VALIDATION/VERIFICATION REPORT

ACR VALIDATION/VERIFICATION OF THE SCOTT RIVER WHISKEY IFM PROJECT (ACR733)

REPORTING PERIOD 1

Date: 5/2/2023
Version 1.7

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Project Name	Scott River Whiskey IFM Project
Project ID	ACR733
Reporting Period	6/7/2021 – 3/31/2022
Client	EFM Investments & Advisory Inc.
Date of Issue	5/2/2023
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Summary

The Scott River Whiskey IFM Project is within the Klamath River basin and located approximately 4 miles northwest of Etna in the Scott Valley in northwestern California. The project abuts the Marble Mountain Wilderness and Klamath National Forest to the west and agricultural lands on the east edge. The project area contains 18,301 acres consisting of a diverse conifer forest assemblage including Douglas Fir, white fir, ponderosa pine, incense cedar, knobcone pine and sugar pine. Smaller percentages of hardwoods are also present including red alder, canyon live oak, California black oak, and big leaf maple.

The purpose of this IFM project is to increase the forest carbon stocks during the project period by implementing management actions that go above and beyond common practices in the local area by creating expanded voluntary riparian buffers, special wildlife areas, reduced intensity silvicultural practices, and increased rotation ages via FSC-certified management practices. The result of these changed management practices will be less timber harvest as compared to growth over the project period. Also, this management regime will improve the overall forest health and resiliency of the project area, while creating and maintaining habitat for a range of wildlife species. Carbon revenue will replace some forgone timber harvest revenue over the project period.

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 6/7/2021 – 3/31/2022. 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 (v7.0), the applied ACR IFM Methodology (v1.3), supporting ACR Program documents, and implementation of the validated GHG Plan.

The validation and 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 from 6/20-6/23/2022. The verification process included several official and documented exchanges between the verifier team and the project proponents 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 project proponents were required to respond, and for which 7 Clarification requests, 5 New Information Requests and 2 Non-Conformances were identified. Verifiers confirmed in an email to the project proponents dated 1/3/2023 that all remaining issues were satisfied in the responses provided in the Issues Log.

Once all identified issues were adequately resolved, S&A Carbon prepared 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, 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 12/20/2022 and the projected *ex-ante* GHG emission reductions of 1,290,584 tCO2e over the first 20-year crediting period. S&A Carbon is also able to issue a positive verification opinion for the 76,324 tCO2e of verified emissions reductions, as reported in the Monitoring Report dated 12/20/2022. The verification assessment covered the monitoring period from 6/7/2021 – 3/31/2022 and verified that calculated emission reductions were achieved during the monitoring period with a reasonable level of assurance. The overall risk rating was 22.0%. Therefore, the total number of credits to be deposited in the buffer account for the initial monitoring period is 16,792 tCO2e and the total ERTs to be issued are 59,532 tCO2e.

Abbreviations

ACR	American Carbon Registry
ANAB	ANSI National Accreditation Board
BMP	Best Management Practices
CO_2e	Carbon Dioxide Equivalent
CP	Common Practice
EPA	Environmental Protection Agency
ERTs	Emission Reduction Tons
GHG	Greenhouse Gas
HWP	Harvested Wood Products
ICS	Initial Carbon Stocks
MR	Monitoring Report
MP	Monitoring Period
NRCS	USDA Natural Resource Conservation Service
PD	Project Developer
PP	Project Proponent
RP	Reporting Period
RPF	Registered Professional Forester
S&A	S&A Carbon
t	Metric Tonnes
U.S.A	United States of America
USDA	United States Department of Agriculture
VVB	Validation and Verification Body

1   Introduction

S&A Carbon (S&A) has been asked by L&C Carbon to verify the emission reductions generated by the Scott River Whiskey IFM Project (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, v1.3). S&A validation/verification activities began on 6/7/2022.   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 ACR733.

1.1 Project Participants

Role	Organization Name	Main Contact Information and Person
Project Proponent (PP)	EFM Investments & Advisory Inc. (EFM)	Amrita Vatsal 721 NW Ninth Avenue, Suite 200 Portland, OR 97209 amrita@efmi.com
Offset Developer & Technical Consultant	L&C Carbon	David Ford, L&C Carbon 710 SW Carmen Heights Dr Dundee, OR 97115 503.449.6957 davidford27@gmail.com
Technical Consultant	Terra Carbon LLC	David Shoch, TerraCarbon 700 Harris St, #201B Charlottesville, VA 22903 434.326.1144 david.shoch@terracarbon.com
Technical Consultant	Cougar Environmental, Inc	Clint Gray, Cougar Environmental, Inc 494492 Hwy 95 Naples, Idaho 83847 208.290.2144 clint@cougarenvironmental.com
Technical Consultant	Latta Forestry	Greg Latta, Latta Forestry 1009 Birdsong Lane Moscow, ID 83843 541.619.9212 lattaforestry@gmail.com

Entities listed above are collectively referred to as project participants throughout this document.

1.2 Description of Project

The common silvicultural practice in northwestern California (west of the Cascade Range) is to manage conifer stands to a minimum rotation age as specified in the California Forest Practice Rules (depending on site class), clearcutting, and replanting with native conifers.

EFM plans to manage the project area towards an uneven-aged management regime. The project activity is projected to harvest less than the annual growth. By limiting annual harvests, the average stand age will increase resulting in increasing CO2e reductions over the project period. As the project activity is designed to achieve an uneven-aged stand structure, it cannot be characterized as common practice which is typically an even-aged silvicultural system with clearcutting and replanting.

The project area is composed of 18,301 acres of mixed conifer and hardwood forest that will be managed for the purpose of increasing carbon stocks by maintaining existing forest biomass and restricting harvests to less than the annual forest biomass growth over the project period. The planned harvest levels over the project period are well below the volumes permissible under federal and state laws, including California's Forest Practices Act and the implementing regulations and rules. The result of this reduced harvest regime will be an extension of rotation age, well beyond the common practice of shorter-rotation management of the neighboring forest owners. Since this project is using a conservative baseline, nearly all the credits being generated over the project period are removals.

The purpose of this IFM project is to increase the forest carbon stocks during the project period by implementing management actions that go above and beyond common practices in the local area by creating expanded voluntary riparian buffers, special wildlife areas, reduced intensity silvicultural practices, and increased rotation ages via FSC-certified management practices. The result of these changed management practices will be less timber harvest as compared to growth over the project period. This management regime will also improve the overall forest health and resiliency of the project area, while creating and maintaining habitat for a range of wildlife species. Carbon revenue will replace some forgone timber harvest revenue over the project period.

Date Description	Date
Project Start Date	6/7/2021
Crediting Period	6/7/2021- 6/6/2041
Reporting Period 1	6/7/2021- 3/31/2022
Validation/Verification Start Date	6/7/2022

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 6/7/2021 – 3/31/2022.

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; and
- 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:
  - Inherent risk of material misstatement; and
  - 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 or project proponent staff;
- 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
- Errata and Clarifications for ACR IFM Methodology v1.3, April 2022
- The Improved Forest Management (IFM) Methodology for Non-Federal U.S. Forestlands, v1.3, April 2018
- ACR Tool for Risk Analysis and Buffer Determination v1.0
- ISO Standards 14064-2 and 14064-3, 2006

1.5 Materiality & Level of Assurance

The validation/verification team must state with reasonable assurance that discrepancies between emissions reductions/removal enhancements claimed by the Project Proponent and estimated by the VVB be immaterial (less than the materiality threshold of +/- 5%). The equation below is used to calculate the percent error in an emission reduction assertion.

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

1.6 Audit Team

Role	Name
Lead Validator	Pablo Reed
Lead Validator (under observation)	Bill Stack
Lead Verifier	Bill Stack
Technical Reviewer	Kyle Silon
Technical Reviewer (under observation)	Alexa Kandaris
Biometrician	Elizabeth McGarrigle
Technical Expert	Marty Duffany
Site Visit Team	Bill Stack (RPF), Kim Mattson, Thomas Blair (RPF) & Alex Powell
Internal Approver	Alexa Kandaris

2 Audit Process and Methodology

S&As audit included the following activities:

2.1 Desk Review

A document request and kickoff call agenda list were sent to the PP on 6/3/2022 and 6/6/2022, respectively. A kickoff conference call was held on 6/7/2022, signaling the start of the validation/verification services. The project team and verifiers discussed initial findings from a desk

review of submitted documents, targeting aspects of the project and supporting information that might affect the evaluation. Meeting minutes were prepared following the kickoff meeting.

The draft GHG Plan was provided 6/4/2022. The verifiers reviewed this document and assessed the eligibility criteria required to design, measure, and monitor the project to the requirements of the ACR Standards and IFM Methodology. Verifiers confirmed that the ACR eligibility requirements were met. The Validation/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 Thomas Blair, Alex Powell, Kim Mattson & Bill Stack from 6/20/2022 through 6/23/2022. An opening meeting was conducted on 6/20/2022. Attendees of the site visit were as follows:

Attendees	Company	Role	Attend Opening Meeting	Attend Field Sampling	Attend Closing Meeting
Bill Stack	S&A Carbon	Lead Auditor	X	X	X
David Ford	L&C Carbon	Project Developer	X	X	X
Darin Stringer	EFM	Forester	X		
Dave Powers	EFM	Advisor Conservation Programs	X		
Thomas Blair	S&A Carbon	Contractor, S&A Site Visit Team	X	X	X
Kim Mattson	S&A Carbon	Contractor, S&A Site Visit Team	X	X	X
Alex Powell	S&A Carbon	Contractor, S&A Site Visit Team		X	

*Note: This site visit was completed concurrently with two other EFM projects (Scott River Shackleford IFM and Scott River Wildcat IFM, ACR 732 & ACR 734, respectively).

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.

During the site visit, verification team activities included the measurement of 8 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% (i.e., the means were the same, p=0.18). Site visit activities also included collecting GPS data (plot center, project boundaries); observing and documenting the forested conditions within the project area (e.g., species composition, age class, canopy cover); and discussions with the PP on QA/QC processes around the inventory data collection, baseline model inputs, and regional common practice for forest management of the forest types within the project area.

A closing meeting for the site visit was held on 6/23/2022 near Etna, California (on site in forest). Attendees are listed in the table above. Other topics also discussed included preparation of the Issues Log, scheduling of the baseline model review call, and proposed validation/verification schedule; and reflections and learnings from the site visit.

2.3 Quantitative Review (only required for verification)

The data and information supporting the PP's GHG assertion for this Project is based on historical records (forest inventory data) and future projections (modeled tree growth). To verify this assertion, S&A conducted various quantitative analyses of the project and 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 this initial reporting period (6/7/2021 – 3/31/2022). 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 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 to estimate the project's carbon stocks and the results were compared to the PP's reported values. This recalculation process includes a complete quantitative check of the PP's inventory data on a plot-by-plot level to verify PP's project stock calculations were done accurately and completely to comply with the ACR Standard. Uncertainty and associated deductions were also independently calculated by the verifier.

For projects where plot sampling is required during a verification, ACR provided guidance stating VVBs shall resample a minimum of 5% of the project's plots. For sampling to pass verification, all strata need to be represented in the sample selection and statistical agreement must be attained between the verifier's and project's plot carbon values 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 within the selected sample plots were re-measured by the verifiers including tree diameters (DBH) & limiting distances (i.e., trees in/out of the plot), species identifications, missing volume, and tree status assessments (live/dead) were independently measured using tools identical or comparable to those used by the PP. No tree height measurements were sampled during the site visit as this field parameter was not needed in calculating project stocks as specified in the IFM Methodology. Verifiers did, however, take at least one tree height measurement on selected the sample plots to check inputs used in baseline modeling.

Inventory re-measurement was confirmed to meet the ACR recommendations and all measurement methods were confirmed 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 6/15/2022 (https://efmi.com/ ; https://www.terracarbon.com/) and/or during interviews with Project Participants throughout the validation/verification process.

Date	Name	Title
Throughout Verification	David Ford	L&C Carbon, Project Developer
Throughout Verification	Greg Latta	Latta Forestry, Technical Consultant
6/7- 6/23/2022	Darin Stringer	EFM, Forester
6/7 & 6/21/2022	Amrita Vatsal	EFM, Managing Director
6/20 – 6/23/2022	Dave Powers	EFM, Advisor Conservation Programs
9/27/2022	Steve Wilson	CALFIRE, Forester, Siskiyou Office
10/13 & 10/31/2022	Andrew Taylor	ACR, Forestry Program Officer
10/19/2022	Aaron Holley	TerraCarbon, Manager
10/19/2022	Deb Quinlan	EFM Contractor, GIS analyst
11/24/2022	Laura Bradley	SLT Stewardship, Siskiyou Land Trust
11/28/2022	ACR	ACR Forestry staff – Andrew Taylor, Kurt Krapfl & Warren Reed

2.5 Findings

Throughout the validation/verification, findings were recorded by the audit team as per guidance outlined in the criteria 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	6/7/2022	6/7/2022
Site visit (*done concurrently with the other two EFM Scott River IFM projects – Shackleford (ACR732) & Wildcat (ACR734))	6/20/2022 – 6/24/2022	6/20/2022– 6/23/2022
S&A Carbon submits issues log v1.0	7/11/2022	10/4/2022
TC response to issues	7/25/2022	11/6/2022
S&A Carbon submits issues log v2.0	8/8/2022	12/6/2022
TC response to issues	8/22/2022	12/20/2022
S&A Carbon closes out issues log	9/6/2022	1/3/2023
S&A Carbon submits validation/verification report for Technical Review	9/7/2022	2/9/2023
S&A Carbon submits verification report for TC review/approval	9/14/2022	2/9/2023
Closing Call; S&A Carbon submits final validation/verification documents to ACR	9/15/2022	2/9 & 2/13/2023

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 from 6/20 through 6/23/2022 near Fort Jones, California. The validation/verification process included several official and documented exchanges between the verification/validation team and the project proponents to gather additional information for review and for examination of compliance with all applicable criteria. These exchanges included two rounds of an Issues Log produced by S&A, for which 7 Clarification requests, 5 New Information Requests and 2 Non-Conformances were identified. Verifiers confirmed in an email to the project proponents dated 1/3/2023 that all issues were resolved in the Issues Log.

2.8 Eligibility Requirements

The verifiers assessed the project against the eligibility criteria of the ACR Standard as well as the applicability conditions required by the ACR IFM Methodology and determined the project to be ACR eligible and applicable to the ACR IFM Methodology. 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 reporting period length for RP1 (6/7/2021-3/31/2022) is less than two years and meets the eligibility requirement. The project start date is after 11/1/1997 and is therefore considered an eligible project. The project start date of 6/7/2021 coincides with the signing of a confidential contract between EFM and L&C Carbon. The start date is also 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 IFM project type. The PP asserts the project area is greater than 10% forest cover (live trees) for this initial reporting period to comply with the ACR Standard eligibility requirement (A.3). Based on reviewing recent aerial imagery (NAIP CA 2020) and June 2022 site visit observations, verifiers are reasonably assured the project area is covered by greater than 10% forestland. The verifiers are also reasonably assured that the project area is located on private owned lands within California based on aerial imagery assessments, deeds and Siskiyou County tax maps. The current project activities do involve commercial harvesting, none were implemented, however, during the reporting period.

The project area's forest is composed of 100% native species. The project area contains 18,301 acres of a diverse conifer forest assemblage, which consists primarily of Douglas Fir, white fir, ponderosa pine, incense cedar, sugar pine, and knobcone pine. Smaller percentages of hardwoods are also present including canyon live oak, California black oak, big leaf maple, and red alder. The project activity doesn't involve any use of non-native species. The vast majority of the project area is made up of highly variable topography ranging from steeply sloped hillsides (>35%) to more gentle slopes on benches, grasslands and larger stream floodplains and isolated wetlands. Elevations range from approximately 2,800 to 7,000 feet.

In accordance with the ACR IFM Methodology, the PP's risk assessment for Reporting Period 1 uses the *ACR Tool for Risk Analysis and Buffer Determination* (v1.0), which was determined to have a risk rating of 22.0%. Verifiers completed a review of the percent contributions for each risk category and found the individual risk ratings reasonable, appropriate, accurate and well supported with documentation to justify the associated risk ratings and conforms with the ACR descriptions for each risk type. In total, 22.0% of the gross emission reductions will be deposited into the ACR 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 during this 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*.

Risk Type	Conform	Finding	GHG Plan	VVB Check
Financial	Y	Default	4%	4%
Project Management	Y	Default	4%	4%
Social/Policy	Y	Default	2%	2%
Conservation Easement Deduction	Y	CE recorded on December 28, 2020	-2%	-2%
Fire	Y	Recent Wildfire <30 miles of Project Area	8%	8%
Diseases and Pests	Y	Default	4%	4%
Levee Failure & Water Table Changes	Y	Default	0%	0%
Other Natural Disaster Events	Y	Default	2%	2%
Total Risk			22.0%	22.0%

2.9 Additionality

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 (1) currently exceeds current effective and enforced laws and regulations; (2) exceeds common practice in the relevant industry sector and geographic region; and (3) faces at least one of the three implementation barriers (financial, technological, or institutional). The project was found to be additional with the project activities above and beyond the business-as-usual scenario for privately owned commercially managed forest lands in northwestern California.

The laws and regulations outlined in Section C1 of the GHG plan were found to comprehensively identify the applicable laws and regulations that could affect the project. The verifiers' assessment of these laws determined that none of them impact the project activities or require the PP to implement the project activities, thereby demonstrating regulatory surplus.

The description of applicable National, State, and local laws and regulations in the GHG Plan was found to consider all applicable laws and regulations for 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 (see Section E1 of the GHG Plan).

Verifiers also confirmed any legally binding elements of the conservation easement were included in the baseline constraints (many of which are addressed under the CA Forest Practice Rules). The conservation easement for the project area was recorded on December 28, 2020 in the County of Siskiyou, California. The conservation easement is held by the Siskiyou Land Trust (SLT) (https://www.siskiyoulandtrust.org) and explicitly reserves all carbon rights associated with the property to the grantor. The conservation easement does not restrict forest management activities and is bound by the legal requirements contained in the California Forest Practices Act (CA Forest

Practice Rules). The most recent SLT conservation easement annual monitoring report (12/2021) indicated there were no non-conformances regarding the easement's legal requirements. Lastly, while Binding International Agreements are described in the GHG Plan, none are considered to impact the baseline scenario or the project activities.

As described in Section C.2, common silvicultural practice of the forest type within the project area is managing conifer stands to a minimum rotation age as specified in the California Forest Practice Rules (site class dependent), clearcutting, and replanting with native conifers (even age management). Verifiers confirmed this practice through discussions with the PP, regional consulting foresters, and CalFire forester; through the verification team's professional work experiences in the region; internet searches pertaining to common silvicultural practices in northwestern California; and site visit observations. The verifiers are reasonably assured that the project and its associated project activities, exceed common practice in this region of northwestern California.

Unlike the common practice, EFM plans to manage the Project Area towards an uneven-aged management regime. The project activity will increase carbon stocks by maintaining existing forest biomass and restricting harvests to less than the annual forest biomass growth over the project period. This reduced harvest regime will result from an extension of rotation age, which will increase the average stand age resulting in increasing CO2e reductions over the project period. The planned harvest levels over the project period are well below the volumes permissible under federal and state laws, including California's Forest Practices Act and California's Forest Practice Rules 2022.

Section B.5 and E.1 of the GHG Plan offers a reasonable definition of the baseline harvest scenario, which the PP asserts is the common practice harvesting regime in the region for similar types of landowners and forest types. The baseline management scenario was based on typical overstory removal and associated basal area retention while incorporating the legal constraints, such as limited harvesting in Watercourse and Lake Protection Zones, as specified in the 2022 California Forest Practices Rules (Title 14, California Code of Regulations Chapters 4, 4.5 and 10). Specific baseline silvicultural harvest prescriptions are described in Section E.1 of the GHG Plan and the baseline modeling workbooks.

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. Specifically, the PP asserts the landowners face limited access to financial capital, in the absence of carbon project income, that would prevent them from implementing the project activities. The PP states in the GHG Plan (C.3) carbon project income is expected to incentivize the project's implementation due to the lost revenue associated with the potential timber harvesting that could legally and feasibly occur within the project area.

The verifiers were provided with a Net Present Value (NPV) financial analysis for both the baseline and with project scenarios that accounts for all costs and revenues from these scenarios. In this analysis, the PP used a 6% discount rate, which was based on private industrial ownership and complies with the specifications in the IFM Methodology (C.1, Table 1).   Required inputs for the project NPV calculation were based on the 2021 timber inventory, growth and yield under a range of silvicultural treatments, stumpage prices for wood products, logging and hauling costs of harvest and basal area

retention as required by the California Forest Practices Rules, other management costs, and carrying costs. Verifiers found these inputs to be reasonable, appropriate, accurate and well supported.

In 2021 dollars, the project activity without carbon revenue is expected to generate an NPV of $945,775, which is substantially lower than the NPV maximization scenario of the baseline model ($27,225,919), thus demonstrating the financial barrier of the implementation of the project. Based on this NPV analysis and stakeholder interviews, verifiers are reasonably assured the project has met the financial barrier test.

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. Percent contributions for each risk category have been applied based on guidance in the tool. All the categorical risk ratings were applied consistent with the Tool's method. All risk ratings were based on the default values except for fire, which had a risk rating of 8%. The PP noted a recent wildfire, the River Complex fire (~200,000 acres, contained fall 2021) in Northern California, which is greater than 1,000 acres and within 30 miles of the project area, thus the 8% risk rating.   Verifiers concur with this assessment and the applied fire risk rating. Verifiers also confirmed the PP's assertion that the project is not located in a region with the presence of an epidemic disease or infestation. Verifiers confirmed the PP's total risk rating of 22%.

In total, 22.0% of the gross emission reductions will be deposited into the ACR pooled buffer account. This deduction is made to the calculated gross ERT calculations generated by the project to determine the total tradeable balance of ERTs generated by the project over the initial reporting period.

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

As mentioned previously in section 2.9, the common silvicultural practices in the region for the private land industrial owners with the project's area forest types are based on even-age management (e.g., clear cutting and re-planting). Verifiers confirmed this practice through discussions with the PP (e.g., 7/8/2022 model review call) and regional consulting foresters; through the verification team's professional work experiences in the region; internet searches pertaining to common silvicultural practices in northwestern California; and site visit observations within and near the project area.

The PP, however, utilizes a more conservative baseline management regime as compared to common practice by modeling harvests to achieve an uneven age management condition. The baseline silvicultural practices involve thinning stands (single tree and group selections) to the legally required

minimum basal area per acre stocking levels as prescribed by the California Forest Practice Rules 2022. The baseline modeling includes a constraint that leaves at least 75 square feet per acre of basal area for site class III and 50 square feet per acre of basal area for site class IV and V as per the California Forest Practice Rules 2022. Further, the baseline modeling includes a constraint which prohibits any harvest within all Riparian Management Zones (RMZs) and Special Habitat Management Zones (SHMZs) which exceed the requirements contained in the conservation easement recorded in 2020.

The baseline (and project) on-site carbon stocks found on the project area were determined through a forest inventory implemented on the project area in the fall of 2021. The inventory design employed a sample of 147 fixed-radius and variable-radius plots installed on a systematic grid across the project area. After the inventory was completed the project area was stratified into six strata which was based on remote sensing information (LEMMA data - https://lemma.forestry.oregonstate.edu/) along with Nearest Neighbor (NN) imputation methods. Strata 1-5 were based on forest cover, stocking (basal area) and DBH. Strata 6 incorporated the baseline constraints associated with water resource areas and special management zones. The verifiers found the project's stratification methods to be reasonable and the inventory methodology to follow standard industry practices. This stratification process was discussed more fully in the project documents as well as the Issues Log (items #12 and #13).

Growth and yield projections were based on the US Forest Service Forest Vegetation Simulator (FVS), Inland California and Southern Cascades (CA). 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. This variant requires a 50-year site index, the PP used a strata-level weighted average Douglas-fir site index which was based on published variables and the expertise of local forest managers and other natural resource professionals in the region. Verifiers' check of site index through the USDA Soils data found the PP's estimate of site index to be reasonable. The inventory tree list was de-grown one year in FVS to estimate the beginning of reporting period stocks. The baseline model was run for a 100-year timeframe using a 1-year time period for the first 21 years and then 5-year periods throughout the remainder of the modeling time horizon.

Baseline carbon in long-term storage in wood products was calculated based on projected harvest volume removals from the FVS model. Harvest volumes were broken out into the categories of softwood sawlog, softwood pulp, hardwood pulp and hardwood sawlog by referencing the merchantability standards in FVS. Harvest volumes were converted to biomass by applying species-specific specific gravity values references in the USFS Handbook and Miles and Smith 2009. 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 California ARB Compliance Offset Protocol, for northwestern California.

Baseline carbon in wood products was summed across the established wood categories and distributed to various end-wood product classes referenced from the California ARB Compliance Offset Protocol, for northwestern California. Baseline 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. Emissions due to burning logging slash are conservatively assumed in the baseline to

be zero. 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 Project Proponent 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. As shown on EFM's website, the PP does own approximately 101,400 acres of other forestland properties outside of the project area. As all of these other forestlands are third-party certified managed lands or will be within 5 years for those more recent acquisitions (group Forest Stewardship Certificate SCS-FM/COC-00117G), thus, there is no activity shifting leakage.

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. Some 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 reporting period the PP 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 plans to mitigate, if applicable (Validation & Verification Standard, 6E). These attestations have been included in the signed Monitoring Report for this initial reporting period.

Project monitoring is generally focused on the project's on-site carbon stocks through updates to the projects forest inventory data. A full re-inventory of the project area is to take place at least once every decade 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 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, harvesting, ecological restoration projects, 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 Section 2 of the SOP (Carbon Cruise Protocol). Both forest and desk-based QA/QC procedures are established. At least 5% of the forest inventory plots will be checked by a different cruiser than the individual who measured the plot. The plot check cruise consists of full plot measurements to identify any issues or significant discrepancies. The SOP provides the measurement type, tolerance, and audit result (e.g., error pts or plot failure) that the inventory contractor (Cougar Environmental) applied to assess cruiser performance, issues and inventory implications. 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 stated desk QA/QC procedures also focus on ensuring that all collected data is appropriately managed and maintained, and that all subsequent calculations of the data that are incorporated into the ERT issuance are correct.

The verifiers were provided with the six Check Cruise batch workbooks detailing the plots and trees checked and comments on the errors identified (e.g., DBH, Height, Status, In/Out). The workbook also includes the original plot/tree data for the check cruised plots. In total, about 11% of the forest inventory plots were check cruised. Incorrect diameter measurements were the most common error identified during the check cruising. There were not a significant number of errors identified during the check cruise nor was any systematic bias or error found with any cruiser.

Verifiers uncovered some minor issues during the site visit sampling such as differences in DBH and needed SOP clarifications (e.g., inventory specifications for limiting distance trees and missing biomass percentages in the bole). As these were relatively minor and the requested detail incorporated into the revised SOP has been provided, the verifiers found 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. Section F1 of the project's GHG Plan outlines the Community and Environmental Impact Assessment addressing the requirements of the ACR Standard.

The project activity is improved forest management. The landowner's forest management practices represent a significant improvement in carbon storage and conservation value when compared to industrial private forestlands in the region that emphasize higher financial return and management regimes characterized by shorter, even-aged rotations. The project activity will increase carbon stocks by maintaining existing forest biomass and restricting harvests to less than the annual forest biomass growth over the project period. This reduced harvest regime will result from an extension of rotation age, which is much longer than common practice of the neighboring forest owners in this region.

No formal stakeholder consultation was conducted in advance of the project, nor was any required

because the Project Area is privately held property. As the project area is privately owned by EFM, no communities or other stakeholders are affected by the project activities, there is not a detailed community consultation and communications plan. The GHG Plan indicates that the project is not a community-based project. In Section F1 of the GHG Plan the PP notes: "*If EFM is contacted by any persons regarding the project, EFM staff will provide references to the publicly available documentation for the project. EFM has conducted informal community and stakeholder outreach about its interest and plans to develop an Improved Forest Management carbon project. Formal community and stakeholder outreach will be done as part of EFM's Forest Stewardship Council forest management certification*."

As noted in the 2020 Forest Management Plan: "*The Property is managed according to the core principles of EFM, which seek to build both conservation and social values, while providing adequate risk-adjusted financial returns to its investors*". Property goals and objectives are provided in Table 1 of this Plan. Core goals and objectives include maintaining roads and protecting the property from risks. Habitat-related goals and objectives will be enacted where financially viable and/or conservation funding allows. Other goals include contributing to the local economy and engaging community members and stakeholders to seek input and involvement in management and monitoring activities across the property.

The GHG Plan gives a general assessment of the project's environmental risks and impacts, covering the relevant factors outlined in the standard including climate change mitigation and adaptation; biodiversity; air/soil/water quality; and natural habitats. Impacts have all been categorized as positive except for air/soil/water quality and natural habitats which has been rated as neutral; verifiers agree with all the PP's impact 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 sections F1 & D1 of the GHG Plan which gives an outline of monitoring activities including inventories (forest measurements), calibrations of forest growth and yield modeling, and management activities and plans. Annual forest management monitoring is completed by the EFM management staff or hired contractors, which includes monitoring the general health and condition of the forest through the course of normal management activities including roads, recreation, wildlife, timber harvesting, and wildfire resiliency practices (silviculture, maintaining roads). Verifiers find these monitoring methods are deemed sufficient to meet the requirements of the ACR Standard (Chap 3). The GHG Plan (F1) also 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 Project Proponent is a private forestland owner and adhere to their respective internally agreed upon practices of project consultation and notification on associated decision making affected by the project activity. EFM has an internal Board of Directors that guides the direction of the organization, policies, and management decisions. As noted in Section F1 of the GHG Plan, "*If EFM is contacted by any persons regarding the project, EFM staff will provide references to the publicly available documentation for the project*." The GHG Plan indicates that the project is not a community-based project. The verifiers agree with this determination considering the project ownership and decision-making management system.

2.16 Validation Conclusion

During the validation assessment the verifiers identified 7 Clarifications, 5 New Information Requests, and 2 Non-Conformances. 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 (12/20/2022) and all supporting documentation, the verifiers concluded with a reasonable level of assurance that the project is in conformance with the applicable criteria and requirements of the ACR Standards listed in Section 1.4. 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 final GHG Plan and the projected *ex-ante* GHG emission reductions of 1,290,584 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 the project activities were implemented over the initial reporting period corresponding to the dates 6/7/2021 to 3/31/2022 in accordance with the project design established in the GHG Plan. The PP submitted a completed copy of the Monitoring Report 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 with no reported carbon stored long term in harvested wood products. 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 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.

Project level live carbon stocks were derived by inputting the inventory tree list into FVS and calculating the total project stocks of the inventory tree list using Jenkins biomass equations (as per the ACR IFM methodology). Verifiers concur with this approach as this process ensures consistency among the reported project and baseline stocks, the latter of which is also derived by using the inventory tree list to grow and harvest the baseline stocks for each period in FVS.

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 on-site carbon stocks as the basis for the materiality checks as presented below.

3.2 Data-Checks & Materiality

A summary of selected data checks for the project are provided below. The assigned ranking reflects both the size and uncertainty associated with these 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 / Checks performed	Reported (PP) tCO$_2$e	Calculated (VB) tCO$_2$e	Dis-crepancy tCO$_2$e	Impact on misstatement/ conformance
Rank 1 Sum of Project stocks; end of RP (CP,TREE,t, CP,DEAD,t, CP,HWP,t, GHGP,t)	2021 Inventory, volume and biomass equations, calculation methods	2,658,220	2,658,220	0	**No impact on** Materiality
Rank 2 Sum of Project stocks; beginning of RP (CP,TREE,t, CP,DEAD,t, CP,HWP,t, GHGP,t)	2021 Inventory, volume and biomass estimates, grown modeling results, grown tree list. Model appropriateness and use. Data systems. Checks of accumulations and correct transfer to Monitoring Report	2,528,641	2,528,641	0	**No impact on** Materiality
Rank 3 20-Yr Average Baseline stocks (live and dead tree CO2e) CBSL,AVE (total)	Monitoring Report and supporting modeling documents. Model appropriateness and use. Data systems. Checks of accumulations and correct transfer to Monitoring Report.	2,225,329	2,225,329	0	**No impact on** Materiality
Rank 4 Emissions Reduction at t (before buffer deduction) (CACR,t)	Monitoring Report / Checks that all PP entries are correct. Check sources. Checks that calculations within the worksheet are correct. Calculation check uses PP values.	76,324	76,324	0	**No impact on** Materiality
Rank 5 Market Leakage Discount Factor (LK)	Monitoring Report, supporting documents.	37,083 (40%)	37,083 (40%)	0	**No impact on** Materiality

Scott River Whiskey IFM (ACR733)
AR_v1.0-20220422

Rank 6 Baseline Harvested Wood Products (CBSL,HWP,t)	Monitoring Report, supporting worksheets	27,020	27,020	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.				
Rank 7 Buffer Credits and Risk Rating (TBt)	Monitoring Report, calculation workbooks, supporting worksheets	16,792 (22%)	16,792 (22%)	0	No impact on Materiality
	Checks that all PP entries are correct. Check risk rating and calculations have been calculated correctly.				
Rank 8 HWP Project (CP,HWP,t)	Monitoring Report, supporting worksheets On-site observations, GIS review, interviews with the PP.	0	0	0	No impact on Materiality
	Checks of mill receipts and HWP storage calculations. Correct use of appropriate mill efficiencies, product classes and long-term storage factors.				
Rank 9 Total Uncertainty (UNCt)	Monitoring Report supporting worksheets	0 (<10%)	0 (<10%)	0	No impact on Materiality
	Use PP data for 2021 inventory stocks; checks the calculation of total uncertainty was done correctly.				
Comment: Below 10% threshold, so total uncertainty is zero.					

The validation/verification team must state with reasonable assurance that discrepancies between emissions reductions/removal enhancements claimed by the Project Proponent and estimated by the VVB be immaterial (less than the materiality threshold of +/- 5%). The equation below is used to calculate the percent error in an emission reduction assertion.

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

Percent error $= \dfrac{[76{,}324 - 76{,}324]}{76{,}324} \times 100 = 0.000\%$

Project ERTs – Verifier ERTs (tCO2e)	Verifier ERTs (w/o buffer deductions) (tCO2e)	Calculated Materiality %
0	76,324	0.000%

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 the same as the PP's calculation using their quantified parameter values. The Materiality Calculation shows the project has no materiality (0.000%). 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 **76,324 tCO2e** for the Reporting Period of 6/7/2021 to 3/31/2022.

Vintage Year	Total ERTs (tCO$_2$e)	Total ERTs to Buffer Pool (tCO$_2$e)	ERTs Net (tCO$_2$e)
2021	53,273	11,721	41,552
2022	23,051	5,071	17,980
Total for RP1	76,324	16,792	59,532

S&A has also verified removals and other ERTs, which is summarized in the table below for the Reporting Period of 6/7/2021 to 3/31/2022. Removals are calculated based on equation 24 within the *ACR Errata and Clarifications v1.3* (April 2022). They are defined as "*The mass of GHGs removed from the atmosphere over a specific period relative to an approved baseline. In the context of this methodology, removals are carbon stock changes resulting in sequestration attributable to the with-project scenario*".

Vintage Year	Total ERTs (tCO$_2$e)	Other ERTs (tCO$_2$e)	Removals (tCO$_2$e)
2021	53,273	21,621	31,652
2022	23,051	9,356	13,695
Total for RP1	76,324	30,977	45,347

Appendix A: Reference List

Project Proponent Documents & References

Description	Filename
Listing	ACR Project Listing_Whiskey_22Dec2021_Submit.pdf
GHG Plan	GHG Plan_Whiskey_IFM_v2.2_Final_20Dec2022.pdf
	Appendix A_Whiskey GHG Plan_Inventory Strata Plots_9Dec2022.pdf
	Appendix B_Whiskey GHG Plan_EFM_CarbonCruise_Protocol_NorCal_v4.0_20Dec2022_FINAL.pdf
	Appendix C_Whiskey GHG Plan_ERT worksheet_9Dec2022.xlsx
Monitoring Report	EFM_Whiskey_RP1 Monitoring Report_v2.1_Final_20Dec2022_signed.pdf
	Appendix A_Whiskey_Monitoring Report_RP1_ACR_ERT worksheet_09Dec2022.xlsx
	Appendix B_Whiskey_Monitoring Report_ACR Risk Analysis_Buffer Calculation_20Dec2022.pdf
Property Deeds-Ownership	EF II Grant Deed.PDF
	EF II to WW Grant Deed. PDF
	Whiskey_LEGAL DESCRIPTION.docx
	Siskiyou County_ACREAGE FOR WILDCAT WHISKEY LLC.xlsx
	SRH_TRS_Map.pdf
	Whiskey Parcels & Map.pdf
Conservation Easement	Whiskey CE_EFM_Recorded Dec 2020.pdf
Forest Management Plan/Certification	Whiskey Forest Management Plan Final.pdf
	FM_CRT_EcotrustForestManagement_073020.pdf
GIS Files	GIS_Whiskey_112922.gdb
	Whiskey_SHMZ.shp
	Calfire_buffers_byUnit_110822 — Calfire_buffers_Whiskey_110822.shp
	Calfire_buffers_Whiskey_110822.shp
	EFM_Whiskey_SamplePoints_Final_Strat.shp
	EFM_Whiskey_SiteIndex_Overlay2.shp
Inventory	EFM_CarbonCruise_Protocol_NorCal_v4.0_20Dec2022_FINAL.docx

	EFM_Whiskey_Inventory Calcs & Stats_01Dec2022.xlsx
	EFM_Whiskey_Fishnet_WGS84_JWF_20221104.shp
	SystematicSamplingGISworkflow_2022.docx
	EFM_ScottRiver_StratificationMethods_20220211.docx
	PP Responses to Stratification Questions_08July2022.docx
	EFM_Carbon Inventory_Whiskey_FINAL_05Dec20211.accdb
	Inventory Documents\Inventory Plot Information
	Inventory Documents\Check Cruise
	EFM_Plots in Slivers Due to Boundary Expansion_11Dec2022.docx
	EFM_WalkthroughResponses_03Dec2022.docx
	i-Tree Canopy_Shack_20221013.pdf
Modeling	Modeling\FVS_Modeling
	Modeling\NPV_Modeling
	EFM_Whiskey_Degrow_Steps.docx
	EFM_Whiskey_LP_Formula Explanation.docx
	EFM_Whiskey_Model_Files_Directory.docx
	EFM_Whiskey_Site_Index Explanation.docx
	EFM_Whiskey_Site_Index.xlsx
	EFM_Whiskey_Site_Index_03Dec2022.xlsx
	EFMCA_Whiskey_Baseline_RP1.gms
	EFMCA_Whiskey_Baseline_RP1.lst
	EFMCA_Whiskey2_Baseline_RP1_Management_Breakdown.txt
	EFMCA_Whiskey2_Project_RP1_Management_Breakdown.txt
	SRV_Project Baseline Modeling_No Harvest Constraints_28Nov2022_FINAL.xlsx
	PPI_Forest_Cost_Inflator_DataFinder-20221129022310.xlsx
Other Documents	EFM_Forest Carbon Projects_Organizational Chart_10April2022.docx
	EMF_LC Carbon_Consulting Services Contract_07June2021_signed.pdf
	EFM_Carbon_Stream_Letter_110422
	mr225_sppsz_2017_aa.pdf (LEMMA – GNN Accuracy Assessment Report-Release Version:2020.1)

Data Sources	2022-fpr-and-fpa_ada.pdf (California Forest Practices Rules)
	Conversion_Factors_gtr_srs251.pdf
	Ecotrust FSC v BAU forestry study.pdf
	https://open-data-siskiyou.hub.arcgis.com/
	https://www.co.siskiyou.ca.us/gis/page/siskiyou-county-open-data
	https://forest-practice-calfire-forestry.hub.arcgis.com/search?tags=forest%20practice%20hydrology%20ta83
	www.canopy.itreetools.org
	www.USFW_NWI.gdb

Verifier Documents

Document Description	Filename
Project Specific COI Form	ACR733_COI Form.docx
Validation/Verification Plan	ACR733_Whiskey_Validation-Verification Plan.docx
Sampling Plan	ACR733_Whiskey_Validation-Verification Sampling Plan.docx
Data Check Log	ACR733_DataCheckLog_20Jan2023.xlsx
Issues Log	ACR733_Whiskey_IssuesLog_v2.1_30Dec2022_Closed.docx
Site Visit t-Test	ACR733_Whiskey_T-Test Worksheet_22June2022.xlsx

Appendix B: Issues Log

Verifier Issue	Issue ID:	22-1	Status:	<mark>Closed</mark>	Checked by:	MD	Date Identified	20-Sep-22

ACR Standard ref	GHG Plan Section	Significance	Issue Description	Comments
ACR Standard (A.3.2)	GHG Plan, Section B3	New information request. *May impact conformance; no materiality*	Verifiers find in T 42N R9W section 8 (near Patterson Creek on the eastern portion of the project area), the project boundary in the southern section may be too far south as it includes a building and several building lots that are within the project areas. These appear to be owned by others and should be removed from the project area. Please review and make corrections as needed.	*EF II to WW Grant Deed.pdf* *EFM_Whiskey_Boundary.shp*
			November 16, 2022 Findings Verifiers reviewed the PP's changes to the project boundaries in T42N R9W Section 8 and agree with the adjustment of the southern project boundary which now shows the building areas outside the project area. As a result, this issue is closed.	*Project_boundary_02Nov2022.zip* https://open-data-siskiyou.hub.arcgis.com/

PP Response			
Date	**PP Comment**		**Additional evidence submitted for review by PP**
7-Nov-22	PP reviewed the project boundary around the area of the buildings. The lot line appears obvious on Google Earth imagery (2022) north of original project boundary line; thus, the project boundary was revised to move the project boundary north to the obvious lot line. The result of this revision removed 3.68 acres from the Project Boundary. As the result of consultation with ACR and the Verification Body, the PP is now using the Siskiyou County tax lot GIS layer as the data source to define the spatial boundaries of the tax parcels owned EFM. All tax lots owned by EFM were confirmed by referencing Siskiyou County tax lot data.		*Project_boundary_02Nov2022.zip* https://open-data-siskiyou.hub.arcgis.com/

Verifier Issue	Issue ID:	22-2	Status:	<mark>Closed</mark>	Checked by:	MD	Date Identified	20-Sep-22

ACR Standard ref	GHG Plan Section	Significance	Issue Description	Comments
ACR Standard (A.3.2)	GHG Plan, Section B3	New information request. *May impact conformance; no materiality*	Verifiers find in T 42N R10W, section 12 the curved boundary line at the northwest corner of the out lot does not follow a road as stated in the deed. The deed states the boundary follows a road ROW. Please review and make corrections as needed.	*EF II to WW Grant Deed.pdf* *EFM_Whiskey_Boundary.shp*

			November 16, 2022 Findings	Project_boundary_02Nov2022.shp
			Verifiers reviewed the PP's revised project boundary in T42N, R10W, Section 12 and find the updated boundary does not completely follow the measurements given in the deed description. However, it is now closer to matching a road visible on the Google imagery. It appears a few of the deed measurements were adjusted to fit the imagery and nothing short of a survey is going to make the irregular project boundaries in this location more accurate. The PP's project area adjustment is reasonably accurate based on the deed description, tax map and aerial imagery assessment. Verifiers believe further boundary adjustments are not warranted and would result in a minor acreage change (<0.2 acres), which verifiers deem as low risk for materiality. This issue item is closed.	
			Verifiers find the revised project boundary has created two new conflicts relative to buildings or building areas within the project area. The first area is on the east side of the out parcel in T42N, R10W, Section 12. This being the same out parcel where the road boundary adjustment above was made and where the Patterson Creek Rd enters the out parcel. Looking at the November 2 project boundaries over aerial imagery (Google Earth, NAIP CA 2020), there are several buildings now inside the revised project area.	
			The second area is in T41N, R9W, Section 5 where the Sawyer Bar Rd enters the project area. On the aerial images there appear to be buildings and building areas within the new project area, both on the north and south sides of the Sawyer Bar Rd. In both locations the buildings and building areas appear to be owned by others and should be removed from the project area. Please review and make corrections as needed.	
			December 5, 2022 Findings	*Whiskey_112922.gdb (project boundary layer)*
			Verifiers reviewed the updated spatial data for the project boundaries near the building areas on the east side of the out parcel in T42N, R10W, Section 12 and where Sawyers Bar road enters the project area. In both locations the project boundaries have been adjusted so that these building areas are now outside the project area. This issue is closed.	

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
7-Nov-22	PP agrees that the section 12 curved boundary does not accurately follow the road as stated in the deed. The project boundary was revised to flow the legal description. The result is that 1.73 acres were removed from the project boundary.	
	December 3	*Whiskey_112922.gdb* (Project Boundary layer)

The project boundary was adjusted to remove the buildings on the east side of the out parcel in T42N, R10W, Section 12. In addition, the project boundary was adjusted to remove the buildings near where Sawyers Bar road enters the project area.	

Verifier Issue	Issue ID:	22-3	Status: Closed	Checked by: BS/MD	Date Identified 7-Sep-22
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**		**Comments**
IFMv1.3 (D1); Standard (2A)	GHG Plan (E1)	Possible non conformance. *May impact materiality or conformance.*	As summarized in the Stratification Methods, the PP utilizes LEMMA data (https://lemma.forestry.oregonstate.edu/) along with Nearest Neighbor (NN) imputation methods to stratify the project area. Specific inputs used included forest cover, basal area and DBH criteria. In reviewing the aerial imagery (CA NAIP 2020) verifiers noted some relatively large non forest areas (>10 acres). Verifiers spatial data is attached to show some examples of the spot checks of the non-forest areas observed (*NFareas_Whiskey*). Based on the stratification spatial data these example areas were accurately classified as "no veg" or "sparse" (raster values from LEMMA) and assigned to Strata 1 (Low Stocking) as shown in the Stratifications Methods. While verifiers agree these areas are low stocking, they do appear to be relatively large non forest areas that may never support tree growth due to site conditions (elevation, aspect, soil, etc.). Based on the existing non forested condition and the ACR Standard for conservatism, verifiers believe these larger non forest areas should be removed from the project area. Please review and revise as appropriate or provide supporting documentation to justify including these areas. Also, during the July 2022 model review call with the PP, verifiers requested clarifications on the stratification method, which the PP provided (Response to Stratification questions). Verifiers understand the PP used a 1-acre sieve function to smooth out forest classifications for stratification at the micro scale (30m X 30 m pixels). While this explains the process on the micro scale, verifiers question the stratification process on the macro scale level; did the PP assess these larger non forest features such as wet meadows, grasslands, or rocky outcrops? Some of these non-forest features have also been documented in the Whiskey Forest Management Plan (pg 15, Table 5) which summarizes		*GHG Plan_Whiskey_IFM_v1.1_17June2022* *EFM_ScottRiver_StratificationMethods_20220211* *EFM_Whiskey_Stratification.shp* *PP Responses to Stratification Questions_08July2022* *S&A: NFareas_Whiskey_9-2022.shp*

			vegetation types within the project areas including non-forest areas (e.g., grasslands, barren, other). Verifiers believe these larger non-forest areas should be excluded from the project area as they do not contain forestlands and do not contribute to the project's forest carbon stocks. Please review, clarify, and revise as needed.	
			November 16, 2022 Findings Verifiers understand the PP is including low stocked (<10% forest cover) and non-forest areas (e.g., wet meadows) within the project area as these vegetation cover types can be included because the project area as a whole meets the forestland definition as specified in Section A1 of the ACR IFM v1.3 (i.e., meets the 10% stocking requirements, in aggregate, over the entire area). The PP has also provided supporting evidence that the entire project area meets this forestland definition (i.e., iTree Canopy results showing the project area is 95% forestland).

Verifiers acknowledge the PP's inventory design accounts for non-stocked and low-stocked areas in a statistically sound manner by using a systematic grid; all cover types within the project area had equal probability of being selected for sampling. And that the project area was post-stratified and the associated inventory sampling error would be reflected in the uncertainty calculations in estimating the project stocks. Verifiers also understand the IFM methodology, Section D1, does not require stratification nor does it specify *ex-ante* stratification for projects that are post-stratified.

To be clear, verifiers are not questioning whether the project area contains greater than 10% forestland nor whether the inventory design is statistically sound. Rather, verifiers are assessing whether the PP's approach of including some relatively large non-forest areas (>5-10 acres), some of which have been documented in the landowner's forest management plan (e.g., grasslands) and are also visible on aerial imagery, meets the Guiding Principles for GHG Accounting (ACR Standard v7.0; A.2). All principles are relevant here, but verifiers are primarily concerned with the Conservatism Principle:

"Use conservative assumptions, values, and procedures to ensure that GHG emission reductions or removal enhancements are not overestimated."

This principle is also further highlighted for VVBs in the ACR Validation & Verification Standard (v1.1, Chap 5 and Chap 9). | *Scott River Headwaters PMP Draft – Public*

Whiskey Forest Management Plan Final

canopy.itreetools.org

i-Tree Canopy_Whis_20221014.pdf

VB:
FIA, National Core Field Guide, Vol 1, v9.2

https://www.fia.fs.usda.gov/library/field-guides-methods-proc/docs/2022/core_ver9-2_9_2022_SW_HW%20table.pdf |

The project area contains some relatively large non-forest areas (grasslands, barren, unclassified) as listed in Table 5 of the 2020 Whiskey Property- Forest Management Plan (pg 15):

Table 5. Vegetation Types (CALVEG)

Vegetation Type	Acres	% Total
Annual Grassland	121	0.6
Barren	7	0.0
Douglas Fir	3,972	21.1
Klamath Mixed Conifer	6,394	34.0
Mixed Chaparral	116	0.6
Montane Chaparral	2,029	10.8
Montane Hardwood	115	0.6
Montane Hardwood-Conifer	2,126	11.3
Montane Riparian	5	0.0
Ponderosa Pine	817	4.3
Red Fir	1,459	7.8
Sierran Mixed Conifer	21	0.1
Subalpine Conifer	35	0.2
White Fir	1,586	8.4
Unclassified	51	0.3
Total	**18,854**	

Some of these areas are not likely to support tree growth during the crediting period (e.g., grasslands) or may be shrub dominated areas (e.g., chaparral). Because of this, verifiers are not reasonably assured the PP's approach to estimating project stocks complies with the conservatism principle. Verifiers believe these non-forest areas should not be included in estimating project stocks and should be removed from the project area. Verifiers recognize some of these areas (identified within the management plan or the verifiers' aerial imagery spot checks of vegetation types within the project area), may be classified non-productive but still be considered forestland as described below.

To gain clarity on the definition of forestland noted in the ACR IFMv1.3, verifiers met with ACR staff on November 14, 2022. We understand this definition stems from the FIA National Core Field Guide, which uses condition classes to define cover types including forestlands. For forestlands, the FIA Guide (v9.2, Section 2) notes the following:

"*Forest Land has at least 10 percent canopy cover of live tally tree species of any size or has had at least 10 percent canopy cover of live tally species in the past, based on the presence of stumps, snags, or other evidence.*"

"*To qualify as forest land, the prospective condition must be at least 1.0 acre in size and 120.0 feet wide measured stem-to-stem from the outer-most edge. Forested strips must be 120.0 feet wide for a continuous length of at least 363.0 feet in order to meet the acre threshold. Forested strips that do not meet these requirements are classified as part of the adjacent nonforest land.*"

Additionally, as the PP notes, the ACR forest land definition is:
"*Forest land is defined as land at least 10 percent stocked by trees of any size, or land formerly having such tree cover, and not currently developed for non-forest uses. Land proposed for inclusion in this project area shall meet the stocking requirement, in aggregate, over the entire area*".

Based on our recent discussions with ACR and review of the FIA's specifications, verifiers believe the word "in aggregate" may be a source for misinterpretation. Verifiers understand the intention of "in aggregate" is to include lands that meet the FIA forest land specification (condition class of >1 acre and 120 ft wide), which also includes the lands that once met this definition and were forested. As shown on recent aerial imagery, the Whiskey project area contains areas that were recently harvested (southern area of Section 16). These harvest units currently have limited forest cover but contain stumps and snags. Verifiers' understanding is that these are the types of areas that are suitable to be aggregated- they were capable of growing trees ("formerly having such tree cover").

As noted, the ACR forest land definition excludes areas not currently developed for non-forest uses (e.g., pasture lands). Based on the FIA's definition of condition class for forest land, verifiers understanding is that other project area lands such as grasslands that do not meet the specifications were not intended to be aggregated in forest land cover estimates.

As mentioned, verifiers concur with the PP that the project area meets the ACR eligibility standard for forest cover (>10%). We differ, however, in that lands that are relatively large in area (>5 acres), which do not meet the FIA forest land condition class, are being included within the project area to estimate project stocks. Regardless of if the project is stratified (pre or post inventory), the inclusion of such lands does not satisfy the conservatism

				principle in estimating GHG emissions reductions/removals and should be removed from the project area.	
				December 12, 2022 Findings Verifiers acknowledge the PP has revised the project area based on identifying and removing non-forest areas. Verifiers understand the PP completed a systematic review and utilized the landowners GIS spatial data of previously delineated special habitat management zones described in the property's management plan, which is referenced in the conservation easement. While the identification and delineation of the non-forest lands is subjective, verifiers believe the PP's approach is reasonable and conservative; and has been comprehensively reviewed and assessed, and accurately implemented in removing non-forest lands within the project area. Verifiers concur with the revised project area spatial data; this issue is now considered closed.	*Whiskey_112922.gdb* (Project Boundary layer) *Whiskey_SHMZ.shp*

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
7-Nov-22	It is the project development team's opinion that it is allowable and statistically sound to include areas of low stocking in the project areas. It is also the project development team's understanding that the inclusion of non-forest areas is allowable under ACR IFM v1.3, given that the project area meets the definition of "forestland" in section A1 of the methodology. This definition states: "Forest land is defined as land at least 10 percent stocked by trees of any size, or land formerly having such tree cover, and not currently developed for non-forest uses. Land proposed for inclusion in this project area shall meet the stocking requirement, in aggregate, over the entire area". To demonstrate that the project area qualifies as forestland as defined by ACR IFM v1.3, iTree Canopy (canopy.itreetools.org) was utilized to estimate tree cover across the project area. iTree Canopy randomly allocates points within a defined polygon and allows the user to determine if the area is forest or non-forest. Three hundred points per project area were randomly assigned, and the max zoom extent was considered as the area of concern: if the area contained approximately >=10% canopy cover, it was called forestland; if not, it was called non-forestland. Results of the iTree Canopy exercise indicate that the Whiskey project area is 95% forestland. Thus, this project area meets the definition "forestland" in aggregate as defined by ACR IFM v1.3. iTree Canopy reports and project files are being made available to the Verification Body as part of the PP's response support documents. The inventory design accounts for non and low-stocked areas in a statistically sound manner. The inventory was designed as a systematic grid and was post-stratified; thus, every acre of the property had equal probability of selection for sampling, regardless of stocking. Therefore, all stocking levels are statistically accounted for in the inventory and are reflected in the baseline and with-project scenarios. The project areas were post-stratified using LEMMA data and stream/conservation easement buffers. It is the project development team's understanding that the ACR IFM v1.3 methodology does not require *ex-ante* inventory	*canopy.itreetools.org* *i-Tree Canopy_Whis_20221014.pdf*

stratification, nor does it prescribe how *ex-ante* stratification is to occur if implemented. Since the inventory was post-stratified, the goodness of fit for the stratification is reflected in the uncertainty calculations: if the stratification did not align with measured plot data, then uncertainty would be inflated. Since the results of the post-stratified inventory were within +/-10% of the mean at 90% confidence, the inventory stratification was deemed to be sufficient.

December 3

A review of the property within the project boundary was completed to evaluate the issues raised in this finding. As a result of this review, the PP removed the acres deemed to be non-forest land. Our focus on removing non-forest land was in instances where no trees (i.e. exposed rock outcrops and barren areas) or evidence of trees (i.e. dead timber and/or stumps) are present through review of aerial imagery. We concur some "non-productive" land identified in the Forest Management Plan meets the definition of forestland, so these acres were not removed. The process of identifying and removing non-forest areas is very subjective; however, we completed a systematic review of the entire project area, including the use of an EFM internal GIS layer of proposed special habitat management zones (SMHZs) – NSO core habitat - that are contained in the CE.

Whiskey_112922.gdb (Project Boundary layer)

Whiskey_SHMZ.shp

Verifier Issue	Issue ID:	22-4	Status:	Closed	Checked by:	MD	Date Identified	20-Sep-22

ACR Standard ref	GHG Plan Section	Significance	Issue Description				Comments
IFM (B4)	GHG Plan Section B5	Clarification. *May impact conformance; no materiality*	Verifiers checked the California Department of Tax and Fee Administration stumpage value table used as a source for prices in the Implementation Barrier analysis in the June 17, 2022 GHG plan document. The prices for species OA and OT could not be found in the California stumpage tables. Please explain the source for these prices. Verifiers see the management cost inputs used in the modeling, however, see no source for those costs. Please explain how these costs were derived and sources if applicable.				*GHG Plan_Whiskey_IFM_v1.1_ 17June2022*
			November 16, 2022 Findings Verifiers reviewed the PP's explanation and confirmed the source of stumpage prices for species OA and OT, from Table 1 – Miscellaneous Harvest Values in the California Department of Tax and Free Administration June 20, 2021. Verifiers also reviewed the referenced Winn document for cord to MBF conversion factors. Verifiers were able to derive several cord to MBF conversion factors using values in Tables 7 and 15; we concur with the PP in using a price of $10/MBF for OT and $20/MBF for OA are conservative values. This part of issue is closed.				Reference – *Diaz, D.D, S. Loreno, G.J. Ettl, and B. Davies. 2018. Tradeoffs in Timber, Carbon, and Cash Flow under Alternative Management Systems for Douglas-Fir in the Pacific Northwest. Forests 2018(8): 447; doi:10.3390/f9080447* *Winn et al (2020). Timber products monitoring: unit of measure conversion*

| | | | The verifier has reviewed the source given for the management costs assumptions. Although the source is sound, the prices (2018) are a little outdated. The verifiers believe more up to date prices or an adjustment to the 2018 prices is warranted. Please review an update as appropriate. | *factors for roundwood receiving facilities. E-Gen. Tech. Rep. SRS-251. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 148 p* |
| | | | **December 12, 2022 Findings** Verifiers reviewed the source (U.S. Bureau of Labor Statistics Producer Price Index (PPI) monthly series for the logging industry) and calculation of the inflation factor for the management costs from 2018 to June 2021 as described by the PP. Verifiers find this approach reasonable. Verifiers acknowledge the PP has also included a description on how the management costs were adjusted in the revised GHG Plan and within the associated NPV modeling documents. Verifiers are satisfied with the revisions and this issue is now closed. | *GHG Plan_Whiskey_IFM_v2.0_ 11Dec2022.pdf*

PPI_Forest_Cost_Inflator_DataFinder-20221129022310.xlsx

NPV modeling folder |

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
8-Nov-22	In the absence of Green Timber stumpage prices (Table G), we had to improvise and use Miscellaneous Harvest Values (Table 1) for the Other (OT) and Oak (OA). We assume the fuelwood, miscellaneous price for OT and fuelwood, hardwood price for OA. No consistent conversion between mbf and cords exists for western species, so we assume a conservative conversion factor of 1 cord per mbf and subsequently a price of $10/mbf for OT and $20/mbf for OA. Reference – *Winn et al. (2020) is the USFS TPO conversion factor compendium and while it has 0.42 mbf per cord for hardwood and 0.415 mbf per cord for hardwoods for all southern states and 0.52 and 0.5 mbf per cord in the northern states, no such conversion is listed for western states.* *Winn, Matthew F.; Royer, Larry A.; Bentley, James W.; Piva, Ronald J.; Morgan, Todd A.; Berg, Erik C.; and Coulston, John W. 2020. Timber products monitoring: unit of measure conversion factors for roundwood receiving facilities. E-Gen. Tech. Rep. SRS-251. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 148 p.* Verifiable sources for costs are hard to come by so in the revised modeling we will use $5/mbf for harvest administration, $15/mbf for road maintenance, $85/acre for site preparation, $318/acre for planting (0.73/tree and 436 tpa, and $135/acre for brush control. These values come from Table 3 of Diaz etal (2018). Reference – *Diaz, D.D, S. Loreno, G.J. Ettl, and B. Davies. 2018. Tradeoffs in Timber, Carbon, and Cash Flow under Alternative Management Systems for Douglas-Fir in the Pacific Northwest. Forests 2018(8): 447; doi:10.3390/f9080447* **December 3** Management costs were based on Diaz et al. (2018) Table 3 values. These costs do not have a temporal basis so we assumed that they would be similar to the log price values of Table 2 which were noted to be from February 2018. To adjust the costs from February 2018 dollars to that of the project start date (June 2021) we use the U.S. Bureau of Labor Statistics Producer Price Index (PPI)monthly series for the logging industry titled: "PPI industry data for Logging, not seasonally adjusted". The data utilized can be found in the "PPI_Forest_Cost_Inflator_DataFinder-	*GHG Plan_Whiskey_IFM_v2.0_11Dec2022.pdf* *PPI_Forest_Cost_Inflator_DataFinder-20221129022310.xlsx*

20221129022310.xlsx"spreadsheet. To inflate the February 2018 dollars to June 2021 we simply take the February 2018 PPI value of 207.0 and divide by the June 2021 PPI value of 214.5 giving an inflator of (207.0/214.5) or 1.036231884 as found in cell F6 of the worksheet.

To use the value, we multiply the original February 2018 cost values by the 1.036 inflator to provide a more up-to-date cost estimate for use in the NPV calculations.

See files in *NPV modeling* folder

Verifier Issue		Issue ID:	22-5	Status:	Closed		Checked by:	BS/MD	Date Identified	5-Sep-22
ACR Standard ref	**GHG Plan Section**	**Significance**		**Issue Description**					**Comments**	
IFM v1.3(B4)	GHG Plan (E.1.3)	Clarification. *May impact materiality or conformance.*		In reviewing the project's stratification of Strata 6 (RMA), verifiers are trying to ascertain the process used to delineate this stratum. Based on the GHG Plan (Sections B5, E.1.1, E.1.3), supplemental *Stratification Methods* document, and discussions with the PP, verifiers understand Strata 6 incorporates the legal constraints due to the 2020 California Forest Practices Rules (WLPZ-Watercourse and Lake Protection Zones) and those within the proposed conservation easement (SHMZ-special habitat management zones).					*EFM_Whiskey _Stratification.shp* *EFM_ScottRiver_StratificationMethods_20220211* *Whiskey CE_EFM_Recorded Dec 2020* *GHG Plan_Whiskey_IFM_v1.1_17June2022* *S&A: Whiskey_Issue_22-5_15Sept2022 California_Streams_shp (CA F&W)*	
				To help assess stream locations, verifiers reviewed the publicly available California Fish and Wildlife stream spatial data and found discrepancies with the project's RMA strata locations. Attached is an example of the discrepancies observed (*Whiskey_Issue_22-5_15Sept2022*). Verifiers are seeking further clarification on the PP's process along with supporting documents that allow us to verify and validate that the noted legal constraints have been appropriately applied to the delineation of Strata 6.						
				More specifically, please address the following:						
				1) Did the PP use a spatial data set to delineate stream locations? If so, please provide the dataset used. If not, please explain.						
				2) How were the SHMZ areas defined and delineated? Is there a spatial data source that was used? In the Stratification Methods description document, there is reference to *FinalShack_WhiskBuffs02182022.shp* but that file was not provided. Please provide the spatial data set used along with the attributes that correlate to the conservation easement constraints so that verifiers can track data to its source.						

3) What spatial data set was used to define the various watercourse classes (Class I-IV) that were used to delineate the required WLPZ to comply with the California Forest Practice Rules (Article 6; § 916.5, 936.5, 956.5)? Please provide the WLPZ used for the associated watercourse classes (i.e., buffer width sizes).

4) According to the California Forest Practice Rules (Article 6; § 916.4, 936.4, 956.4), the WLPZ is measured from the "Watercourse Transition Line". As there are numerous streams and associated sizes within the project area, how did the PP account for these various channel widths in determining the WLPZ?

5) The GHG Plan provides a map showing streams, water bodies and wetlands (Section B3, Figure 4). The wetlands data appears to reflect the US Fish & Wildlife Service's National Wetlands Inventory source data (NWI). Is that correct?

   1. While some of the NWI's mapped wetlands are within Strata 6 boundaries, a portion of them is outside of it. The second screenshot within the provided *Whiskey_Issue_22-5_15Sept2022* shows an example of the discrepancies observed. Please clarify if Strata 6 incorporates these NWI wetlands and explain differences if they do.

6) Whiskey Creek Management Plan notes some special management areas with high conservation value forest (pg 32, Riparian & Other Special Management areas). While these appear to pertain to riparian management areas, verifiers seek clarification if there are other HCVF areas such as NSO habitat or coho stream recovery areas within the project areas that should be included in Strata 6 (RMA).

7) While it is inferred that the RMA is Strata 6 in the submitted *Stratification Methods description* document (item #2), please revise this item to add clarity on what stratum RMA represents.

Please review and revise the project documents as appropriate to address and clarify these items and incorporate a more detailed description on the process used in the defining and delineating Strata 6 (RMA).

| | | | **November 17, 2022 Findings** | https://forest-practice-calfire-forestry.hub.arcgis.com/search?tags=forest%20practice%20hydrology%20ta83 |
| | | | 1.) Verifiers understand the PP had previously delineated stream locations and associated classes based on the spatial dataset from the previous | |

| | | | landowner(s) and is now switching to a public dataset (CalFire). The PP has clarified and provided the requested spatial data set; this issue item is now closed. | *Calfire_buffers_byUnit_110822 — Calfire_buffers_Whiskey_110822.shp* |
| | | | | |

landowner(s) and is now switching to a public dataset (CalFire). The PP has clarified and provided the requested spatial data set; this issue item is now closed.

2.) Verifiers are seeking clarifications on the process used to define and delineate Strata 6 and how legal constraints were addressed and incorporated into the baseline model. The PP states the High Conservation Value Forests (HCVF) and NWI wetlands are primarily located within stream buffers and these buffered areas were determined based on the applicable California Forest Practices Rules for the project's stream classes (i.e., WLPZ). Verifiers now understand the basis for determining stream classes and delineating the associated and required WLPZ (issue item 1 above) that have been incorporated as a legal constraint in the baseline modeling.

Verifiers, however, are not clear on how HCVF areas (e.g., spotted owl core habitat areas) and conservation easement restrictions are being addressed within the baseline modeling of the legal constraints. While the GHG Plan (pg 23) does note the conservation easement restricts harvest in SHMZ and RMZs, the spatial data for the HCVF areas (i.e., NSO, wetlands) has not been provided to allow the verifiers to confirm the legal constraints are being addressed to comply with the IFM Standard (baseline modeling).

To close this issue item, verifiers request the following be incorporated into the appropriate project document: (1) detail descriptions on the assumptions, source documents & data and methods utilized in delineating Strata 6 and (2) the same information for how the PP is addressing potential legal constraints for the baseline model associated with HCVF areas, wetlands, and conservation easement restrictions.

Verifiers recognize the process used to determine the SMHZ for Strata 6 has changed. If the previously requested document spatial data (*FinalShack_WhiskBuffs02182022.shp*) is revised, please provide.

3.) Verifiers acknowledge and accept that the PP is using the CALFIRE stream spatial data in determining the water course classes and buffer widths necessary for complying with the California Forest Practice Rules (CA CFR Article 6; § 916.4, 936.4, 956.4). Buffer widths for Class 1 (150'), 2(100'), and 3 (25') streams were found to be conservative.

Spatial data references (right column):

Calfire_buffers_byUnit_110822 — Calfire_buffers_Whiskey_110822.shp

Project_boundary_02Nov2022.shp

EFM_Carbon_Stream_Letter_110422

EFM_ScottRiver_StratificationMethods_20220211

Whiskey CE_EFM_Recorded DEc 2020

GHG Plan_Whiskey_IFM_v1.1_ 17June2022

<u>S&A</u>:
ACR733_Whiskey_Issues Log_22-5(8).pdf

USFW_NWI.gdb

The PP has provided input from a California Registered Professional Forester for recommendations in classifying the unclassified CalFire perennial and intermittent streams within the project area. Verifiers find the approach reasonable, representative, and conservative. As with item 2 above, this issue item remains open until a description on this process has been added to the appropriate project document(s).

4.) Verifiers acknowledge the PP is assuming CA FPR's most conservative buffer widths for all stream classes to compensate for the other buffer-sizing parameters that vary between streams within the project area (i.e., channel widths (WTL) and the hillside slopes). Based on site visit observations on channel widths & topography, verifiers find these assumptions adequately and conservatively address the required WPLZ in complying with the California Forest Practice Rules (Article 6; § 916.4, 936.4, 956.4). This item remains open until a description on this process has been added to the appropriate project document(s).

5.) The PP indicates only CalFire stream data was used in the delineation of Strata 6 and that most of the USF&W's NWI wetlands are contained within Strata 6. The GHG Plan (Figure 4, pg 18) provides a map showing the wetlands within the project area (based on NWI source data). Verifiers agree that some of these wetlands may not be accurately mapped and need to be confirmed by on-site visits. Unless the PP has supporting field evidence that shows these wetlands do not exist or have not been accurately mapped, verifiers believe the conservative approach would be to include them in Strata 6 until proven otherwise. The PP's 2020 Forest Management Plan (FMP) acknowledges their presence (pg 13):

"The *National Wetland Inventory shows 366 acres of wetlands on the Property, with the highest concentration occurring along the lower part of Patterson Creek. Much of this wetland (74%) is classified as Riverine Wetlands. Remaining wetlands are Freshwater Forested Shrub based (25%). Freshwater Pond and Freshwater Emergent Wetland (combined 1%)*

Verifiers agree that most of these wetlands are associated with riverine systems and are within the existing stream's WLPZ. There are also some wetlands associated with streams that are outside the WPLZ (e.g., lower Patterson Creek). Further, as noted in the FMP, there are ~91 acres of forested/shrub wetlands (25% of the total) that maybe outside of the WLPZ as well.

While these wetlands do not require a WLPZ according to the CA FPR, verifiers request clarification if the Conservation Easement (CE) requires any legal constraints (e.g., harvesting) to be incorporated within the baseline model as implied in the GHG Plan (pg 23 – "*.. the baseline modeling includes a constraint which prohibits any harvest within all Riparian Management Zones (RMZs) and all Special Habitat Management Zones (SHMZs) contained in the conservation easement recorded on December 31, 2020*.). Are wetlands included in the SHMZs?

Also, the FMP describes management strategies for water resources (pg 3) describing "…buffering streams and wetlands". The CE additionally notes Conservation Values of the Property where wetlands are included (pg 2, (F) and (H)). Is buffering of wetlands needed to meet the Conservation Purpose of the CE?

Lastly, the NWI spatial data also shows a small number of freshwater ponds within the project area, to comply with the CA FPR, verifiers believe these water resources would need a WLPZ and be included as a baseline model legal constraint. Please review and update as appropriate.

6.) Verifiers confirmed that the majority of High Conservation Value Forests' acreages are along stream courses and have been included in stream buffers as stated by PP (Strata 6). Verifiers understand the NSO core habitats, a HCVF area, that is not being included in Strata 6, has been incorporated into the baseline model as a voluntary constraint (no harvesting). In the Forest Management Plan, the PP states NSO core habitats are comprised of 17 acres (Whiskey HCVF Map 9, Page 50 FMP). Verifiers are finding it difficult to confirm the acreages associated with this and other non-stream related baseline legal constraints within the project documents. Verifiers request a spatial dataset that includes all the baseline constraints that have been modeled so that we are able to confirm spatial alignment and acreages associated with the various constraints such as the NSO core habitat areas.

7.) As mentioned in other issue items, when these items are resolved, please provide an updated *Stratification Methods description* that includes the methods and source data used to delineate Strata 6 (RMA) and an updated GHG Plan (baseline modeling) that includes the methods, source data, and supporting references/documents for the baseline constraints.

8.) Verifiers reproduced the buffer scenarios outlined by PP and compared the values for each stream class. Once all buffers were dissolved, the VB

				accounted for 4.5 acres in stream buffers that weren't accounted for by the PP. These appear to be buffers extending into the project area for streams outside the project area. A screenshot is attached for reference *(ACR733_Whiskey_IssuesLog_22-5(8))*. Please review and revise as appropriate.	
				9.) Verifiers reviewed the California Forest Practice Rules (Article 6; § 916.4, 936.4, 956.4) which indicates that springs and domestic water sources should be protected with buffer widths dependent on slope (see Table 1 "Procedures for Determining WLPZ Widths and Protective Measures"). CALFIRE Hydro Point data indicates that there are springs in the project area which have not been accounted for in the buffers layer received from the PP. Please review and revise as needed.	
				December 13, 2022 Findings	*GHG Plan_Whiskey_IFM_v2.0_11Dec2022.pdf*
				(2) The PP has revised the GIS spatial data for stream & spring buffers which are now based on the CALFIRE Forest Practice Hydrological spatial data. The associated buffer width specifications along with descriptive details of the process utilized for delineating Strata 6 have been included in the revised GHG Plan (Section E1.3). Verifiers found the PP's approach to be an accurate and conservative estimate in delineating the associated WLPZ acres for Strata 6 (1,832 acres). Verifiers also confirmed the additional description around the stratification process, assumptions and data sourcing for Strata 6 were incorporated to Appendix C of the updated SOP.	*Whiskey_112922.gdb*
					Whiskey_SHMZ.shp
					EFM_CarbonCruise_Protocol_NorCal_v3.0_11Dec2022_FINAL.pdf
				Within the revised GHG Plan (Section E1.3), the PP has also included the requested descriptive details on the process, along with the supporting spatial data (SHMZ.shp), used to assess potential legal constraints for the baseline model associated with HCVF areas, wetlands, and conservation easement restrictions. Verifiers confirmed acreages presented in the SHMZ GIS layer for Forest Reserve areas; these acreages align with acreages provided in the revised GHG Plan (pg 47, Table 12 Baseline Harvest Constraints – No Harvest Areas) and Map 9 – Whiskey Property HCVF (pg 50) of the FMP. Verifiers find the PP's approach to accurately and conservatively account for the acreages associated with the SHMZ that are now incorporated into Strata 6. This issue item is closed.	*SRV_Project Baseline Modeling_No Harvest Constraints_28Nov2022_FINAL.xlsx*
					NWI_source_detail.JPG
					Whiskey_strata6_and NWI.pdf
				(3) Verifiers confirmed that the description of how unclassified CalFire perennial and intermittent streams were classified and buffered via weighted averages (125' and 51.25', respectively) has been added to the revised GHG Plan (Section E1.3) and Appendix C of the updated SOP. This issue item is closed.	
				(4) Verifiers acknowledge the PP has updated SOP (Appendix C) to include the requested description on the methods used to define the water transition line in complying with the CA FPR for delineating WPLZ along streams. This document	

states the various stream class buffers are based on the steepest slopes (maximum CA FPR buffer distance).   All buffers applied in the creation of the RMA strata are now clearly described and defined in Appendix C of the updated SOP and accurately delineated in the revised spatial data.

Verifiers confirmed the buffer widths described in the GHG Plan and Appendix C of the SOP are consistent with those executed in GIS to form Strata 6 (Class 1- 150', Class 2- 100', Class 3 – 25', Unclassified Perennial-125' and Unclassified Intermittent-51.25'). This issue item is closed.

(5) Verifiers acknowledge the receipt of the revised GIS spatial data. Verifiers confirmed the removal of the non-forested acres associated with wetlands noted in the FMP (Map 13) from the project area.   This approach was found to be reasonable and accurately delineated in the revised spatial data and complies with the CA FPR. This issue item is closed.

(6) Verifiers have reviewed the Whiskey SHMZ GIS layer provided and confirmed the baseline constraint acres for the NSO Core habitat areas (17 acres). In conjunction with the RMA acres alluded to in other issue items, this agrees with the baseline constraint descriptions and acreages in the revised GHG Plan (Table 12) and SOP (Appendix C). This issue item is closed.
                    7.
(7) Verifiers have reviewed Appendix C (Stratification) of the revised SOP (*EFM_CarbonCruise_Protocol_NorCal_v3.0*), which describes the requested criteria used for LEMMA raster categorizations in stratifying the project area. As mentioned in other issue items, the revised SOP includes the previously requested additional descriptive details on the delineation process for Strata 6 (RMA). This issue item is closed.

(8) Verifiers have reviewed the revised strata spatial data and the baseline constraint acreages associated with Strata 6 in the revised GHG Plan (Table 12 Baseline Harvest Constraints – No Harvest Areas).   Required stream buffers extending into the project area for streams outside the project area have now been included in the revised Strata 6 spatial data. Verifiers' checks of these acreages now closely align with the PP's total acreages for Strata 6 (<0.01%). This issue item is closed.

(9) Verifiers have reviewed the revised strata spatial data and the baseline constraint acreages associated with Strata 6 in the revised GHG Plan (Table 12). Verifiers spot checks confirm that CALFIRE hydro point springs spatial data has now been included within Strata 6 and these springs were buffered at 150 ft to comply with the CA FPR. Verifiers acknowledge the PP has described the inclusion of these springs in the RMA

		buffer within the revised GHG Plan and Appendix C of the SOP. This issue item is closed. (10) Verifiers noticed that Table 8 was duplicated and there was a discrepancy in the acreages provided in this table between the GHG plan and the GIS stratification spatial data (a few acres). Please review and revise as appropriate Table 8 of the finalized GHG plan.	
		December 21, 2022 Findings (10) The PP has removed the duplicated Table 8 in the revised GHG Plan and has updated this table so there is consistency in acreages between the revised GHG Plan and GIS stratification spatial data. Verifiers also acknowledge the PP corrected the total acres reported for RMA designation in Table 12 within the revised GHG Plan. This issue item and this issue is now closed.	*GHG Plan_Whiskey_IFM_v2.1_20Dec 2022.pdf* *Whiskey_112922.gdb*

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
7-Nov-22	PP determined that the original stream layer used to denote Stratum 6 was obtained from the previous property owner and, unfortunately, no source data is available for this layer. Thus, based on consultation with Verification Body and ACR Registry personnel, PP decided to revise the project stream layer by using the publicly available CalFire stream layer (https://forest-practice-calfire-forestry.hub.arcgis.com/search?tags=forest%20practice%20hydrology%20ta83). The CalFire steam layer includes stream class designations. However, within the project area, the CalFire stream layer lists 26.04 miles of stream as unclassified perennial and 45.77 miles of stream as unclassified intermittent. PP consulted with Californian Registered Professional Forester, Dewey Robbins of Jefferson Resources, seeking his opinion on a conservative method to assign stream width buffers to the unclassified streams contained in the CalFire stream layer. PP, based on the opinion and recommendation of RFP Robbins (see letter from Robbins to PP), assigned a weighted average buffer width to the unclassified perennial and intermittent streams as follows: - Unclassified perennial – use a 125-foot buffer width (each side of the stream course), which is the average using an assumption of 50% of the stream mileage as Class 1 (150') and 50% of the stream mileage as Class 2 (100'). This buffer width is greater than recommended by RFP Robbins to ensure conservatism. - Unclassified intermittent – use a 51.25-foot buffer width (each side of the stream course), which is the average using an assumption of 35% of the stream mileage as Class 2 (100') and 65% of the stream mileage as Class 3 (25'). According to the California Forest Practice Rules (Article 6; § 916.4, 936.4, 956.4), the WLPZ is measured from the "Watercourse Transition Line". To account for the various channel widths associated with the	*https://forest-practice-calfire-forestry.hub.arcgis.com/search?tags=forest%20practice%20hydrology%20ta83* *CALFIRE_streambuffers_all_units_110522.zip* *EFM_CA_Carbon_Stream_Buffer_Letter_110422.pdf*

stream courses within the project area that require buffers, we used a conservative buffer width for stream classes as follows:

Class 1 – PP used 150'; however, the rules require a variable buffer width based on slope and yarding technique (<30% 75'; 30-50% 100'; [>50% 150' (-50' for cable yarding)])
Class 2 – PP used 100'; however, the rules require a variable buffer width based on slope and yarding technique (<30% 50'; 30-50% 75'; [>50% 100' (-25' for cable yarding)])
Class 3 – PP used 25'; however, the rules do not restrict harvesting, rather buffers are to define an equipment limitation zone (25' <30% and 50' >30%) where ground-based equipment must be excluded.
Class 4 – PP did not buffer, as the rule do not require any buffer as these are man-made features.

CALFIRE Stream Buffer Acreage
Dissolved by Stream Class

Whiskey	Acres	Miles
Class 1	142.81	4.09
Class 2	218.72	8.82
Class 3	163.65	26.41
Unclassified Perennial	779.25	26.04
Unclassified Intermittent	585.43	45.77
	1889.86	*111.13*

CALFIRE Stream Buffer Acreage

All Stream Classes Merged

Whiskey	1822.14

The High Conservation Forests identified in the Property Management Plan and within the project area are mostly located along several stream courses and these stream courses are within Stratum 6. The Northern Spotted Owl core buffer acres are not within Stratum 6; however, these acres have been assigned as no harvest in the baseline and project scenarios.

PP has reviewed the NWI's mapped wetlands and nearly all of these are within the Stratum 6 boundary. The small portion of these NWI's mapped wetlands not located within Stratum 6 and upon inspection via

aerial imagery indicate they are forested. It is the PP's understanding that the NWI mapped wetlands are not ground verified, so maps do not represent actual ground conditions.

PP has updated the project documents to address and clarify these items and incorporate a more detailed description on the process used in the defining and delineating Stratum 6 (RMA).

December 3

Item 2 - The GHG plan (Section E1.3) now includes a table of no harvest acres by strata used in the baseline modeling, including CE restrictions. The two no harvest categories are: 1) stream/spring buffers (1,832 acres); and 2) forest reserve (NSO) (17 acres), a CE restriction.

In addition, a description of the stratification process for Stratum 6, including a detailed description of assumptions, source documents, and sources data is now included in Appendix C of the SOPs.

Item 3 - the GHG plan (Section E1.3) now includes a description of how the PP determined the water course classes and buffer widths necessary for complying with the California Forest Practice Rules and CE requirements. This information is also included in Appendix C of the SOPs.

Item 4 - the GHG plan (Section E1.3) now includes a description of how the PP determined the water course classes and buffer widths necessary for complying with the California Forest Practice Rules and CE requirements. This information is also included in Appendix C of the SOPs.

Item 5 – PP has reviewed the NWI wetlands and removed non-forest areas. 82% of the wetland areas identified in the NWI layer are included in the RMZ (stratum 6) and the areas that are not in the RMZ were reviewed and determined to qualify as forestland and were not removed from the project area. The NWI layer is based on imagery information that is between 1975 and 1983 and at scales between 58,000 and 80,000. Thus, we dispute the accuracy of this data as a basis to categorize a small number of acres into a no harvest category in the baseline, since it appears that almost all of these areas are misalignments with the CalFire stream layer used as our basis for stream and spring locations. The CE does not require any buffers associated with wetlands.

PP reviewed the project area for freshwater ponds and found no ponds larger than one acre in size – with the largest being .15 acres in size. Thus, no buffers were included as there would be no material change on RMZ acres.

Item 6 - PP has provided the Whiskey SHMZ GIS layer that spatially identifies the special management zone – NSO core habitat (17 acres) required by the CE. Also, The GHG plan (Section E1.3) now includes a table of no harvest acres by strata used in the baseline modeling, including CE restrictions. The two no harvest categories are: 1) stream/spring buffer and 2) forest reserve (NSO core habitat).

GHG Plan_Whiskey_IFM_v2.0_11Dec2022.pdf

Whiskey_112922.gdb

Whiskey_SHMZ.shp

EFM_CarbonCruise_Protocol_NorCal_v3.0_11Dec2022_FINAL.pdf

SRV_Project Baseline Modeling_No Harvest Constraints_28Nov2022_FINAL.xlsx

NWI_source_detail.JPG

Whiskey_strata6_and NWI.pdf

Item 7 – the GHG plan now clarifies that Stratum 6 contains all the stream and spring buffer areas and the states the data source.

Item 8 - PP reviewed all stream buffers extending into the project area for streams outside the project area and added all missing buffer segments into Stratum 6.

Item 9 – PP reviewed the CALFIRE Hydro Point data and identified multiple springs not within the stream buffer layer (Stratum 6). These springs were buffered by a 150-foot radius and added to Stratum 6. This is documented in the GHG Plan (E1.3) and in Appendix C of the SOPs. https://hub-calfire-forestry.hub.arcgis.com/

The GHG Plan was updated to reference the data sources and parameters used for the project that are detailed in Appendix D of the SOPs.

20-Dec-22	PP reviewed and confirmed that Table 8 is consistent with the GIS stratification acreage data. In addition, the total acres for RMA designation in Table 12 was corrected to the correct acreage value.	*GHG Plan_Whiskey_IFM_v2.1_20Dec2022.pdf*

Verifier Issue	**Issue ID:**	**22-6**	**Status:**	Closed		**Checked by:**	**BS**		**Date Identified**	**20-Sep-22**

ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**					**Comments**		
ACR Standard (A.3.2)	GHG Plan, Section B3	Possible non conformance. *May impact materiality or conformance.*	Using the Siskiyou County's Road spatial data (*roads-public.shp*), verifiers note there are portions of three County roads within the project area (Sawyers Bar Road, Patterson Creek Road and Kidder Creek Road). The PP has removed the Sawyers Bar Road but not the two other roads. Please explain why these other roads are included in the project area. Please review and revise as needed.					*EFM_Whiskey _Stratification.shp* *Siskiyou County GIS:* *https://www.co.siskiyou.ca.us/gis/page/ siskiyou-county-open-data*		
			November 17, 2022 Findings Verifiers acknowledges the PP has removed portions of the two County Roads (Patterson Creek and Kidder Creek, 60 ft right-of way widths) within the revised project area boundary. This issue is now closed.					*Project_boundary_02Nov2022.zip*		
PP Response										
Date	*PP Comment*							*Additional evidence submitted for review by PP*		
7-Nov-22	PP has removed portions of county roads within the project area - Patterson Creek and Kidder Creek roads, including a 60-foot right-of-way.							*Project_boundary_02Nov2022.zip*		

Verifier Issue	Issue ID:	22-7	Status:	Closed	Checked by:	MD	Date Identified	20-Sep-22

ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments
		New information request. *May impact conformance; no materiality*	Verifiers find in the Whiskey Forest Management Plan that 366 acres of the property are classified as wetland according to the National Wetland Inventory. Also, in the management plan according to the CALVEG vegetation types classification there are 121 acres of Annual Grassland, 7 acres of Barren and 51 acres of Unclassified vegetation types on the property. It appears none of these potentially non-forested areas have been removed from the project area. Please explain the reason for including these areas in the project area and adjust if needed.			*Whiskey CE_EFM_Recorded DEc 2020.pdf* *Whiskey Forest Management Plan Final.pdf*
			November 17, 2022 Findings This same issue is being addressed within Issues 22-3 and 22-5. There is no need for issue to remain open and is now closed.			

PP Response

Date	PP Comment			*Additional evidence submitted for review by PP*
7-Nov-22	PP reviewed the National Wetland Inventory and concluded that the vast majority of these acres are within the stream buffer layer. In reviewing areas outside the stream buffer area, we concluded that these contain varying levels of forest cover and therefore should not be included in the stream buffer layer. In reviewing the CALVEG layer we do not find any acres within the project boundary that are unclassified. Further, it is the project development team's opinion that it is allowable and statistically sound to include areas of low stocking in the project areas. It is also the project development team's understanding that the inclusion of non-forest areas is allowable under ACR IFM v1.3, given that the project area meets the definition of "forestland" in section A1 of the methodology. See PP response to Issue ID 22-3.			

Verifier Issue	Issue ID:	22-8	Status:	Closed	Checked by:	BS	Date Identified	27-Sep-22

ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments
IFM Methodology v1.3, (C3-3.1.1; D2,D3)	Carbon Cruise Protocol	Clarification. *May impact materiality or conformance.*	The Carbon Cruise Protocol (SOP) notes the inventory points were established using a systematic grid with random start points and random orientation. Please provide the grid spacing and bearing of the grid and incorporate these specifications within the SOP.			*EFM_CarbonCruise_Protocol_NorCal_v1. 2_19Sept2021_Final*

			November 17, 2022 Findings	EFM_Whiskey_Fishnet_WGS84_JWF_2022 21104
			The PP has provided the requested the spatial data for the entire inventory grid and the associated grid spacing. Verifiers understand the grid spacing specification will be incorporated into the forthcoming updated carbon cruise protocol (*EFM_CarbonCruise_Protocol_NorCal_ v2.0_XXXX2022*). This issue will be closed when the updated protocol has been submitted. The PP has also submitted the *Systematic Sampling GIS workflow* document, which provides additional background on the GIS process used to create and allocate the random sampling grid within the project area.	
			December 12, 2022 Findings The PP has included the grid spacing specifications into the revised carbon cruise protocol (SOP, Appendix B). Verifiers acknowledge that Appendix B also includes the PP's process in developing a systemic sampling grid (*Systematic Sampling GIS workflow*). As these sampling specifications have been described and incorporated into the revised SOP, this issue is now closed.	*SystematicSamplingGISworkflow_2022.d ocx* *EFM_CarbonCruise_Protocol_NorCal_v3. 0_11Dec2022_FINAL.docx*

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
7-Nov-22	PP is providing the Verification Body the fishnet grid used to establish the inventory plots. PP updated the SOP to include the grid spacing (715 meters) and the process to establish the bearing of the grid. **December 3** PP updated the SOP to include the grid spacing (715 meters) and the process to establish the bearing of the grid.	*EFM_Whiskey_Fishnet_WGS84_JWF_20221104.shp* *EFM_CarbonCruise_Protocol_NorCal_v2.0_XXXX202.pdf* *SystematicSamplingGISworkflow_2022.docx* *EFM_CarbonCruise_Protocol_NorCal_v3.0_11Dec2022_ FINAL.pdf*

Verifier Issue	Issue ID:	22-9	Status:	Closed	Checked by:	BS	Date Identified	27-Sep-22

ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments
Standard (A.3.3)	GHG Plan Section A3	New information request. *May impact conformance; no materiality*	Table 1 (Sec A3) of the GHG Plan states: "*Project start date is June 7, 2021, which is the date that the project proponent entered a contractual relationship to initiate a carbon project with project developer L&C Carbon…*" Verifiers request a redacted copy of a portion of this contract showing the signature and dates to validated & verify the project start date.		*GHG Plan_Whiskey_IFM_v1.1_ 17June2022*

			November 18, 2022 Findings	EMF_LC Carbon_Consulting Services
			The PP has provided a redacted copy of the confidential contract between EFM (PP) and L&C Carbon (carbon consultant). Verifiers confirms the project's start date as contract was executed by EFM on June 7, 2021. This issue is closed.	Contract_07June2021_signed.pdf

PP Response			
Date	*PP Comment*		*Additional evidence submitted for review by PP*
7-Nov-22	PP is providing the Verification Body a redacted copy of the confidential contract between EFM (PP) and L&C Carbon (carbon consultant). The contract was executed by EFM on June 7, 2021 which initiated the carbon project.		*EMF_LC Carbon_Consulting Services Contract_07June2021_signed.pdf*

Verifier Issue	**Issue ID:**	**22-10**	**Status:**	**Closed**	**Checked by:**	**EM**	**Date Identified**	**28-Sep-22**
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**				**Comments**	
ACR IFM v1.3 (C)	GHG Plan (Sec E1)	New information request. *May impact materiality or conformance.*	Verifier found reference to *EFM_Site_Index_Explanation.docx* but were unable to find the document. Please provide this document along with an explanation of how site index was derived and used in FVS.				*EFM_Whiskey_Model_Files_Directory.docx*	
			November 18, 2022 Findings The PP has provided the requested *EFM_Whiskey_Site_Index_Explanation* document. The issue remains open as verifiers are reviewing the document and awaiting updated and forthcoming baseline documents to complete the associated modeling data checks.				*EFM_Whiskey_Site_Index Explanation.docx*	
			December 23, 2022 Findings Verifiers have reviewed the site index document and related calculations and have no further questions regarding the methodology used. This issue is considered closed.					

PP Response			
Date	*PP Comment*		*Additional evidence submitted for review by PP*
7-Nov-22	PP has uploaded the *EFM_Whiskey_Site_Index Explanation.docx* that explains how the site index values were derived. This includes the translation of site index to CA Forest Practices site classes.		*EFM_Whiskey_Site_Index Explanation.docx*
	December 3 PP has provided the updated modeling files.		See FVS and NPV folders in shared Dropbox folder

Verifier Issue	Issue ID:	22-11	Status:	Closed		Checked by:	EM		Date Identified	28-Sep-22

ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments
ACR IFM v1.3 (C)	GHG Plan (Sec E1)	Clarification. *May impact materiality or conformance.*	Verifier review of the GAMS model used to model baseline constraints resulted in the following questions: 1- The GHG Plan indicates that the riparian management zones will be excluded from any harvest activity; however, the GAMS model appears to list thinning treatments as possible options for the RMA stratum. For example, the "IsThinX" values are set to "Yes" for the RMA strata in the .lst file. There does not appear to be an LP equation that limits the harvesting within the RMA areas. Please clarify how the model limits harvesting in the RMA strata and where the strata-level harvest schedule is stored. 2- The LP8 equation is utilized to ensure that the acreage assigned to the lower basal area retention is equal to the proportion of the forest in site class IV and V. It is unclear where that proportion is stored in the outputs and whether this constraint was spatially explicit.		*GHG Plan_Whiskey_IFM_v1.1_ 17June2022.pdf* *EFMCA_Whiskey_Baseline_RP1.gms* *EFMCA_Whiskey_Baseline_RP1.lst*
			November 17, 2022 Findings Verifiers are waiting for the response to this issue and, as such, this issue remains open.		
			December 23, 2022 Findings Verifiers have reviewed the documents provided regarding the GAMS model, the LP equations and the additional harvest allocation breakdowns. Verifiers have confirmed that the thinning entries are as described in the GHG plan and the harvest allocations align with the constraints as expected. This issue is considered closed.		

PP Response			
Date	**PP Comment**		**Additional evidence submitted for review by PP**

3-Dec-22	Issue 1 - regarding area excluded from harvest, the limitations were added in two ways. The first is limiting all harvesting activities in the RMA strata. This is done in lines 288-290 of the GAMS linear programming file. While a versatile matrix compiler, the GAMS commands can be a bit awkward. First, we eliminate any management options with thinning by removing it from the tuple indicating that there is a valid thinning entry in a period (IsThinX):
	     IsThinX('RMA',Periods,MicXthin)=no;
	Then also eliminating it from any acreage allocation through the ISP tuple:
	     IsP('RMA',Periods,MicXthin)=no;
	Then we make sure the only option available is to never cut it by eliminating any harvest options except the final, "never" period (period 9999):
	     IsP('RMA',Periods,'Grow')$(ord(periods) lt card(Periods))=no;
	The no harvest set-aside acres in other strata are handled through a lower bound on the existing acreage allocation variable (EXIST) that is set to "never" be harvested (period 9999). This is done with the following command rather than an equation (constraint):
			EFMCA_Whiskey2_Baseline_RP1_Management_Breakdown.txt
			
			EFMCA_Whiskey2_Project_RP1_Management_Breakdown.txt

EXIST.lo(StandID,'9999','Grow')= NoCut_Acres(StandID);
There is a wide array of output related to a linear programming model solution. The most basic piece of information is the acreage allocation which we realize was not part of the output (lst) file. We have added an output file that contains StandID, Management, Year of Final Harvest, and Acres covering all acres of the project indication the optimal solution values in the EFMCA_Whiskey2_Baseline_RP1_Management_Breakdown.txt and EFMCA_Whiskey2_Project_RP1_Management_Breakdown.txt files.

Issue 2 - without an output of acre-by-acre management choices it was impossible to determine if the constraints were implemented. The provided management breakdown files now contain this breakdown including the lower basal area retention (E – uneven-aged managements) versus the higher basal area retention (U-uneven-aged managements).

Verifier Issue	Issue ID:	22-12	Status:	Closed	Checked by:	EM	Date Identified	28-Sep-22
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**				**Comments**	
ACR IFM v1.3 (C)	GHG Plan (Sec E1)	Clarification. *May impact materiality or conformance.*	Verifiers have reviewed the stratification methodology provided and note that it indicates that the LEMMA-based vegclass codes -1, 1 and 2 have been combined to create the "LowStocking" stratum. Vegclass code -1 indicates no vegetation, 1 indicates a canopy cover of less than 10% while code 2 indicates a canopy cover between 10% and 39%. These three codes can represent very different biological capacities and the resulting forest cover or even the potential for forest cover can be significantly different. Please clarify the reasoning behind combining vegclass codes -1, 1 and 2, is there any data to indicate the proportion of each class across the project, and how variable the canopy over is within this stratum?				*GHG Plan_Whiskey_IFM_17June2022.pdf*	
			November 17, 2022 Findings Verifiers agree that the ACR IFM v1.3 protocol does not stipulate how stratification must be developed, that the inventory design was statistically sound and each area had equal probability of selection regardless of stocking. Verifiers are not questioning the data source or the sampling design, rather, verifiers are questioning whether all areas currently included can be considered forest land. Verifier concerns regarding the inclusion of large, open and/or non-productive areas are explained in issue 22-3. In relation to this issue and issue 22-3, please provide the LEMMA raster for the project area where vegclass class code "-1" occurs.					
			December 23, 2022 Findings Upon the review of the responses to issue 22-4, verifiers agree that the LEMMA raster indicating where vegclass code "-1" occurs is no longer needed. Verifiers concur that the ACR IFM v1.3 protocol does not stipulate how stratification must be					

| | | | developed and are satisfied with the manner in which non-forest areas have been delineated on the project area. This issue is considered closed. | |

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
7-Nov-22	ACR IFM v1.3 does not stipulate how stratification must be developed. LEMMA was selected as a source for the stratification because it is a well-established publicly available data set, the process is automated to reduce human bias, the accuracy is documented, and it can be repeated for verification purposes. Vegclass codes -1,1 and 2 were combined to create a "LowStocking" stratum. Although these three codes can represent different forest cover or potential for forest cover, every acre of the property had equal probability of selection for sampling, regardless of stocking. Therefore, these low stocking areas are statistically accounted for in the inventory and are reflected in the baseline and with-project scenarios. Since the inventory was post-stratified, the goodness of fit for the stratification is reflected in the uncertainty calculations: if the stratification did not align with measured plot data, then uncertainty would be inflated. Since the results of the post-stratified inventory were within +/-10% of the mean at 90% confidence, the inventory stratification was deemed to be sufficient. **December 3** Please see response to Issue 22-3, where the non-forest issue is addressed. LEMMA rater data should only be used for stratification purposes, as it is not suitable for making determinations of non-forestland that should be excluded from a project area as per ACR standard and methodology requirements.	

Verifier Issue	Issue ID:	22-13	Status:	Closed	Checked by:	EM	Date Identified	28-Sep-22

ACR Standard ref	GHG Plan Section	Significance	Issue Description				Comments	
ACR IFM v1.3 (C)	GHG Plan (Sec E1)	Clarification. *May impact materiality or conformance.*	Verifiers have reviewed the stratification methodology provided and are unclear on step "c" quoted below: " c. Ran sieve tool (8-connectedness) to ensure that each raster classification had at least 1 acre in each clump. This target was set to meet FIA definitions of forestland." Can you clarify how the 1-acre clumps were aggregated from individual pixels? If an area had less than required amount of pixels to create 1 acre, how was the strata assigned to the 1 acre clump? How were open, non-vegetated areas considered in the assignment of strata? If open areas were larger than 1 acre were they excluded?				*EFM_ScottRiver_StratificationMethods_20220211.docx*	

			November 17, 2022 Findings	
			Verifiers have reviewed the settings used in the sieve tool and the explanation provided. Verifiers are satisfied with the settings used in this step and also concur that there are no statistical concerns related to the design of the inventory or the resulting carbon stocks. The questions regarding larger open areas being included in the low stock stands are now sufficiently covered in issue 22-3, as a result, this issue is considered closed.	

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
7-Nov-22	The project development team elected to use a sieve function to account for small pockets of forest classifications by "smoothing" the LEMMA raster dataset into approximately 1-acre groupings. The development team believes this to be an appropriate way to "smooth" the LEMMA data to a size that is more in line with the scale of forest management. This was accomplished by using the QGIS Sieve tool. The QGIS Sieve tool "Removes raster polygons smaller than a provided threshold size (in pixels) and replaces them with the pixel value of the largest neighbor polygon." (https://docs.qgis.org/2.8/en/docs/user_manual/processing_algs/gdalogr/gdal_analysis/sieve.html). The two main variables in the tool are Threshold and Pixel Connection. Threshold sets the size of the smoothing. The development team selected 5 pixels, as 5 30m x 30m pixels are approximately 1 acre. Pixel connection dictates if pixels must be touching along a full length (4-connectedness) or if they can be touching at a corner (8-connectedness). The development team selected 8-connectedness as it was the team's opinion that 4-connectedness would not capture the fluidity of forest extents as well. When the sieve tool was run, it searched for groupings of less than 5 pixels. When it identified an area of this size, that clump (or singular pixel) was assigned the pixel value of the largest neighbor polygon, thus "smoothing" the data into more useful sizes for forestry operations. Referencing back to the earlier point about the theory behind inventory stratification, as stated in the PP's response to Issue ID 22-4, the results of the sieve tool are incorporated into the final stratification, and thus are judged by the outcome of the statistics on the post-stratified inventory. Areas that appear to contain no trees are included in the "LowStocking" stratum. The inventory design accounts for low-stocked areas in a statistically sound manner. The inventory was designed as a systematic grid and was post-stratified; thus, every acre of the property had equal probability of selection for sampling, regardless of stocking. Therefore, all stocking levels are statistically accounted for in the inventory and are reflected in the baseline and with-project scenarios.	

Verifier Issue	Issue ID:	22-14	Status:	Closed	Checked by:	MD/BS	Date Identified	28-Sep-22

ACR Standard ref	GHG Plan Section	Significance	Issue Description	Comments
ACR IFM v1.3 (C)	GHG Plan (Sec E1)	Clarification. *May impact materiality or conformance.*	Verifiers reviewed the revised project boundary relative to the provided sample plot locations and larger grid (fishnet) points. The revised project boundary has created issues with some sample plots or the need there of. Verifiers note three grid (fishnet…) points, not existing sample plots within the previous project boundary, which are now sample plots within the revised project boundary area. Specifically, these points are the eastern grid point between sample plots 67 and 68, the grid point southwest of sample plot 136 and the grid point east of plot 20. Now that these grid points are in the project area, sample plots are needed in those locations.

Additionally, based on the previous property boundary, the PP designated 15 walk-through plots (WKTHRU attribute in the sample points spatial dataset). The revised project boundary changes have altered the walk-through situation on sample plots near the revised project boundary edges. Specifically, these include:

- Three of those sample plots (112, 126 and 145) are within 30 ft of the previous project boundary and are now a longer distance from the revised project boundary (up to 107 ft). With the project boundary change, these plots may have walk-through trees that may or may no longer be valid and there could be new walk-though trees.
   8.
- Four of the sample plots (21, 104, 111 and 140) are further from the previous project boundary (from 70 to 170 feet) and are either closer or further away from the revised project boundary lines depending on the situation. These plots may have walk-through trees that may or may not be valid and there could be new walk-though trees.
   9.
- Six plots (17, 79, 116, 135, 142, and 149) of the 15 walk-through plots are now over 150 ft from the previous project boundary and it is doubtful there are any double trees on these plots.
   10.
- For two walk-through plots (5 and 123), the project boundary did not change so there would be no change in the walk-through situation.

Please review and revise as appropriate and needed for updating the estimate for the project stocks associated with the revised project boundary. | *EFM_Whiskey_Fishnet_WGS84_JWF_2022 21104.shp*
EFM_Whiskey_Boundary.shp – old project boundary
Project_boundary_110222.shp – New project boundary

EFM_Whiskey_SamplePoints_Final_Strat .shp |
| | | | **December 14, 2022 Findings**
Verifiers acknowledge the PP's proposed plan and supporting documents to address new plots and changes to existing or potential walk-through plots as a result of the refinements in the project boundary. We concur that the sliver areas were created | *EFM_Plots in Slivers Due to Boundary Expansion_11Dec2022.docx* |

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when the project boundary was adjusted to align more accurately with Siskiyou County's GIS tax, which resulted in three new plots being added to the inventory plot allocations and potential changes to existing plots (i.e., walk-through plots). Verifiers note, the addition of these three plots was not due to an oversight of the inventory design and implementation (i.e., missed plot installation).

Verifiers reviewed the proposed plan and assessed potential materiality issues based on the following findings:

- The change in project boundaries resulted in a slight increase in the total project area (134 acres, <1%).
11.
- Based on the most recent aerial imagery (NAIP CA 2020), the three new plots added to the revised project area (slivered portions), appear to be forestlands with no significant forest structural differences from the existing project area. These plots likely contain forest carbon stocks.
    12.
- With the revised project boundaries, one walk-through plot has been dropped. There are now a total of 14 plots where the PP has designated as walk-through plots.
    13.
- Three previously existing walk-through plots (112, 126 and 145) are now further from the revised project boundaries and are not likely to be walk-through plots. All of these plots did not previously contain any walk-through trees (i.e., double counted trees). With the revised project boundaries, these plots could now potentially contain higher carbon stocks (no boundary edge effects, full plot radius). Verifiers believe retaining the plot data as measured during the inventory is a conservative approach for these plots.

- Of the remaining 11 identified walk-through plots, only one (plot 5) had any double counted trees (one tree). As the project boundary in this location did not change, this double counted tree was retained within the tree list, which is appropriate.
14.
Based on these observations and assessments, verifiers find the PP's approach to addressing the addition of three new plots and potential changes to plots near boundaries (i.e., walk-through), as a result of revising the project boundaries, to be reasonable, appropriate and conservative.

EFM_CarbonCruise_Protocol_NorCal_v2.0_27Nov2021_FINAL.docx – see Appendix E

EFM_WalkthroughResponses_03Dec2022.docx

				Going forward, verifiers also concur with the PP's plan to complete the following at the next required inventory (presumably in 5 years), which is summarized in the revised SOP (Appendix E):	
				(1) Locate and measure the new plots within these added project areas (sliver areas). Using the same inventory design process and grid layout as the initial inventory, the PP has identified that three inventory plots will be added within the sliver areas. The plot numbers and X and Y coordinates have been documented in the inventory SOPs.	
				(2) Re-evaluate the potential walk-through plots.	
				Based on the noted findings, verifiers assessed the risk of materiality in estimating the project stocks as Low. This issue is considered closed.	

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
3-Dec-22	**Grid Points Now Within New Boundary Slivers –** we agree that there are now a few grid points that fall within the sliver areas created by slightly expanding the project boundary to align with the County GIS tax lot layer. We have estimated the slivers area totals about 134 acres or 0.7% of the project area. The PP will address this situation as follows: 1. Move forward with validation and verification of the projects based on the original inventory. 15. 2. At the next required inventory (year 5), locate and measure plots within these sliver areas. The number and location of plots to be added was determined using the same methodology as the initial inventory, overlaying the original inventory fishnet grid, in the same orientation and spacing. Using this process, PP identified three inventory plots that fall within the sliver areas. The plots will be located and measured at the first project re-inventory. The plot numbers and X and Y coordinates have been documented in the inventory SOPs. 16. It is important to note that the sliver areas were created when the project boundary was adjusted to align with Siskiyou County's GIS tax lot layer. PP detects no forest structure differences within the original inventory frame next to the slivers as compared to the sliver areas added to the project boundary. Thus, the PP believes, for practical and logistical (area snowed in for the winter) reasons, it is reasonable to add the few additional plots at the first re-inventory at the end of the project's fifth year. PP concludes this a low-risk approach due to the small number of acres within the sliver areas and no discernible forest structure difference detected through a Google Earth imagery review. **Walkthrough Plots** - when the project area boundaries were changed, one of three walkthrough scenarios was possible: 1. A plot was previously a walkthrough plot, but was no longer a walkthrough plot,	*EFM_Plots in Slivers Due to Boundary Expansion_11Dec2022.docx* *EFM_CarbonCruise_Protocol_NorCal_v2.0_27Nov2021_FINAL.docx – see Appendix E* *EFM_WalkthroughResponses_03Dec2022.docx*

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2. A plot was not previously a walkthrough plot, but now could be a walkthrough plot, or
3. A plot's walkthrough status did not change.

The project development team actions taken for each walkthrough scenario:
1. No longer a walkthrough - for any plot center greater than double the maximum limiting distance after project area boundary adjustments, then any trees with a doubled tree count due to walkthrough were reduced to a single tree count in the final tree dataset.
2. A potential walkthrough – since ground data is not available, no changes to these plots were made. Future inventories will true up data for these plots.
3. Walkthrough plot data did not change – plot data was not changed.

Appendix C: Project Team

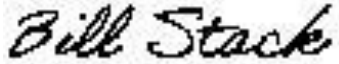| Verification Team	Qualifications
Pablo Reed	Pablo Reed holds a B.S. in Forest and Ecological Engineering as well as a minor in Latin American Studies from the University of Washington in Seattle. He has also recently completed a Masters of Environmental Management degree at the Yale School of Forestry & 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.
Bill Stack	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 owners 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.
Kyle Silon	Kyle Silon holds an M.S. in Energy and Environmental Economics. He has ten years' experience in climate change mitigation strategies and carbon reduction projects. Prior to founding S&A, he worked for a leading international certification company, specializing in validation and verification of small-scale household energy demand projects (such as

Verification Team	Qualifications
	cook stove and water filter projects), primarily located in South America, Asia, and Africa. He has participated in numerous verifications of forestry, landfill, and livestock projects, and has worked across all major GHG programs, including the Air Resources Board, Verified Carbon Standard, Climate Action Reserve, American Carbon Registry, Gold Standard, and Clean Development Mechanism (CDM).
Alexa Kandaris	Alexa Kandaris has 6 years' experience in carbon auditing and climate change mitigation policy and is accredited by ARB as a lead verifier under their US Forests protocol and the Ozone Depleting Substances protocol, and by the Climate Action Reserve (CAR) as a lead verifier. In this time, she has participated in 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.
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

Verification Team	Qualifications
	forestry model to assess the impact of climate change on species composition in forest types across Canada.
Marty Duffany	Martin Duffany holds a BS in Forestry from SUNY College of Environmental Science and Forestry. He brings over 35 years of experience in forest management working for forest industry and Timberland Investment Organizations (TIMOs) primarily in the northeastern and Appalachian regions of the US and eastern Canada. This experience focuses mainly on managing all aspects of forest inventory and mapping projects but includes extensive work in forest management planning, modeling and analysis. He has years of experience working in compliance with FSC and SFI certification standards and protocols. Martin joined S&A Carbon in February 2019 as a contractor providing support on desk and field verification projects. He is an SAF Certified Forester and holds forester licenses in Maine, New Hampshire and Vermont.
Thomas Blair	Thomas Blair holds a BS from Humboldt State University, graduating in 1993. He worked with Western Timber Services from 1994 – 1999, which preceded his foundation of Blair Forestry Consulting in 2000. Blair Forestry Consulting is primarily focused on timber cruising and timber harvest plan layout. Thomas has been involved in many carbon projects both as a California RPF (#2607) as well as has worked on carbon projects outside of the state of California.
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 is described below. 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

Verification Team	Qualifications
	navigation; Extensive use of computers (Microsoft Excel, Word, Access) and internet research.
Kim Mattson	Dr. Kim Mattson is the sole proprietor of Ecosystem Northwest, a natural resources consulting firm located in Mt. Shasta, California. Ecosystems Northwest was started in 1993 and has employed or subcontracted between 2-12 people performing field surveys of streams, forests, and biology. Dr. Mattson also specializes in scientific services such as watershed analyses, basic and applied research, and forest carbon offset verification services. Clients include federal government, watershed councils, private forest firms, and Indian tribes. Dr. Mattson is certified as a carbon offset verifier for the ARB and CAR forest protocols and the CAR soils protocol. He has been lead verifier for 6 forest offset projects in various parts of the US. Prior to his consulting profession, Dr. Mattson has worked with the EPA Research Lab in Corvallis, Or, had research positions at Oregon State University, University of Idaho, and West Virginia University. Dr. Mattson has an active publication record in forest carbon storage, and responses to disturbances.

Appendix C: Version Tracking

Version	Date	Developed By	Version Notes
1.0	5/17/2022	Alexa Kandaris	Initial Document
1.1	2/3/2023	Bill Stack	Draft Final
1.1	2/9/2023	Pablo Reed	Lead Validator review comments
1.2	2/9/2023	Bill Stack	Updated document based on Lead Validator comments
1.3	2/9/2023	Kyle Silon/Alexa Kandaris	Technical Review
1.4	2/9/2023	Bill Stack	Updated Final document based on Technical Review comments
1.5	2/13/2023	Alexa Kandaris	Final approval/signatures
1.6	4/28/2023	Bill Stack	Updated Final document based on ACR Review comments
1.7	5/2/2023	Bill Stack	Updated Final document based on ACR Review comments

S&A Carbon Lead Verifier Name and Signature:	Bill Stack *Bill Stack*
S&A Carbon Lead Validator Name and Signature:	Pablo Reed
S&A Carbon Technical Reviewer Name and Signature:	Kyle Silon
Date:	5/2/2023