatory Surplus test; Corrected the typo in Section C, C2. Common Practices; Corrected the typo in Section H, H2. Project time; Corrected reference to the ACR standard V7.0 in the GHG plan and in the monitoring report; Corrected the project ID to #672. 	<p>ACR672 GHG Project Plan_Draft_083122_Revised.doc</p> <p>ACR672 RP1 Monitoring Report_Draft_083022_Revised</p>	

			However, section E.1.3.7.1 “Harvest Prescriptions” refers to section E.1.2.3 when describing the harvest prescriptions used in the project. There is no section E.1.2.3 in the GHG plan. Please review and updated as needed.	
			October 25, 2022 Findings Verifiers acknowledge the revised GHG plan in which the PP has corrected the reference to the section E.1.3.2. This issue is now closed.	ACR672 GHG Project Plan_Draft_101722.pdf

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
31-Aug-22	All discrepancies have been corrected and the relevant files have been revised.	ACR672 GHG Project Plan_Draft_083122_Revised.doc
14-Oct-22	The intended reference here was Section E.1.3.2. This has been corrected in the document.	ACR672 GHG Project Plan_Draft_101722.pdf

Verifier Issue	Issue ID:	22-3	Status: Closed	Checked by: EP	Date Identified	25-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
IFM Methodology v1.3, 3.1.1	ACR672 Inventory Specifications	Clarification. May impact materiality or conformance.	In the ACR672 Inventory Specifications (Section Design, sampling intensity on page 2) states “Sampling Intensity has been determined as approximately 94 total nested samples across the project site. Sample intensity was established based on the variability of existing plot data. <u>All sample locations have been pre-determined randomly on field maps and have been assigned GPS coordinates...</u> ”. Verifiers understand through the review of spatial data (ACR672_RP1.gdb) the plot allocation for the inventory is based on a systematic grid. Please clarify.		ACR672 Inventory Specifications ACR672_RP1.gdb	
IFM Methodology v1.3, 3.1.1			September 7, 2022 Findings The PP has clarified the inventory plot allocation method was based on systematic grid in the revised carbon plot methodology document. However, GHG plan on section “E.1.1 Inventory” still describes a random distribution across the project. Please review and update as appropriate.		ACR672 Inventory Specifications_Rev ACR672 GHG Project Plan_Draft_083122_Revised	
IFM Methodology v1.3, 3.1.1			October 25, 2022 Findings Verifiers acknowledge the revised GHG plan in which the PP has corrected to reflect use of systematic grid for plot location determination. This issue is now closed.		ACR672 GHG Project Plan_Draft_101722.pdf	

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
31-Aug-22	Inventory specification corrected to reflect use of systematic grid for plot location determination.	ACR672 Inventory Specifications_Rev.pdf
14-Oct-22	GHG plan has been corrected to reflect use of systematic grid for plot location determination.	ACR672 GHG Project Plan_Draft_101722.pdf

Verifier Issue	Issue ID:	22-4	Status: Closed	Checked by: EP	Date Identified	25-Apr-22
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ACR Standard ref	GHG Plan Section	Significance	Issue Description	Comments
IFM Methodology v1.3, (C3-3.1.1; D2, D3)	ACR672 Inventory Specifications (pg2)	New information request. <i>May impact materiality or conformance.</i>	Please provide the spatial data for the entire grid that was used to allocate the inventory plots.	ACR672 Inventory Specifications ACR672_RP1.gdb
IFM Methodology v1.3, (C3-3.1.1; D2, D3)			<u>September 7, 2022 Findings</u> The PP has provided the entire grid with the plots located in the non-forested areas already removed (e.g., streams, wetlands, non-forested areas.). While verifiers can visually assume that only the edge plots were kept, it is impossible to determine if edge plots were also removed. Thus, verifiers request initial plot grid (fishnet) to confirm that edge plots have been correctly considered. Further, apparently, PP has chosen a smaller grid to allocate systematically the plots, verifiers request further clarification about how the start point was determined (i.e., a systematic grid with a random start). This issue remains open.	ACR672_RP1_Revised.gdb
IFM Methodology v1.3, (C3-3.1.1; D2, D3)			<u>October 25, 2022 Findings</u> Verifiers received the original grid. Verifiers sampled some plots located in the non-forested areas and confirmed that they were properly removed (e.g., streams, wetlands, non-forested areas.). Verifiers also confirmed that a random starting point was used for determining the measured plot locations. This issue is now closed.	ACR672 GHG Project Plan_Draft_101722.pdf ACR672_RP1_Revised.gdb
PP Response				
Date	PP Comment			Additional evidence submitted for review by PP
31-Aug-22	Entire grid added to an updated project geodatabase.			ACR672_RP1_Revised.gdb
14-Oct-22	PP has provided the original grid (i.e. non-project areas included). A random starting point was used for determining the measured plot locations.			ACR672 GHG Project Plan_Draft_101722.pdf ACR672_RP1_Revised.gdb

Verifier Issue	Issue ID:	22-5	Status:	Closed	Checked by:	EP	Date Identified	4-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description				Comments	
ACR Standard, v7.0, Sections 4.A.1 and IFM Methodology v1.3, B4.	GHG Plan Section B2, C.1, and E	Non conformance. <i>No materiality impact</i>	Verifiers find the GHG Plan lacks clarity and supporting descriptive details on the Regulatory Surplus Test to comply with the noted sections of the ACR Standards and ACR’s GHG Plan template’s specifications.				ACR672 GHG Project Plan_Draft_012122	
			Please address the following items:				ACR672 GHGPP Calculations Draft_01112022	
							ACR672_RP1.gdb	

			<ol style="list-style-type: none"> 1. In Section E1, verifiers request additional descriptive details on the baseline constraints that were incorporated into the baseline model. While Section C1 provides the relevant laws, regulations, statutes, legal rulings, and other regulatory frameworks that affect the project activity, verifiers are trying to ascertain which law/regulation/statutes were utilized to determine the constraints that were used within the modeling process. If publicly available spatial data was utilized, please reference these sources within the GHG plan. 2. In Section C1, how have the Endangered Species Act (ESA), Migratory Bird Treaty ACT (MBTA), Bald and Golden Eagle Protection act (BGESA) been incorporated in the project area? Further, GHG plan and related documents suggest that endangered species at the state level has not been taken in consideration when evaluating the constraints within the property boundaries. 3. Also, the verifiers searched the Bios system from the California Department of Fish and Wildlife (CDFW) for any state listed threatened or endangered species that may be found on the project area. Based on the species listings on this webpage, the following species may be found in the region: two birds (western yellow and willow flycatcher) have an endangered status, three birds (bank swallow, Northern Spotted Owl, and tricolored blackbird) have a threatened status, two fishes (longfin smelt and coho salmon - southern Oregon) have a threatened status and one amphibian (foothill yellow-legged frog) has an endangered status. No publicly available data could be found to the level of the project area to confirm the habitats of those species. In the GHG plan, the verifiers only found information about the Northern Spotted Owl (page 41) Please confirm if any of those species noted exist or have recently been observed in the project area and whether there are baseline constraints that should be applied to the baseline modeling (e.g., does the baseline model assume that during harvest operations specific measures are implemented via the California Forest Practices Act to provide habitat protection pursuant to the BGESA?) 4. Verifiers reviewed the E-bird data mapping tool to see the exact locations of where birders and the general public have sighted birds in and around the project area. While the verifiers are aware of the limitations encountered with this kind of tool (e.g., limited precision, doubt about the knowledge and skills of the identifiers), the verifiers recognize that it gives an indication of possible migration routes. No identification was found within the project area, what is to be expected, since the project is in private property. However, two adjacent points near to the property (less than 1 mile) have shown signals of one threatened species or one Bird of Conservation Concern (Wrentit and Olive-sided Flycatcher). Please confirm 	
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			<p>if any of those species have been recently observed in the project area and possible constraints that should apply.</p> <ol style="list-style-type: none"> Does the property have any Forest Habitat Conservation Plan (FHCP) or any Aquatic Habitat Conservation Plan (AHCP)? As point out below (issue 22-12), language in the GHG plan is not consistent if harvesting activities will occur. Does the baseline model account for any submitted, active, or approved THPs at the time of offset project commencement? GHG plan on section B2 states that the property is FSC certified, however, GHG plan on section C1 does not mention any impact that the High Conservation Value Forests (HCVFs) may have within the project area that may constrain harvesting baseline scenario (e.g., RMZ, NSO core areas, true oak stands, and mature hardwood (tanoak). Please clarify. Slope instability is a concern on the North Coast and did not appear to be addressed within the section C1 of the GHG plan. Unstable areas require site-specific consideration and are often restricted to uneven-aged management regimes, typically with a higher retention than the minimum, and occasionally restricted from management altogether (no harvest). 	
<p>ACR Standard, v7.0, Sections 4.A.1 and IFM Methodology v1.3, B4.</p>			<p><u>September 23, 2022 Findings</u></p> <p>Verifiers have reviewed the revised GHG Plan for the items 1-8 noted above and have the following comments:</p> <ol style="list-style-type: none"> The PP has added descriptive details to Section E.1 (E1.3.10 – Legal and market constraints) to clarify the relevant laws and regulations that were evaluated and those that were applicable to the project and were ultimately incorporated as a baseline constraint within the baseline model. The PP has also provided a detailed clarification (table E1.3.11) about the stream class zone widths established for the baseline modeling. This issue item is closed. -3. Verifiers acknowledge an updated version of the GHG Plan on section C1 was provided in response to finding raised. All applicable laws, regulations, rules, and procedures are defined. The baseline model assumes that all harvest activity will be accompanied by an approved THP and its respective regulations. This issue is now closed. The verifiers acknowledge and accept the PP’s explanation of the presence of threaten species within project boundary area. GHG plan, section E1.3.10, has been updated and explain the measures to protect the northern spotted owl (NSO) habitat, the only threatened species present in the project area. This issue is now closed. The verifiers acknowledge and accept the PP’s explanation of the FHCPs or AHCPs associated with property. This issue is now closed. Review of the updated GHG plan confirms that there has been no harvest activity during the first reporting period and no harvests are currently 	

			planned. Forest management plans and historical records provided for verification demonstrate no deviation from management plans or from historical trends. This issue item is closed.	
			7. Review of the updated GHG plan confirmed changes. GHG plan does not refer to any forestry certification. This issue item is now closed.	

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
31-Aug-22	<ol style="list-style-type: none"> Section E1.3.10, beginning on page 40 of the GHG plan, provides detailed background on the relevant laws/regulations considered for baseline modeling. Section E1.3.10 provides further detail on all relevant laws/regulations considered for baseline modeling. The project baseline adheres to all relevant requirements of the California Forest Practice Act, which is consistent with requirements of the California Endangered Species Act. The project baseline includes all relevant constraints associated with conformance to the California Forest Practice Act. In conjunction with this, specific constraints have been incorporated for the consideration of NSO habitat, which has confirmed presence on the project area. Any other threatened or endangered species have either not been observed within the project area, or are considered to be protected by adherence to the California FPAs and do not require additional consideration of modeling constraints. These observations do not constitute official surveys. Additionally, there are no known regulations or laws that would require consideration of specific constraints for these species for the purpose of baseline modeling. No, there are no FHCPs or AHCPs associated with property. This language was erroneously included from a previous project in the same region and has been removed from the GHG plan. No harvesting activity is currently planned in the with-project scenario. The mention of FSC certification was erroneously included from a previous project. This language has been removed from the GHG plan. Language has been added to Section E1.3.10 to include specific consideration of unstable slopes. In discussions with the consulting forester for the property, it was determined that the occurrence of landslides is typically more associated with road building activities rather than silviculture. The baseline model includes annual expenses associated with road building. Additionally, the baseline model does include some annual amount of selection type harvesting, which could be considered for the more landslide-prone areas. 	ACR672 GHG Project Plan_Draft_083122_Revised

Verifier Issue	Issue ID:	22-6	Status: Closed	Checked by: EP	Date Identified	26-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments
ACR Standard, v7.0, Section	GHG Plan Section E3	Non conformance.	Section E.3 of the GHG Plan states; “The quantification of leakage for the project is limited to market leakage.” Additionally, Figure A-6. Ownership Map within the appendix suggests that all area owned by LD O’Rourke foundation is included in the			ACR672 GHG Project Plan_Draft_012122

E3. A.4.32.B.3 & 4.8 and IFM Methodology v1.3, D6 and D7		No materiality impact	<p>LD O'Rourke IFM project. The verifiers seek additional confirmation and supporting evidence that all lands owned by the PP are included in the project area. The verifiers request spatial data for the overall LD O'Rourke ownership that encompasses both the project area and non-project lands to further assess the potential for timber harvesting outside of the project area boundaries and within the PP's ownership.</p> <p>Also, as the project decreases wood product production by >5% relative to the baseline, the PP must demonstrate that there is no leakage within their operations. Such demonstration must include one of the 3 elements outlined in the methodology:</p> <ul style="list-style-type: none"> • Historical records covering all PP ownership trends in harvest volumes paired with records from the with-project time period showing no deviation from historical trends over most recent 10-year average; or • Forest management plans prepared ≥24 months prior to the start of the project showing harvest plans on all owned/managed lands paired with records from the with-project time period showing no deviation from management plans; or • Entity-wide management certification that requires sustainable practices (programs can include FSC, SFI, or ATFS). Management certification must cover all entity owned lands with active timber management programs. <p>As evidence to support this, the verifiers request which of 3 elements outlined in the ACR methodology is used to demonstrate that there is no leakage within the project area. For instance: 1) a shapefile for the entire PP's ownership and 2) evidence that the FSC certificate applicable to the project area covers all of the PP's lands.</p>	<p>ACR672 GHGPP Calculations Draft_01112022</p> <p>Appendix - Figure A-6. Ownership Map</p> <p>ACR672_RP1.gdb</p>
			<p>September 23, 2022 Findings:</p> <p>PP explained that in accordance with ERC published by ACR on 9-30-21, this demonstration is not applicable if PP and associated landowners enroll all their forested landholdings, owned and under management control, within the ACR carbon project. The review of spatial data and deeds revealed that the landowner has indeed enrolled all the land within the ACR carbon project.</p> <p>Issue# 22-13 below addresses clarification about project area ownership and boundaries.</p> <p>This issue is now closed.</p>	<p>ACR672_RP1_Revised.gdb</p> <p>4-19-22 Timberlands Deed 2012-10066-5</p>
PP Response				
Date	PP Comment			Additional evidence submitted for review by PP

31-Aug-22	Per the ERC published by ACR on 9-30-21, this demonstration is not applicable if PP and associated landowners enroll all of their forested landholdings, owned and under management control, within the ACR carbon project. PP has uploaded copy of property deed and spatial file of property boundary to Vault. During project development due diligence, property was checked against publicly available data to confirm extent of ownership. This data can be referenced from the Humboldt Co GIS website (Humboldt County Web GIS). The relevant assessor's parcel numbers referenced in the deed have also been uploaded to Vault as a separate file.				ACR672_RP1_Revised.gdb 4-19-22 Timberlands Deed 2012-10066-5.pdf	
31-Aug-22	Issue ID:	22-7	Status: Closed	Checked by: EP		Date Identified 28-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments
IFM Methodology v1.3, (3.1.2.1)	Inventory Specifications (pg 10); Monitoring Report; Section V (pg 5)	Clarification. May impact materiality or conformance.	ACR methodology for standing dead trees specifies 4 decay classes. The PP’s inventory data utilized 4 decay classes and notes 4 decay classes are used in the Project Monitoring section of the MR (decay class). However, forest inventory specifications states that 5 classes should be used. Please review it and clarify.			ACR672 Inventory Specifications ACR672 RP1 Monitoring Report_Draft_011322 ACR672 Inventory Data
IFM Methodology v1.3, (3.1.2.1)			September 23, 2022 Findings: Review of the updated forest inventory specifications confirmed changes. This issue is now closed.			ACR672 Inventory Specifications_Rev
PP Response						
Date	PP Comment				Additional evidence submitted for review by PP	
31-Aug-22	Language in forest inventory specifications corrected to 4 classes. Note that this was correctly implemented/communicated to the inventory contractors, only the specification document had this incorrect.				ACR672 Inventory Specifications_Rev.pdf	

Verifier Issue	Issue ID:	22-8	Status: Closed	Checked by: EP	Date Identified	4-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments
ACR Standard, v7.0 (Chap 3, Table 2)	Section A3	New information request. <i>Conformance Issue</i>	Table A3.1 of the GHG Plan states: <i>"The project has a start date of March 12, 2020, the date on which a Carbon Offset Transaction Terms Agreement between the Project Proponent and a purchaser of the ERTs was fully executed."</i> Verifiers request these agreements in order to validated & verify the project start date.			ACR672 GHG Project Plan_Draft_012122

ACR Standard, v7.0 (Chap 3, Table 2)		<p>September 23, 2022 Findings: The verifier reviewed the memo between LDO Manager and WTS consulting authorizing the carbon inventory, dated March 12, 2020. Review of the updated GHG plan confirmed changes.</p> <p>Please also review GHG plan, section H1, in order to have a concise language through the entire document.</p>	<p>ACR672 GHG Project Plan_Draft_083122_Revised</p> <p>3-12-20 LDO Authorization for Carbon Test Plots WTS MEMO</p>
ACR Standard, v7.0 (Chap 3, Table 2)		<p>October 25, 2022 Findings Verifiers acknowledge the revised GHG plan in which the PP has corrected language to reflect the authorization. This issue is now closed.</p>	<p>ACR672 GHG Project Plan_Draft_101722.pdf</p>

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
16-Apr-22	This language has been updated to reflect the project start date being associated with authorization of a carbon inventory. A copy of the relevant correspondence has been uploaded to Vault.	3-12-20 LDO Authorization for Carbon Test Plots WTS MEMO.doc
14-Oct-22	Language in GHG plan has been updated to reflect the authorization.	ACR672 GHG Project Plan_Draft_101722.pdf

Verifier Issue	Issue ID:	22-9	Status: Closed	Checked by: EP	Date Identified	25-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR Standard, v7.0, Section 2.B.6	Inventory Specifications (pg 2)	New information request. <i>May impact conformance; no materiality issue</i>	The field QA/QC process claims at least 10% of plots were visited in an audit of the inventory crews. The verifiers requested a list of the plots that were visited, dates of the visit, the individuals performing the audit, and the results of the check audit including any corrective actions taken. While the GHG plan Appendix B (inventory specifications) outlines a detailed QA/QC review process, the verifiers requested supporting documentation demonstrating the implementation of the QA/QC system, including the dates of review, individuals responsible for reviews, issues identified during reviews, and a summary of revisions/updates made as a result of the QA/QC reviews.		ACR672 Inventory Specifications	
ACR Standard, v7.0, Section 2.B.6			<p>September 23, 2022 Findings: The PP has provided the check cruise reports prepared by the inventory contractor (WTS consulting). Verifier reviewed 2 check cruise reports, one occurring between 5/06/2021 and 6/17/2021 and the other occurred between 5/11/2021 and 6/16/2021. A total of 14 plots were evaluated (10% of the total 94 plots). Check cruise reports contain: (1) the inventory plots that were visited; (2) the dates of the visit; (3) the individuals performing the audit; and (4) the results of the check audit.</p> <p>The PP has provided the QA/QC documents related to the inventory and the data collection process including the inventory contractor's check cruise reports; summary of data issues during data collection and how these were resolved; and the workbook</p>		<p>ACR672 Inventory Data_Revised</p> <p>6-4-21 Final Error Report by Cruiser</p>	

		used to compile the final inventory data. Three issues were identified: plot 244, tree 4 (different height) and plot 228, trees 1 and 2 (different DBH). Corrective actions taken are described on column "S" – Comments. Therefore, this issue is now closed.	
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PP Response

Date	PP Comment	Additional evidence submitted for review by PP
31-Aug-22	Summary report of field audit has been added to Vault. Additionally, tree records requiring corrective action have been flagged with detail in an updated Inventory Data workbook, also added to Vault.	ACR672 Inventory Data_Revised.xlsx 6-4-21 Final Error Report by Cruiser.doc

Verifier Issue	Issue ID:	22-10	Status: Closed	Checked by: EP	Date Identified	5-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
IFM Methodology v1.3, C1	Inventory Specifications (pg2-4)	Clarification. May impact materiality or conformance.	The Design section of the Inventory Specifications indicates the walk-through (WT) methodology would be used for those plots that are near "hard" edges such as the project boundary or excluded roads. Verifiers could not find how this information is recorded on the inventory data sheet provided. So far, inventory data suggests that WT method was not applied by the cruisers. Verifiers are seeking to confirm the plots where the WT method was utilized.		ACR672 Inventory Specifications ACR672 Inventory Data	
IFM Methodology v1.3, C1			September 23, 2022 Findings: Verifiers understand the plots where walk-through plots were recorded have been documented in the Column L "walk-through" in the Inventory Master (denoted by a "yes"). As noted, the "TreeCount", Column H in the "trees" tab within the revised ACR672 Inventory Data_Revised suggests one walk-through tree was recorded. Therefore, this issue is now closed.		ACR672 Inventory Data_Revised	

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
31-Aug-22	Inventory Data workbook has been updated to denote plots where walk-through condition was identified.	ACR672 Inventory Data_Revised.xlsx

Verifier Issue	Issue ID:	22-11	Status: Closed	Checked by: EP	Date Identified	5-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
IFM Methodology v1.3, section A2	Section B.2	Clarification. Conformance Issue	GHG plan states on page 8 that "The project area has been actively enrolled in the FSC program throughout all commercial harvest activities, which meets the criteria established in the IFM Methodology and the 2020 Errata and Clarifications". However, verifiers did not find the property listed in the FSC database, and no further information is available to confirm that the property is third part certified. Please clarify and provide further evidence to confirm that the property is FSC certified.		ACR672 GHG Project Plan_Draft_012122	
IFM Methodology			September 22, 2022 Findings: Review of the updated GHG plan confirmed changes. GHG plan does not refer to any forestry certification. This issue item is closed.		ACR672 GHG Project Plan_Draft_083122_Revised	

v1.3, section A2			
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PP Response

Date	PP Comment	Additional evidence submitted for review by PP
31-Aug-22	The mention of FSC certification was erroneously included from a previous project. This language has been removed from the GHG plan.	

Verifier Issue	Issue ID:	22-12	Status: <u>Closed</u>	Checked by: EP	Date Identified	19-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
IFM Methodology Section D.6	GHG plan section E2 and GHG calculations	Clarification. May impact materiality or conformance.	GHG plan, section E2. states: "At this time, the Project Proponent does not anticipate any harvesting to occur over the next 20 years". However, section E3 reads "The project includes a moderate level of harvest activity within the first reporting period, and moderate levels are projected for future reporting periods, as well." Excel file "ACR672 GHGPP Calculations Draft_01112022", spreadsheet "ERTs UNC" also suggests that harvesting is not supposed to occur in the next 20 years. Please confirm which level of harvesting is supposed to occur in the first reporting period, if any. Please review and revise as needed.		ACR672 GHG Project Plan_Draft_012122 ACR672 GHGPP Calculations Draft_01112022	
IFM Methodology Section D.6			September 22, 2022 Findings: Review of the updated GHG plan confirms that there has been no harvest activity during the first reporting period and no harvests are currently planned. Forest management plans and historical records provided for verification demonstrate no deviation from management plans or from historical trends. This issue item is closed.		ACR672 GHG Project Plan_Draft_083122_Revised	

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
31-Aug-22	Language has been corrected to reflect the intended management for the with-project scenario.	ACR672 GHG Project Plan_Draft_083122_Revised.doc

Verifier Issue	Issue ID:	22-13	Status: <u>Closed</u>	Checked by: EP	Date Identified	19-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR Standard, v7.0, Sections 2.B.1 & 3 (Table 2)	GHG plan, section E1, appendix Figure A-6. Ownership Map,	New information request. May impact materiality or conformance.	The verifiers checked the project boundary's spatial data provided against a variety of publicly available datasets to assess the accuracy of the asserted spatial boundaries of the project. Among the spatial datasets checked included the Federal, State, Tribal, etc. Protected Areas Land Ownership areas available through the USDA GeoSpatial Data Gateway website. Generally, good alignment was found with		ACR672 GHG Project Plan_Draft_012122 ACR672 Inventory Specifications ACR672_RP1.gdb	

inventory specifications (pg 2).		<p>corresponding federal, state and tribal boundaries. However, verifiers observed the following issues:</p> <ol style="list-style-type: none"> 1. Some small patches that do not reach the threshold to be considered as forest cover are removed from the project area. No further explanation is detailed in the GHG plan about the methodology used to exclude those areas. Please clarify. 2. PP has not provided the shapefiles for the ownership area (only the project area), forest management plans, nor deeds to confirm the project boundaries and ownership. Please provide all the relevant documents to confirm boundaries and ownership. 3. Inventory specifications describe an area higher than that the area displayed in the GHG plan and spatial data provided (3,142 acres instead of 2,955 acres). The verifiers ask the PP to review the project area and to provide background information on the difference. They also request summary information of the standardized processes followed for delineation of the project area boundary, outlining the data sources used in the process, as well as QA/QC procedures to ensure quality and accuracy of the final boundary. 	Figure A-6. Ownership Map
ACR Standard, v7.0, Sections 2.B.1 & 3 (Table 2)		<p>September 22, 2022 Findings:</p> <p>(1) PP's response clarifies that <i>"Fields/openings with an apparent size of approximately 5 acres were digitized and excluded from the project area using the observable forest edge of the imagery at the above scale"</i>. However, according to ACR Standard, v7.0, on page 78: <i>"Land with at least 10% cover (or equivalent stocking) by live trees of any size, including land that formerly had such tree cover and that will be naturally or artificially regenerated. <u>To qualify, the area must be at least 1 acre in size.</u>"</i> It is the verifiers understanding that the standard is clear about this minimum area requirement, why did the PP choose to go for a minimum mapping unit of 5 acres instead? Also, the review of the project boundaries and spatial data suggest that some areas do not reach these thresholds and are still considered within the project boundaries. For instance, see coordinates 391537, 4485725 and 393151, 4487974. This issue remains open.</p> <p>(2) The verifiers acknowledge receipt of the deeds. Verifiers reviewed Deed for parcels # 101-142-003; 101-191-005; 101-191-006; 101-192-002; 101-192-003; 101-201-005; 101-211-001; 101-211-002; 101-211-007; 101-212-001; 101-222-003; 101-291-003. The parcels are included in the project area and LD O'RF foundation is the parcel's owner. This issue is now closed.</p> <p>(3) PP provided spatial data for the full ownership with associated deeds. The review of the this data associated to the Humboldt Co GIS website (Humboldt County Web GIS) suggests two areas, one called "GIS acres" totalizing 3,335.57 acres and a second called "assessed lot size" totalizing 3,238.17 acres. PP spatial data suggests</p>	<p>ACR672 GHG Project Plan_Draft_083122_Revised.doc</p> <p>LDO_ForestMapping_QAQC.xlsx</p> <p>ACR672_RP1_Revised.gdb</p>

			that property covers 3,332.64 acres. The verifiers ask the PP to review the project area and to provide background information on the difference and confirm which area should be considered the total ownership area. This issue remains open.	
ACR Standard, v7.0, Sections 2.B.1 & 3 (Table 2)			<p>October 25, 2022 Findings</p> <p>(1) The verifiers acknowledge and accept this explanation. The quote from page 78 of the Standard is indeed the definition for “forest” used by ACR, not the minimum mapping unit for delineating non-forest areas. This issue item is considered closed.</p> <p>(2) The verifiers acknowledge and accept this explanation. Overall, it is sought that the public registry converge with the landowner property data, however verifiers understand that small difference may occur. The scale of the difference from public registry to landowner data is marginal. Thus, this issue is now closed.</p>	

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
31-Aug-22	<ol style="list-style-type: none"> Additional explanation has been provided in Section B3 of the GHG plan. Additionally, PP has uploaded a summary of process used to define project area and non-forest areas. PP has uploaded property ownership and deed files to Vault. PP has uploaded a summary of process used to define project area to Vault. 	ACR672 GHG Project Plan_Draft_083122_Revised.doc LDO_ForestMapping_QAQC.xlsx ACR672_RP1_Revised.gdb
13-Oct-22	<ol style="list-style-type: none"> The quote from page 78 of the Standard is the definition for “forest” used by ACR, not the minimum mapping unit for delineating non-forest areas. The 5-acre unit was an <u>approximate</u> threshold used by the PP to exclude <u>fields/openings</u> from the project area. Non-forest areas of varying size that were already mapped in the landowner’s existing spatial dataset were not modified further. It is generally recognized that an “assessed” acreage is a value used only for taxation purposes, and is therefore not a relevant metric for comparison in this context. Regarding the GIS acres vs. PP acres, it should be a reasonable expectation that <i>some</i> amount of difference may exist between the landowner provided data vs. what is available via public sources. In this case, the PP acreage shows a difference of less than 3 acres <u>fewer</u> than the county GIS acreage value – or less than 0.001% difference. 	

Verifier Issue	Issue ID:	22-14	Status: Closed	Checked by: EP	Date Identified	18-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description	Comments		
ACR Standard, v7.0, Section 6.B and 8A	Section F1 and D	Non conformance. May impact OMM or conformance.	Positive impacts that are expected to result from the implementation of the project activities are discussed in Section F1 of the GHG Plan. The PP asserts the project will have positive impacts on carbon sequestration, wildlife & plant habitat protection, soil and water protection. To meet the criteria within Chapter 8 of the ACR Standard of Section 8, verifiers have some questions and/or clarifications on how the process	ACR672 GHG Project Plan_Draft_012122		

		<p>used to assess environmental and community impacts. Please clarify and/or revise as appropriate to comply with the noted ACR Standard's assessment. Specifically, these include the following:</p> <ol style="list-style-type: none"> (1) Did the PP consider other environmental impacts such as biodiversity, air quality, water quantity or wildfire risk? (2) Verifiers understand there is an increased awareness and growing concerns of the potential higher risk of wildfires in this region due to climate change (e.g., higher summer temperatures). With less harvesting on the project (compared to baseline), verifiers anticipate there will be increases in stocking and fuel loads over the crediting period. Given the increasing risk of wildfires and likely higher fuel loads, verifiers would consider this as a potential negative environment impact resulting from the project. (3) Impact assessment does not include recreational opportunities. Does the implementation of the carbon project change the existing recreational access management plans? Is there an increase in access? (4) Did the PP consider community impacts such as changes to employment or revenue for local communities? Verifiers find this section of the GHG Plan does not adequately address if community impacts were assessed. (5) The section F1 of the GHG Plan lacks detail on how risks and impacts will be monitored, how often and by whom. For instance, the GHG plan describes on the section monitoring plan "See D. Monitoring plan". However, section D does not provide monitoring activities to the identified impacts. (6) GHG plan, section E3. reads "<i>The project includes a moderate level of harvest activity within the first reporting period, and moderate levels are projected for future reporting periods, as well.</i>" However, as described above, there is no consistence with the wording used to confirm that harvesting will not occur. Please confirm if harvesting activities will happen and if those activities have been considered during the risk and impact assessment. 	
ACR Standard, v7.0, Section 6.B and 8A		<p><u>September 22, 2022 Findings</u></p> <p>Verifiers have reviewed the revised GHG and have the following comments:</p> <ol style="list-style-type: none"> (1) Verifiers agree that the project will have positive impacts on biodiversity, air quality, water quality. This issue item is closed. (2) While PP's response suggests a risk category for wildfire, however, GHG plan on section F1 still shows wildfire as a positive impact of the project. Since wildfire was considered as a net negative impact of the project activity, the verifiers would have liked to see the PP elaborate on this on the GHG Plan. According to ACR standard on chapter 8: "The assessment shall: 1) identify each risk/impact; 2) categorize the risk/impact as positive, negative, or neutral and substantiate the risk category; 3) 	ACR672 GHG Project Plan_Draft_083122_Revised

		<p>describe how any negative impacts will be avoided, reduced, mitigated, or compensated; and 4) detail how risks and impacts will be monitored, and how often and by whom." Please review the GHG plan and revise as needed.</p> <p>(3) The verifiers acknowledge and accept this explanation. Recreational opportunity in these areas could be limited in the future due to more active and widespread timber harvesting operations. This issue item is considered closed.</p> <p>(4) The verifiers acknowledge and accept this explanation. The scale of the carbon project relative to the scale of overall timber operations in the region suggest that any changes to employment or revenue for local communities, positive or negative, will be marginal, and fluctuate year to year to a higher degree than any potential impact of the project. This issue item is closed.</p> <p>(5) Verifiers understand that the standard does not ask for monitoring positive impacts, thus the verifiers acknowledge and accept the PP's explanation of the assessment of other environmental impacts. This issue item is closed.</p> <p>(6) Review of the updated GHG plan confirms that there has been no harvest activity during the first reporting period and no harvests are currently planned. Forest management plans and historical records provided for verification demonstrate no deviation from management plans or from historical trends. This issue item is closed.</p>	
ACR Standard, v7.0, Section 6.B and 8A		<p><u>October 25, 2022 Findings</u></p> <p>The verifiers acknowledge and accept this explanation. Changes to fuel loads caused by the implementation of the project action are considered to be de minimis, however, project monitoring activities are expected to mitigate the overall risk. This issue is now closed.</p>	ACR672 GHG Project Plan_Draft_101722.pdf
OPO/APD Response			
Date	PP Comment	Additional evidence submitted for review by PP	
31-Aug-22	<ol style="list-style-type: none"> Language in Section F1 has been updated to include other associated environmental impacts relevant to the implementation of the project. A risk category for wildfire has been added to Section F1. Language updated in Section F1 to reflect unchanged recreational access. Section F1 states that "Any negative economic impact on communities from enrollment of 3,000 forested acres in an Improved Forest Management program is effectively de minimis, particularly given the size of the larger wood basket in which the project is located" Section D has been updated to include more detailed description of monitoring plan. Section E3 has been updated to reflect planned management activities. 		
14-Oct-22	The assessment required by ACR is organized around impacts, which are then further categorized by risk. Based on the first round of findings from the VB, an impact for 'Wildfire Mitigation' has been added to the assessment, with a risk category of positive. This section is intended to reflect that project activities	ACR672 GHG Project Plan_Draft_101722.pdf	

pertaining to wildfire risk are overall a net positive impact due to the negligible changes to fuel loads caused by the implementation of the project, while regular monitoring (i.e., professional forester observation and reconnaissance where necessary to monitor onsite carbon stocks) reduces the overall likelihood of catastrophic wildfire.

Verifier Issue	Issue ID:	22-15	Status: <u>Closed</u>	Checked by: EP	Date Identified	14-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments
ACR Standard, v7.0, Section 4.A.2; IFM Methodology v1.3, B4	Sections C2, B5, and E1.3	Non conformance. <i>May impact conformance; no materiality</i>	<p>The text in section C2 regarding common practice, doesn't really define what is considered the common practice forest management in the region in which the project area is located. Section B and E give some further additional information about common practice baseline scenario is the region. However, the GHG Plan lacks adequate detail on what was actually done to evaluate the common practice harvesting on lands similar to the project area. While a basic description of the asserted common practice harvesting is given, no detail is offered on how the PP went about determining the asserted common practice is indeed common for lands similar to the project area. For instance, GHG plan assumes on page 19 that "were the project not implemented the intensive management and resulting lower onsite carbon stocks associated with that level of harvest activity could very well occur within the project area." Additional supporting evidence of the rational used to justify a common forest management regime of "heavily managed forest land ownership" on the project area is needed. Verifiers request a summary be added to Section C2 describing the process the PP utilized in determining the proposed project activity exceeds the common practice of similar landowners managing similar forests in the region. If there are associated supporting documentations used for this process, please reference and/or provide.</p> <p>Also, the actual common practice management needs to be more clearly defined to further support that the project activities are not common practice on similar forest types found on the project area. Are there any current examples of what is considered to be common practice management taking place in the region that can be provided specific to the forest types found on the project area? What information and data are being used as the bases to determine the common practice management in the region? It is not clear if the PP has evaluated the predominate practices in the region/sector to determine the degree in which the practices have penetrated the market to demonstrate the project activities aren't common practice. Can it be shown that implementation of the project activities and related forest management is not common practice in the region? There are several other forest carbon projects being developed/implemented in the region (at least 16 registered/listed in the CAR database only for the Humboldt County in California), so</p>			ACR672 GHG Project Plan_Draft_012122

			there is some evidence that the project activities could actually be becoming more of a common practice in the region.	
ACR Standard, v7.0, Section 4.A.2; IFM Methodology v1.3, B4			<p><u>September 22, 2022 Findings</u></p> <p>The PP has clarified the process used in determining the common practice applied within the baseline model, which further supports the description in Section C2 of the GHG Plan. While the information in the PP's response below is important to understand how common practice has been determined, it has not been included in the GHG Plan (e.g., specific input from WTS Consulting Foresters and the comparison of project stocks to regional 'Common Practice' stocking levels derived from FIA data). Verifiers request some of this additional information be incorporated into Section C2 to fully describe and justify the process used in defining the common practice.</p> <p>On September 27, 2022, verifiers contacted Finite carbon personnel to discuss the common practice within the region and forest management practices being utilized within the project area. Based on this conversation, verifiers concur with the PP's assessment of common practice. Additionally, PP has shared a workbook for comparison of project stocks to regional 'Common Practice' stocking levels derived from FIA data. In the end of 20-year credit period, the project should have at least 30% more carbon stocks than the regional common practice. Thus, at this stage, the verifiers confirmed that project deemed go beyond common practices.</p> <p>Verifiers agree with the PP, while there are other carbon projects in the region the total acreage of these projects with similar ownership classes is relatively small; forest carbon projects with management strategies to store more carbon via different harvesting and silvicultural prescriptions is not common practice. Verifiers appreciate the clarification. We concur that the number of projects in a given county is not an appropriate measure to assess common practice.</p>	<p><i>LDORourke_SuperSection_CP.xlsx</i></p> <p><i>ACR672 GHG Project Plan_Draft_083122_Revised</i></p>
ACR Standard, v7.0, Section 4.A.2; IFM Methodology v1.3, B4			<p><u>October 25, 2022 Findings</u></p> <p>Review of the updated GHG plan confirmed changes. GHG plan explains further how the common practices have been assessed. This issue item is closed.</p>	<p>ACR672 GHG Project Plan_Draft_101722.pdf</p>
<i>OPO/APD Response</i>				
<i>Date</i>	<i>PP Comment</i>		<i>Additional evidence submitted for review by PP</i>	
31-Aug-22	PP used the services of WTS Consulting Foresters, a well-established forestry consulting firm, to help determine region-specific silviculture to model in the baseline. Additionally, PP has shared 'LDORourke_SuperSection_CP' workbook for comparison of project stocks to regional, 'Common Practice' stocking levels derived from FIA data. Current project stocks, under a conservative assumption that all mixed conifer acres would be subject to the 'High' site class Common Practice value, are shown to be well-above regional Common Practice. Through the landowner's commitment to retain and sequester carbon per their enrollment in the IFM project, they will maintain the carbon stocking levels above those		LDORourke_SuperSection_CP.xlsx	

	<p>of the regional Common Practice values. This is demonstrated by the 20-year Crediting Period total of Above Ground Carbon Mean (mtCO₂e/acre) for the project stocks vs. Common Practice. The FIA Common Practice stocking values for the region establish that most private forests in the region are more intensively managed to lower per acre amounts of above-ground carbon.</p> <p>PP acknowledges prevalence of projects in region. However, the number of projects in a given county should in no way be construed as an indicator of Common Practice given the vast array of carbon project sizes, the variety of landowner types, as well as the geographical extent of the "wood basket" in which a project exists.</p>	
14-Oct-22	Language has been added to the GHG plan describing regional common practice comparisons.	ACR672 GHG Project Plan_Draft_101722.pdf

Verifier Issue	Issue ID:	22-16	Status: <u>Closed</u>	Checked by: EP	Date Identified	18-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments
ACR Standard, 8A (item 4)	GHG Plan, Section F1	Non conformance. <i>May impact conformance; no materiality</i>	In Section F1 of the GHG Plan, the PP lists the ACR’s requirements for completing environmental and community impact assessments, however PP has not described and detailed for Item 4 “how positive impacts contribute to sustainable development goals”. Verifiers understand this ACR Standards’ requirement is not optional for the GHG Plan (v7.0, Section 8.A). Additionally, the sustainable development goals for these positive project impacts are not currently identified nor described in this section of the GHG Plan. Verifiers request the removal of the word “optional” and the addition of the sustainable development goals associated with the positive environmental and community impacts.			ACR672 GHG Project Plan_Draft_012122
ACR Standard, 8A (item 4)			<u>September 22, 2022 Findings</u> The PP has updated the GHG Plan to remove the word “optional” and provide further information how the project meets the SDG. This issue item is closed.			ACR672 GHG Project Plan_Draft_083122_Revised
OPO/APD Response						
Date	PP Comment				Additional evidence submitted for review by PP	
31-Aug-22	PP has added additional language to Section F1 demonstrating the project’s Sustainable Development Goals associated with positive environmental and community impacts.				ACR672 GHG Project Plan_Draft_083122_Revised.doc	

Verifier Issue	Issue ID:	22-17	Status: Closed	Checked by: EP	Date Identified	4-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR Standard, v7.0, Section 6.B.	Section A, A.4	Non conformance.	<p>The following information is missing in the GHG plan to conform with the ACR V7.0, section 6.B:</p> <ul style="list-style-type: none"> - Physical conditions prior to project initiation. - Centroid coordinates for the project area (e.g., point location). 		ACR672 GHG Project Plan_Draft_012122	

		<i>May impact OMM or conformance.</i>	Please clarify and/or revise as appropriate to comply with the noted ACR Standard's requirement.	
ACR Standard, v7.0, Section 6.B.			<u>September 22, 2022 Findings</u> The PP has updated the GHG Plan (Section A4, A5, and A6). Even though not extensive, PP has provided some additional information describing the property conditions prior to project initiation, including habitat conditions, species composition, and forest management practices associated with the project. Further, centroid coordinates have been added to Section A4 (40.523862, - 124.274768). This issue is therefore considered closed.	ACR672 GHG Project Plan_Draft_083122_Revised.doc ACR672_RP1_VerFind.gdb

OPO/APD Response

Date	PP Comment	Additional evidence submitted for review by PP
31-Aug-22	Section A6 provides detail on property conditions prior to project initiation. Additionally, further detail has been added to Section A5 describing habitat and other physical features associated with the project. Centroid coordinates have been added to Section A4.	ACR672 GHG Project Plan_Draft_083122_Revised.doc

Verifier Issue	Issue ID:	22-18	Status: Closed	Checked by: EP	Date Identified 4-Apr-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description	Comments	
ACR Standard, v7.0, Section 5A	Section B.8	Clarification. <i>May impact OMM or conformance.</i>	Verifiers confirm the Permanence Risk rating and contribution to the Buffer is correctly calculated. However, wildfires are considered to be low risk on the calculation. Wildfire Map in Appendix C suggests that some areas have high risk. References used to determine low fire risk is said to include the USDA wildfire support website (https://www.firelab.org/project/wildfire-hazard-potential). Wildfire hazard potential layer reveals that around 1/3 of the property is located in high-risk areas (ca 1075 acres). The verifiers request more detail on what information on this website was specifically used to assess fire risk, or if any other resources were used to assess fire risk. Also, PP used default values for category "F - Diseases and Pests. PP uses the USFS National Insect & Disease Risk and Hazard Mapping as reference. Verifiers reviewed the National Insect & Disease Risk Conditions Map from the USFS and the project area appears to be located in the radius area that shows Sudden Oak death symptoms. Please review and clarify if the project area is located on a 30-mile radius of the infestation.	ACR672 GHG Project Plan_Draft_012122	
ACR Standard, v7.0, Section 5A			<u>September 21, 2022 Findings</u> The PP has clarified the use of default values for category "F - Diseases and Pests". Verifiers reviewed the inventory data and confirmed that only one Tanoak was	ACR672 Inventory Data_Revised	

		identified in the plot# 152. Verifiers agree with PP clarification that the project area does not support the suitable presence of host species for the Sudden Oak death. This issue is now closed.	ACR672 GHG Project Plan_Draft_083122_Revised
		Further, verifiers have reviewed the revised B8 Permanence section of the GHG Plan. Verifiers confirmed that PP has adjusted the Permanence Risk rating to 2.78. It is the verifiers understanding that the ACR methodology does not accept weighted averages. Typically, the projects are classified either as low risk or high risk. Verifiers request PP clarification on its approach for the risk rating. This issue remains open.	ACR672 GHGPP Calculations Draft_083022_Revised.xlsx
ACR Standard, v7.0, Section 5A		October 25, 2022 Findings The verifiers reviewed the ACR email confirming the approach to calculating the risk rating used for this project. This issue item is closed.	ACR email dated 25 October 2022
OPO/APD Response			
Date	PP Comment	Additional evidence submitted for review by PP	
31-Aug-22	PP has adjusted the Permanence Risk rating to reflect areas with high fire risk in accordance with USDA wildfire support website. The species composition of the project area is heavily dominated by typical Coastal forest types, mixed conifer and red alder, with virtually no presence of Sudden Oak death-affected species – there is one single Tanoak tree record in the provided inventory data. Therefore, the project area does not support the suitable presence of host species for this disease.	ACR672 GHG Project Plan_Draft_083122_Revised.doc ACR672 GHGPP Calculations Draft_083022_Revised.xlsx ACR672 Inventory Data_Revised.xlsx	
17-Oct-22	ACR has confirmed the approach to calculating the risk rating used for this project. Additional email correspondence with the Registry provided to VVB.		

Verifier Issue	Issue ID:	22-19	Status: Closed	Checked by: DC	Date Identified 29-Jun-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description	Comments	
ACR Standard, v7.0, Section 5A	Section E1.3.11	Clarification. May impact OMM or conformance.	Verifiers note that in the baseline modelling, over half of the standing volume in the project is harvested in the first year. Page 43 of the GHG Project Plan states that the “opportunity cost” of not harvesting low-growth stands...” incites the model to select such stands in the early years. But can it be demonstrated that there is mill capacity for this level of harvesting? The baseline must present a realistic harvest scenario.	ACR672 GHG Project Plan_Draft_042122	
			October 8, 2022 Verifiers deduced the baseline harvest reduction from the WS_All_Report tab of the calculations worksheet. Live tree CO2 is reduced from 800,872 to 395,383 tonnes. From cell D8 on tab HWP_Conv, 315305.79 tons are harvested prior to delivery to mill for period 1 which is a large portion of product carbon. However, after	ACR672 GHGPP Calculations Draft_01112022.xlsx ACR672 GHGPP Calculations Draft_01112022	

converting to MMBF is appears there is mill capacity available as presented in the supplementary workbook. Issue is considered closed.

		1st crediting period		
Equation	Parameter	ACR Account Year	0	1
		ACR Account Year Date	2020	2021
Baseline				
1	$C_{BSL,TREE,t}$	Live Tree CO ₂ Baseline	800,872	395,383
2	$C_{BSL,DEAD,t}$	Dead Wood CO ₂ Baseline	13,359	17,994
3	$C_{BSL,HWP,t}$	HWP Baseline	-	71,997
3	$C_{BSL,HWP}$	20yr Avg Baseline HWP	-	7,346
4	$GHG_{BSL,t}$	GHG emissions Baseline	-	-
4	GHG_{BSL}	20yr Avg Baseline GHG emissions	-	-
		sum stocks	814,231	420,723
5	$C_{BSL,AVE}$	20yr Avg Baseline	352,658	352,658
	T	Year T	-	-
6 & 7	$\Delta C_{BSL,t}$	deltaC baseline	-	(393,507)
		Pro-rate	-	-

OPO/APD Response

Date	PP Comment	Additional evidence submitted for review by PP
31-Aug-22	PP would like to request clarity on which values the verifiers are referencing in their finding that "over half of the standing volume in the project is harvested in the first year." This conclusion is not consistent with the year-over-year values presented in the baseline model. With regards to mill capacity, PP has provided a supplementary workbook demonstrating significant regional mill capacity for the project.	ACR672 Mill Capacity Data.xlsx

Appendix C: Project Team

Verification Team	Qualifications
Pablo Reed	<p>Pablo Reed holds a B.S. in Forest and Ecological Engineering as well as a minor in Latin American Studies from the University of Washington in Seattle. He has also recently completed a Masters of Environmental Management degree at the Yale School of Forestry & Environmental Studies. Prior to his return to grad school, he spent the preceding six years of his life working with conservation and development projects in various countries in Latin America. He served as country director for a joint USAID/Idaho State University community conservation project in the Alta Verapaz region of Guatemala and also spent time in Panama working as an environmental and GIS consultant. His most recently worked for the Peace Corps in Ecuador, where he served as program manager for the posts' natural resource conservation program. While at Yale, his program of studies centered on social and political ecology as well as natural resource management policy. His research and subsequent thesis centered on the development of REDD (Reducing Emissions from Deforestation and Degradation) policy frameworks, especially as they pertain to the inclusion of communal Indigenous territories and lands (Ecuador, summer 2010). Pablo is an ARB Forestry project specialist, and an ARB Lead Verifier.</p>
Lawson Henderson	<p>Lawson joined S&A Carbon as a Senior Associate in 2016, and expands the existing capacity of the forest carbon offset verification team. He is acts as an ARB Verifier on forest carbon offset projects, and is qualified as a Lead Offset Verifier under the ARB regulation. Lawson currently supports the S&A team with reviews of verification documents, field verifications of ARB forest carbon offset projects, and S&A's actions to become accredited under the American National Standards Institute – ANSI). Lawson brings nearly a decade of experience in forest certification through his prior employment with Rainforest Alliance, where he acted as a project manager and lead auditor of forest carbon offset projects against the major voluntary GHG programs, and FSC Forest Management & Chain of Custody Certifications. Lawson is qualified as a Lead Verifier under the Climate Action Reserve (CAR), and is also qualified as a AFOLU IFM Expert under the Verified Carbon Standard (VCS) program. He has led the validation and verification of IFM, AR & REDD forest carbon offset projects against the major voluntary GHG programs globally. He is a member of both the Gold Standard Foundation (GSF) Land Use and Forestry (LUF) and Oversight and Assurance (OA) Technical Advisory Committees (TAC). Lawson holds a B.S.F in forest management from the University of New Hampshire (2005).</p> <p>Lawson left S&A Carbon in the end of 2022.</p>



Verification Team	Qualifications
Bill Stack	<p>Bill took over Lawson’s responsibilities as the technical reviewer in 2023.</p> <p>Bill Stack is a forester, natural resource manager, and ecosystem restoration specialist with over 29 years experience working on forest and aquatic ecosystems in the northeast and northwest US. He holds a master’s degree in Forest Engineering from Oregon State University. He is an ARB accredited lead verifier and forest project specialist. Bill has participated on the verification of forest offset projects throughout the US including Alaska. Verification responsibilities included pre-site visit prep, forest inventory, data processing and analysis, developing findings, and report writing. Bill also provides a broad range of forest management consultation services to private landowners in preparing and implementing ecologically-based forest stewardship plans. He holds professional forester licenses in New Hampshire and Vermont. His comprehensive approach balances water, soil, wildlife, timber, recreation, aesthetics, and other resources with landowner goals and values. Previously, Bill has worked as a Senior Project Scientist with Stantec consulting on ecosystem restoration projects and as a Forest Hydrologist on interdisciplinary project teams for the USDA Forest Service.</p>
Carlos Eduardo Paixão	<p>Eduardo joined S&A Carbon as a subcontractor in 2021 and expanded the existing capacity of the forest carbon offset verification team. Eduardo currently supports the S&A team as a lead verifier with reviews of verification documents and field verification of forest carbon offset projects. Eduardo holds a bachelor’s degree in forestry and in wood engineering, and a master’s in forestry. He has 7 years of experience in natural resources management. He has conducted assessments of deforestation in supply chains in South America, Africa, and in Indonesia. Previously, he participated in the development of technical and economic studies for two European forestry investment funds in Latin America. Eduardo is a sustainable forestry and agriculture standard auditor and has conducted audits worldwide (FSC, PEFC, RSPO sustainable palm oil, sustainable farm assessment, Rainforest Alliance, UTZ coffee and cocoa, and the international sustainability carbon certification). Eduardo is also involved in academic research and has been a lecturer at the University of Quebec in Canada since 2018. Native Portuguese speaker, he also speaks French and English.</p>
Dwight Chapman	<p>Mr. Chapman is a Forester and Project Manager with experience running a private consulting company conducting forest inventory and natural resource surveys for government agencies and the private sector. As a sole proprietor, he has extensive experience taking ownership of and building project strategies from the ground up for projects outside of his formal educational training. With over 25 years of consulting experience, he brings strong leadership and</p>

Verification Team	Qualifications
	management skills to the carbon verification industry. While running the forestry consulting business, he was responsible for client management, facilitating meetings between the public and private sector, and hiring and managing forestry field staff. He has completed thousands of field-based forest inventory plots in all western states from the Rocky Mountains to the coast of California. He has also managed and performed private industrial forest volume cruises throughout the pacific northwest. Additionally, he brings 10 years of professional and technical writing experience including proposal preparation, progress and final reports, and GIS analysis including spatial analysis.
Elizabeth McGarrigle	Elizabeth McGarrigle holds three forestry degrees (BScF, MScF, PhD). Her work has focused on forest inventory, growth and yield, and forest management planning. Her research focused on examining the impact of uncertainties in the inputs to long term forest management plans when optimization models are employed during the Master's program. While completing her PhD, she was part of the team developing a regional growth and yield model for the Acadian forest in the Northeastern United States and Canada. She developed a stand level model that is used to predict survivor growth, ingrowth, and mortality in the region. As part of her dissertation, she focused on several variants of the Forest Vegetation Simulator and several regional growth and yield models from across Canada and the United States. Dr. McGarrigle is currently working with the provincial government in Nova Scotia Canada as a Forest Inventory Data Analyst where she is responsible for the design and analyses of permanent sample plots. In addition to her work as a biometrician on several ARB forest projects, she has also been involved in research at Natural Resources Canada using a fine scale forestry model to assess the impact of climate change on species composition in forest types across Canada.
Alexa Kandarlis	Alexa has 6 years' experience in carbon auditing and climate change mitigation policy and is accredited by ARB as a verifier under their US Forests protocol. In this time, she has participated in over 200 verifications of carbon offset projects and corporate inventories under a variety of GHG programs, including the Air Resources Board, Climate Action Reserve, American Carbon Registry, Verified Carbon Standard/Climate Community & Biodiversity Standard, and Carbon Disclosure Project. Alexa developed tracking systems for a program registered under the Clean Development Mechanism and registered with the Gold Standard. Alexa is currently responsible for implementation of S&A's corporate management system to ensure ongoing improvement and compliance with ISO requirements. In addition to this, she has field experience with Forestry, Ozone Depleting Substances, and Livestock verification projects. She holds a Bachelor of Arts in Economics with a focus on natural resource and environmental Economics.

Verification Team	Qualifications
Alex Powell	Alex Powell has a BS degree from Humboldt State University, 2006, majoring in Wildlife Management. He has been employed in the forestry business since 2008, and has worked with Blair Forestry Consulting since 2014. He has experience with inventory data collection. He is experienced with all equipment necessary for cruising (releskop, impulse laser for heights and distances, spencer tape, biltmore stick, etc.) as well as species identification, and keeps field notes and data organized. He has collected data on field sheets and handheld devices, and has organized and interpreted data in the office. Additional experience includes Timber Harvest Plan preparation, filing and implementation (field work and written document, Pre-harvest Inspections, LTO interactions); Interpretation and implementation of the Forest Practice Rules; Watercourse classification; Identification of fish bearing streams; Identification and protection of habitat for rare species and species of concern; Road and crossing assessment and improvement recommendations and sediment reduction strategies; Preparation of Lake or Streambed Alteration agreements and 1600s; Identification and assessment of cumulative impacts; Botanical surveys; Overstory and understory species identification; Data management and organization; Work in rugged terrain and inclement weather, individually or in small crews, navigation of remote forest roads and use of ATV; Use of GIS and GPS for both in office assessment and in field data collection and navigation; Extensive use of computers (Microsoft Excel, Word, Access) and internet research

Appendix D: Version Tracking

Version	Date	Developed By	Version Notes
1.0	11/1/2022	Alexa Kandarís/Pablo Reed	Initial Document
1.1	11/4/2022	Eduardo Paixão	Updated document following closure of Issues Log
1.2	11/8/2022	Alexa Kandarís/Dwight Chapman/Elizabeth McGarrigle	Updated document
1.3	11/14/2022	Lawson Henderson	Technical Review
1.4	11/16/2022	Alexa Kandarís	Finalized document upon PP approval
2.0	2/20/2023	Pablo Reed/Eduardo Paixão	Updated document in response to ACR review comments.

S&A Carbon Lead Verifier	Pablo Reed
Name and Signature:	
Date:	23 February 2023
S&A Carbon Technical Reviewer	Bill Stack
Name and Signature:	
Date:	23 February 2023