



VALIDATION/VERIFICATION REPORT

ACR VALIDATION/VERIFICATION OF THE ROSETTA IFM PROJECT (ACR878)

REPORTING PERIOD 1

Date: 11/6/2024

Version 1.9

Lead Validator/Verifier: Bill Stack

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Project Name	Rosetta IFM Project
Project ID	ACR878
Reporting Period	1/1/2023 – 4/30/2023
Client	Weyerhaeuser Company
Date of Issue	11/6/2024
Prepared By	S&A Carbon, LLC
Contact	705 SE 55 th Ave Portland, OR 97215 www.saacarbon.com
Audit Team	Lead Validator/Verifier: Bill Stack Lead Validator/Verifier (under observation): David deRoulhac Technical Reviewer: Pablo Reed Biometrician: Elizabeth McGarrigle Technical Expert: Marty Duffany & Stacy Birch (under observation) Site Visit Team: Bill Stack (RPF), David deRoulhac & Stacy Birch Project Manager/Approver: Alexa Kandarís

Summary

The Rosetta IFM Project (project) is composed of 31,114 acres located in Southwestern Mississippi in Claiborne, Copiah, Franklin, Jefferson and Wilkinson counties. Historically, the project area has been managed for commercial timber by Weyerhaeuser and previous owners. The project area consists of loblolly pine plantations and hardwood bottomlands. Forest management is completed by the PP's Southern Timberlands Operations Team, which uses a Strategic Harvest Plan (99 -year plan) based on modeled growth and yield projections. Managers at Weyerhaeuser adhere to Best Management Practices (BMPs) to protect environmental integrity and implement artificial regeneration following harvests. Forest management activities for the project will follow Sustainable Forestry Initiative (SFI) requirements. The original SFI certification was issued in 2006 and the current SFI group certification, which includes the project area, expires in 2026.

The purpose of this IFM project is to increase the forest carbon stocks during the project period by reducing harvest volumes and changing management activities to ensure that growth exceeds harvest volumes. Commercial harvest volumes will be reduced to levels that are below business-as-usual levels and this will be achieved through extended harvest rotations and harvest reductions below baseline levels. The results of the reduced harvest regime include increases in both, above and below ground, live biomass. By implementing the project, the PP plans to generate carbon revenues that will offset the lost harvest revenues due to reduced harvest volumes 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 1/1/2023 – 4/30/2023. 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 (v2.0), 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 9/25/2023 – 9/29/2023. 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 5 rounds of an Issues Log produced by S&A for which the project proponents were required to respond. These included 13 Clarification requests, 9 Non-Conformances, 8 New Information Requests and 1 Observation findings. Verifiers confirmed in an email to the project proponents dated 4/18/2024 that all remaining issues were resolved in the Issues Log.

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 11/4/2024 and the projected *ex-ante* GHG emission removals/reductions (before buffer contributions) of 642,949 tCO₂e over the first 20-year crediting period. S&A Carbon is also able to issue a positive verification opinion for the 8,633 tCO₂e of verified emissions reductions, as reported in the Monitoring Report dated 11/5/2024. The verification assessment covered the monitoring period from 1/1/2023 – 4/30/2023 and verified that the calculated GHG removals and 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 1,900 tCO₂e and the total net ERRs to be issued are 6,733 tCO₂e.

Abbreviations

ACR	American Carbon Registry
ANAB	ANSI National Accreditation Board
BMP	Best Management Practices
CO ₂ e	Carbon Dioxide Equivalent
CP	Common Practice
EPA	Environmental Protection Agency
ERRs	Emission Reductions/Removals
ERTs	Emission Reduction Tons
GHG	Greenhouse Gas
HWP	Harvested Wood Products
MR	Monitoring Report
MP	Monitoring Period
NRCS	USDA Natural Resource Conservation Service
PD	Project Developer
PP	Project Participants
RP	Reporting Period
RPF	Registered Professional Forester
S&A	S&A Carbon
t	Metric Tonnes
USDA	United States Department of Agriculture
VVB	Validation and Verification Body

1 Introduction

S&A Carbon (S&A) has been asked by Weyerhaeuser Company to verify the greenhouse gas (GHG) removals and emission reductions generated by the Rosetta IFM Project (the project) for Reporting Period 1. 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, v2.0). S&A validation/verification activities began on 5/31/2023. This report presents the findings from this validation/verification process.

Date Description	Date
Project Start Date	1/1/2023
Crediting Period	1/1/2023- 12/31/2042
Reporting Period 1	1/1/2023- 4/30/2023
Verification Start Date	5/31/2023

1.1 Project Participants

Role	Organization Name	Main Contact Information and Person
Project Proponent & Landowner	Weyerhaeuser Company	Alicia Robbins 220 Occidental Ave South Seattle, WA 98104 206.539.4493 Alicia.robbs@weyeraeuer.com
Inventory Contractor	Forest Resource Services LLC	Jerry Lambert 1904 Huntington Drive Frederic, MI 49733 989-619-2882 Jlambert@forestresourceservices.com

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

1.2 Description of Project

The Rosetta IFM Project (project) is composed of 31,114 acres located in Southwestern Mississippi in Claiborne, Copiah, Franklin, Jefferson and Wilkinson counties. Historically, the project area has been managed for commercial timber by Weyerhaeuser and previous owners. The project area consists of loblolly pine plantations and hardwood bottomlands. Forest management is completed by the PP's Southern Timberlands Operations Team, which uses a Strategic Harvest Plan (99 -year plan) based on modeled growth and yield projections. Managers at Weyerhaeuser adhere to Best Management Practices (BMPs) to protect environmental integrity and implement artificial regeneration following harvests. Forest management activities for the project will follow Sustainable Forestry Initiative (SFI) requirements. The original SFI certification was issued in 2006 and the current SFI group certification, which includes the project area, expires in 2026.

The purpose of this IFM project is to increase the forest carbon stocks during the project period by reducing harvest volumes and changing management activities to ensure that growth exceeds harvest volumes. Commercial harvest volumes will be reduced to levels that are below business-as-usual levels and this will be achieved through extended harvest rotations and harvest reductions

below baseline levels. The results of the reduced harvest regime include increases in both, above and below ground, live biomass. By implementing the project, the PP plans to generate carbon revenues that will offset the lost harvest revenues due to reduced harvest volumes over the project period.

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 1/1/2023 – 4/30/2023.

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 2020¹
- The ACR Validation and Verification Standard, v1.1, May 2018
- The Improved Forest Management (IFM) Methodology for Non-Federal U.S. Forestlands, v2.0, July 2022
- Errata and Clarifications for ACR IFM Methodology v2.0, August 2024
- ACR Tool for Risk Analysis and Buffer Determination v1.0
- ISO Standards 14064-2 and 14064-3, 2006²

1.5 Materiality & Level of Assurance

The validation/verification team must state with reasonable assurance that discrepancies between GHG 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 the GHG removals and emission reductions assertion (v7.0 Standard, Eq 1).

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

¹ Based on 10/19/2023 ACR Guidance ("ACR Guidance: Templates, Reporting Periods & Terminology for Emission Reductions & Removal"), ACR Standard v8.0 is not applicable for this project [verification contract signed before 7/1/2023 (4/28/2023) and ACR Listing form submitted before 7/1/2023 (4/18/2023)].

² ISO Standard 14064-3:2019 is not applicable as the verification contract was signed prior to 5/1/2023.

1.6 Audit Team

Role	Name
Lead Validator/Verifier	Bill Stack & David deRoulhac (under observation)
Technical Reviewer	Pablo Reed
Biometrician	Elizabeth McGarrigle
Technical Expert	Marty Duffany & Stacy Birch (under observation)
Site Visit Team	Bill Stack (RPF), David deRoulhac & Stacy Birch
Project Manager/Approver	Alexa Kandarlis

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 5/1/2023 and 5/26/2023, respectively. A kickoff conference call was held on 5/31/2023, 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 and provided to the PP on 6/1/2023 for review.

The draft GHG Plan was provided 5/15/2023. 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 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 Bill Stack, Stacy Birch and David deRoulhac from 9/25/2023 through 9/29/2023. An opening meeting was conducted on 9/25/2023. Attendees of the site visit were as follows:

Attendees	Company	Role	Attend Opening Meeting	Attend Field Sampling	Attend Closing Meeting
Jason Gibson	Weyerhaeuser	Director of Forest Carbon	X	X	X
David Newton	Weyerhaeuser	Forester Carbon Project Manager	X	X	X
Tommy Tadlock	Weyerhaeuser	Planning/Inventory Manager	X	X	X
Anne Watts	Weyerhaeuser	Inventory Manager	X	X	X
Conner McLendon	Weyerhaeuser	Inventory Forester	X	X	
Donna Carney Slavin	Weyerhaeuser	Administrative Coordinator			X
David deRoulhac	S&A Carbon	Lead Validator/Verifier (under observation)	X	X	X
Stacy Birch	S&A Carbon	Technical Expert (under observation)	X	X	X
Bill Stack	S&A Carbon	Lead Validator/Verifier	X	X	X

*Note: Anne Watts and Tommy Tadlock attended 9/25/2023 field sampling only.

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 19 randomly selected forest inventory plots across the project area. Following plot data collection, the verifiers ran their verification data through the paired t-test (two-tailed). The analysis showed that the project's inventory was verifiable at a confidence interval of 90% (i.e., the means were the same, $p=0.70$). 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 9/28/2023 in the Weyerhaeuser Brookhaven office. Attendees are listed in the table above. Other topics also discussed included preparation of the Issue Log, harvesting and inventory database record keeping, log accounting process, scheduling of the baseline model review call, next steps in 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 removals and reductions over the first 20-year crediting period as well as the actual ex-post emission removals and reductions for this initial reporting period (1/1/2023 – 4/30/2023). The audit team implemented a detailed review of all aspects of the carbon stock modeling, including the stratification process, forest inventory design and specifications, plot allocations, 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 and back 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 removals and 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 the ACR IFM Methodology (v2.0, Section 7.4.1) provides the following specifications for resampling: *"If the forest inventory has been stratified, resampling may include the lesser of either 1) five (5) strata selected by the verifier based on a strategic assessment of risk, or 2) fewer than five (5) strata comprising $\geq 90\%$ of the proportional project carbon stocks. The Student's t-test(s) may be performed either independently by strata, or at a consolidated project level, so long as absence of bias and statistical agreement of the t-test(s) can be demonstrated"*. As there are greater than five strata within the project area (total=22 strata), verifiers selected sample plots within five strata based on a strategic analysis and risk assessment. The strategic analysis for the selection of strata was based on strata statistics, inventory attributes, and site conditions and characteristics.

The minimum number of plots required to be measured by verifiers is 19 which was determined using equation 21 of the ACR IFM Methodology (SQRT of total inventory plots). For sampling to pass verification, statistical agreement must be attained between the verifier's and project's plot carbon values using a t-test at 90% confidence interval for the plots selected.

All trees within the selected sample plots were re-measured by the verifiers including tree diameters (DBH) and heights, 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.

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's website on 6/20/2023 (<https://www.weyerhaeuser.com/>) and/or during interviews with Project Participants throughout the validation/verification process.

Date	Name	Title
Throughout Verification	Jason Gibson	WY, Director of Forest Carbon
Throughout Verification	David Newton	WY, Forest Carbon Manager
Throughout Verification	Caileigh Shoot	WY, Forest Carbon Analyst
Throughout Verification	Ji She	WY, Modeling
Throughout Verification	Bill Headlee	WY, Inventory
Throughout Verification	Ryan Spicer	WY, Forest Carbon Manager
6/28/2023	ACR	ACR Forestry staff – Andrew Taylor, Kurt Krapfl, Gabriel Burns, Umesh Chaudhari & Warren Reed
7/11/2023	Andy Daughdrill	MS, Department of Transportation Planning Group
7/11/2023	Jimmy Bass	Franklin County, Board of Supervisors, President
9/25 & 9/29/2023	Tommy Tadlock	WY, Inventory Manager
9/25 & 9/29/2023	Anne Watts	WY, Inventory Manager
9/25-9/28/2023	Conner McLendon	WY, Inventory Forester
9/29/2023	Donna Carney Slavin	WY, Administrative Coordinator
10/13/2023	Dan Perry	WY, Environmental Manager
10/13/2023	Katie Cava	WY, Sustainability Program Manager
11/14/2023	Don Bragg	USFS, Southern Research Station
12/1/2023	Marc Krider	MS State Forestry
12/11/2023	John Doesky	USFWS, Red-Cockaded Woodpecker
1/5/2024	ACR	ACR Forestry staff – Andrew Taylor, Kurt Krapfl, Gabriel Burns, Umesh Chaudhari & 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/Validation Activities	Proposed Date	Actual Date
Weyerhaeuser submits SV project documentation (partial)	5/15/2023	5/15/2023
Kick-off meeting	5/31/2023	5/31/2023
S&A Carbon submits pre-SV Issues Log v1.0	6/12/2023	5/31/2023
Weyerhaeuser response to issues	6/22/2023	6/6/2023
S&A Carbon submits pre-SV Issues Log v2.1	-----	6/16/2023
Weyerhaeuser response to issues	-----	6/22/2023
S&A Carbon submits pre-SV Issues Log v2.2	-----	7/6/2023
Weyerhaeuser response to issues		9/8/2023
Weyerhaeuser submits full project documentation to S&A	5/26/2023	9/22/2023
Site visit	6/26/- 6/29/2023	9/25/2023 – 9/29/2023
S&A submits full initial Issues Log v3.1	7/20/2023	11/20/2023
Weyerhaeuser submits response to Issues Log v3.1	8/10/2023	12/1/2023
S&A submits full initial Issues Log v4.0	8/24/2023	12/14/2023
Weyerhaeuser responds to full initial issues log 4.1	9/7/2023	3/1/2024
S&A Carbon submits issues log v5.0	-----	3/19/2024
Weyerhaeuser submits response to Issues Log v5.0	-----	3/27/2024
S&A Carbon closes out issues log	9/14/2023	4/18/2024
S&A Carbon completes draft validation/verification reports	9/28/2023	5/6/2024
S&A completes independent review	10/5/2023	5/21/2024
S&A submits draft validation/verification reports to Weyerhaeuser for review/approval	10/10/2023	5/23/2024
S&A conducts closing call with Weyerhaeuser	10/11/2023	5/28/2024
S&A Carbon submits final validation/verification documents to ACR	10/11/2023	5/28/2024

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 9/25 through 9/29/2023 near Brookhaven, Mississippi. 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 5 rounds of an Issues Log produced by S&A for which the project proponents were required to respond. These included 13 Clarification requests, 9 Non-Conformances, 8 New Information Requests and 1 Observation findings. Verifiers confirmed in an email to the project proponents dated 4/18/2024 that all remaining issues were resolved in 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, v2.0. 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 removals and 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 (1/1/2023-4/30/2023) is less than two years and meets the eligibility requirement. The project start date (1/1/2023) is after 11/1/1997 and is therefore considered an eligible project. The project start date was determined by the date the PP began to apply the land management activities to increase carbon stocks and/or reduce emissions relative to the baseline. Verifiers confirmed this is an acceptable and appropriate demarcation of the project start based on the start date criteria listed in the ACR Standard (Section 2.3). 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 MS 2010) and September 2023 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 Mississippi based on aerial imagery assessments, deeds, and tax maps. The current project activities do involve commercial harvesting.

The project's forestlands are composed of 100% native species. The project area contains approximately 31,114 acres of land consisting primarily of loblolly pine stands (approximately 79% of total project basal area) and hardwood bottomlands that include beech, maples, sweetgum, tulip poplar, southern magnolia, and hickories and oaks. The project activity doesn't involve any use of non-native species. Topography is gently rolling in the east to more sloped terrain in the West. Some area hills have been dissected stream channels with steeper side slopes (20-30%).

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	Default	0%	0%
Fire	Y	Low to Moderate	2%	2%
Diseases and Pests	Y	Southern Pine Beetle poses some risk to forest health	8%	8%
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 removals and 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 (1) that the existing laws, regulations, statutes, legal rulings, or other regulatory frameworks do not directly mandate the project action, and which require specific technical, performance, or management actions; (2) the project exceeds common practice in the relevant industry sector and geographic region; and (3) the project faces at least one of the three implementation barriers (financial, technological, or institutional). The project action was found to meet these three-prong additionality test for privately owned industrial timberlands.

The PP lists the laws and regulations in Section C1 of the GHG plan that could affect the project. Based on the verifiers' review of these laws and regulations, discussions with Mississippi State foresters and Weyerhaeuser staff, project document data checks, and the team's past experiences working in this region, found this list to comprehensively identify the applicable laws and regulations affecting the project area. Verifiers confirmed that these laws do not require the PP to implement the project activities.

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 and accurately incorporated into the modeled baseline harvest scenario (e.g., Mississippi Forestry Best Management Practices). Verifiers are reasonably assured all applicable laws and regulations have been considered in addressing and demonstrating

regulatory surplus as specified in Section 4.A.1 of the ACR Standard. See the Issues Log and verifiers data check log for additional information.

As described in the GHG Plan (Section C.2), common silvicultural practice of the forest type within the project area is managing conifer stands to a minimum rotation age (site class dependent), clearcutting, and replanting with loblolly pine (even age management). Verifiers confirmed this practice through discussions with the PP and MS and USFS foresters and researchers; through the verification team's professional work experiences in the region; internet searches pertaining to common silvicultural practices in the Mississippi region; and site visit observations. Verifiers understand that common loblolly pine rotation cycles vary between 25-35 years depending on the pulpwood & saw wood markets, site conditions, ownership size, and management objectives. Common practice for harvesting hardwoods in the SMZs is typically a thinning operation that occurs concurrently with a neighboring pine harvest.

Section E.2 of the GHG Plan defines the project scenario which includes increasing the average loblolly pine stand rotational age harvest by 5 years during the 20-year crediting period (30.6 years) and to eliminate harvesting within SMZs. These project activities will increase the average stand ages and the associated carbon stocks compared to the common practice for these industrial forestlands, which will result in increasing GHG emissions reductions/removals over the project period. The verifiers are reasonably assured that the project and its associated project activities exceed the common practice for industrial forestlands in the region. For additional information, see the verifiers' Issues Log (item 23-25).

Section B.5 and E.1 of the GHG Plan describes the baseline harvest scenario, which is based on regional industrial forest management practices as noted previously and incorporates the legal constraints such as BMPs (stream management zones). Specific baseline silvicultural harvest prescriptions are described more fully in Section E.1 of the GHG Plan and the baseline modeling workbooks. Verifiers have confirmed these legal constraints have been accurately and consistently applied within the baseline model (see the verifiers' Issues Log and Data Check Log for further details).

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 (see *Rosetta BSL vs PRJ NPV Comparison 030124.xlsx*). 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 v2.0 (C.1, Table 1). Required inputs for the project NPV calculation were based on the 2023 timber inventory, growth and yield under a range of silvicultural treatments, recent stumpage prices for wood products, and management costs. Verifiers found these inputs to be reasonable, appropriate, accurate and well supported.

The project activity without carbon revenue is expected to generate an NPV that is substantially lower than the NPV maximization scenario of the baseline model by approximately 40%, 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 and disease & pests.

The PP selected a low fire risk rating (2%) and provided supporting information and data source used to justify this rating (USFS Wildfire Hazard Potential, <https://www.firelab.org/project/wildfire-hazard-potential>). Verifiers found this data source to be the most accurate public data source available for potential wildfire hazards and concurred with the PP's low fire risk rating (see Issues Log item 23-23). The PP utilized the highest the insect and disease risk rating (8%) due to potential carbon stock impacts from the southern pine beetle. Based on stakeholder interviews and public data source checks (e.g., <https://www.fs.usda.gov/foresthealth/applied-sciences/mapping-reporting/detection-surveys.shtml>), verifiers found this risk rating to be conservative. Verifiers confirmed the PP's calculation for the total risk rating of 22%.

In total, 22.0% (1,900 tCO₂e) of the gross emission reductions will be deposited into the ACR polled 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). As mentioned, verifiers confirmed this practice through discussions with the PP (e.g., 10/27/2023 model review call) and State and Federal foresters & researchers; through the verification team's professional work experiences in the region; internet searches pertaining to common silvicultural practices in southwestern Mississippi; and site visit observations within and near the project area.

The baseline (and project) on-site carbon stocks found on the project area were determined through a forest inventory implemented on the project area during April 3-17, 2023 and August 22-26, 2023. The PP pre-stratified the project's productive forestlands into 22 unique strata (3 hardwood and 19 loblolly pine plantations or softwood strata). For softwoods, stratification was based on trees per acre and age classes and hardwood strata were based on basal area. Strata were delineated using planting records and existing Weyerhaeuser GIS records. Once issues around non-forest areas were resolved (e.g., removal of public roads), verifiers found the project's stratification methods to be reasonable and accurately delineated (see Issues Log for further details).

The inventory design employed a sample of 363 fixed-radius plots that were allocated using a "randomly oriented grid rotation" with a random distribution of plots on the grid. Each stratum utilized different grids based on the project's inventory sampling objectives. Individual grids were constructed within an R script and plots randomly allocated. Due to the internal processing of these grids, the PP was not able to generate and provide the spatial data for these stratum-generated grids. Verifiers did, however, discuss this process with the PP, reviewed the R code, and assessed the distribution of the spatial data for the inventory plots are reasonably assured the plot allocations were randomly distributed and spaced on individual grids for each stratum. Data collection during the inventory followed standard industry measurements and practices. This stratification and plot allocation processes are discussed more fully in the project documents (e.g., *Rosetta Stratification SOP*) as well in the verifiers' Sampling Plan and Issues Log.

As described in Section E1 of the GHG Plan and project documents (*RosettaRP1Inventory Updates20231220*), all the productive forestlands within the project area were modeled using the Southern variant of the US Forest Service Forest Vegetation Simulator (FVS-SN) using the default settings of the FVS Fire and Fuels Extension. 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. The forest inventory data were grown in FVS for 21 cycles (default time cycle length of 5 years) over a total of 105 years. The resulting treelists were merchandized into log and product information using a proprietary Weyerhaeuser software library at each time step. Resulting volume estimation by products, together with direct FVS outputs of above and below ground total live carbon values using default settings, were linearly interpolated for intermediate years between cycles to produce annualized growth projections. The PP created and utilized strata-based yield curves to estimate carbon projections for the various time periods (e.g., beginning and end of the crediting periods.). A model II linear programming harvest scheduling model was created using Remsoft's Woodstock Optimization Studio and incorporated various model management constraints to reflect local operations and harvesting conditions for the region (e.g., operational feasibility).

The PP uses proprietary merchandizing codes to model harvested wood product volumes, which include the use of internally derived taper equations, densities and green weight adjustments. As this proprietary information was not available for verification review, verifiers conducted a meeting with the PP and ACR on January 5, 2024 to gain clarity on the PP's process and proprietary needs as well as to understand the requirements of the IFM Methodology. As a result of this meeting, ACR provided the following guidance:

"...ACR approves of the use of Weyerhaeuser-derived taper equations, densities and green weight adjustments to produce the HWP for the baseline. Given that these taper equations, densities and green weight adjustments are proprietary and based on internal data that verifiers do not have

equivalent independent data to validate, verifiers do not intend to scrutinize the validity of the taper equations, densities and green weight adjustments”.

Following this guidance, verifiers requested the PP to provide a subset of calculations for treatments and years of treatments as well as attest the same equations and steps were utilized in both the baseline and the project scenario. From the provided subset of calculations and PP provided documentation (*MerchExplainer.pdf*) verifiers were able to confirm the process of transferring data from the FVS cutlist to HWP values. This documentation indicated at which steps the PP converted to harvest volume by weight using proprietary conversion factors which varied by species, tree size, age, and geography.

Upon verifiers’ request, the PP included a brief description of the noted log merchandizing process in the GHG Plan (Section E1) and a separate detailed description of the methods to ensure consistency throughout the project term (*MerchExplainer.pdf*). Verifiers also requested numerical values for each species be maintained and verifiable. These included merchantability standards, volume equations, density conversions/cull rates by species. Verifiers held a follow up call with the PP on March 25, 2024 and reached reasonable assurance regarding how these factors and codes were recorded and stored as redundant copies on the PP’s internal servers which would ensure consistency during long-term monitoring. For further details see the Data Check Log and Issue Log (23-28).

Baseline carbon in long-term storage in wood products was then calculated based on the projected harvest volume removals derived from the noted merchandizing process. Harvest volumes were broken out into the categories of softwood sawlog, softwood pulp, hardwood pulp and hardwood sawlog. 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 2015 California ARB Compliance Offset Protocol, for Mississippi.

Baseline carbon in wood products was then summed across the established wood categories and distributed to various end-wood product classes referenced from the California ARB Compliance Offset Protocol, for Mississippi. 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 v2.0. 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. Weyerhaeuser asserts that all their lands currently are certified through the Sustainable Forestry Initiative (SFI) and

no activity-shifting leakage is present. Verifiers reviewed the provided SFI certificates for U.S. and Canadian acres timberlands that demonstrate entity wide certification (certification #BV-SFIS-US011685-2) of approximately 9.8 million acres at 38 sites in the U.S. Additionally, verifiers searched for and confirmed PP's SFI certificate (BV-SFIS-CA011685-1) also cover 8,892,393 acres of Canadian timberlands (expires February 2, 2026).

As there were differences between the SFI acreages and the total forestland acreages listed on Weyerhaeuser's web site, verifiers conducted a conference call with Weyerhaeuser staff Katie Cava (Sustainability Program Manager) and David Newton (Carbon Team -Project Manager). Based on this discussion, verifiers understand that not all of Weyerhaeuser lands are managed for timber production (e.g., non-forest lands), thus not all are included in the SFI certificate. Verifiers also contacted Gregor Macintosh (Senior Director of Standards, SFI Inc.) and confirmed that acres certified by SFI for inclusion under the certificate are certified by a third-party auditor. As a result of these discussions and review of the SFI certificate and audit reports verifiers are reasonably assured that activity-shifting leakage is restricted to de minimis levels (see Issue Log # 23-24 for further details).

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 is more than 5% but less than 25% over the crediting period, the leakage deduction is 10%. 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 project's forest inventory data. A full re-inventory of the project area is to take place at least once every 5 years 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. The threshold for triggering an inventory update from such a disturbance is the lesser of 15% of the cumulative acreage or 250 cumulative acres within a given stratum being impacted by the disturbance. If impacts from such events are significant, the affected areas will be

re-inventoried and adjusted to reflect current on-site carbon stocks as specified in the project's Inventory SOP.

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 in the Inventory SOP. Both forest and desk-based QA/QC procedures are established. The inventory SOP describes the inventory check cruising process and specifications, which aims to evaluate a random selection of 10 % of the forest inventory plots. The PP utilizes a quantitative approach to fully evaluate the accuracy of the data collected by the cruisers (scorecard completed for each plot). The check cruising completes full plot measurements to identify any issues or significant discrepancies. The SOP provides the measurement type, weighting, tolerance, and scoring methods (e.g., error pts) used 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. 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 inventory was completed by Weyerhaeuser contractors and was check cruised by Weyerhaeuser forestry staff. Verifiers were provided with the five audit results workbooks detailing the plots and trees checked; comments on the errors identified (e.g., DBH, Height, Status, In/Out); and check cruising results (scores). In total, about 8% of the forest inventory plots were check cruised (30 plots). Incorrect diameter and height measurements were the most common error identified during the check cruising. The average score for the 30 plots check cruised was 98% (>95% is passing). Only 1 plot failed and was remeasured. While the check cruising sampled 8% of the plots, which is less than specified in the SOP (10%), verifiers found no reason to further question the implementation or effectiveness of the established QA/QC process as there were only two cruisers that needed to be checked and there were not a significant number of errors identified during the check cruise evaluation nor was any systematic bias or error found with any cruiser.

During the September 2023 site visit sampling verifiers noted consistency between the verifiers' and PP's DBH measurements. The PP only measured heights on five dominant or co-dominant trees on each plot and then estimated heights via modeling for the remaining trees within the plot. Verifiers measured heights were consistent with the PP's measured heights, but modeled heights were often different than the verifiers' measurements. The PP's modeled heights trended lower than verifiers' measured heights in most strata, with the exception of the P_Age=6to10 stratum, which typically were higher than the measured heights.

Verifiers also noted one area of improvement regarding data collected. Most of the project area has relatively gentle slopes (<10%) and adjusting for slopes in checking limiting distances to assess in/out trees is generally not required. However, verifiers did encounter a few plots where a limiting distance tree did require adjusting for slope. The current inventory SOP does not provide specifications for adjusting for slopes. This was noted to the PP during the site visit's closing meeting. The PP intends

to revise the Inventory SOP accordingly prior to the next scheduled inventory. For additional details on the site visit sampling results see the verifiers' Sampling Plan.

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 an 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 in the pine plantations with hardwood harvesting in SMZs. The project activity will increase carbon stocks by reducing harvest volumes and changing management activities to ensure that growth exceeds harvest volumes over the project period. Commercial harvest volumes will be reduced to levels that are below business-as-usual levels and this will be achieved through extended harvest rotations and harvest reductions below baseline levels. The results of the reduced harvest regime include increases in both, above and below ground, live biomass.

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 Weyerhaeuser, 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: *"Weyerhaeuser anticipates that any public inquiries will come directly to local staff or through our website. All inquiries are directed to our local public affairs manager who coordinates with Timberlands to provide a response. Publicly available documentation for the project will provide the basis for most responses."*

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; 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 Weyerhaeuser 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, and timber harvesting as well as assessing insect & disease and wildfire risks. 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. Weyerhaeuser has an internal Board of Directors that guides the direction of the organization, policies, and management decisions. 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 13 Clarification requests, 9 Non-Conformances, 8 New Information Requests and 1 Observation findings. 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 (11/4/2024) 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 removals/reductions (before buffer contributions) of 642,949 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 1/1/2023-4/30/2023 in accordance with the project design established in the GHG Plan. The PP submitted a completed copy of the Monitoring Report (MR) that provides the information required in the ACR monitoring report template. The verifiers are reasonably assured there were no changes to the landowner, project area or inventory over the reporting period, and estimates of the current on-site carbon stocks based on the inventory data are provided. There was commercial harvesting over the initial reporting period with 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 removals and reductions including baseline emissions, project emissions, leakage emissions, contributions to the buffer pool, and a summary of the net GHG emission removals and 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 biomass estimation process of Option 2 in

Section 4.2.2.1 (as per the ACR IFM methodology v2.0). 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 model the 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	Reported (PP) tCO ₂ e	Calculated (VB) tCO ₂ e	Dis-crepancy tCO ₂ e	Impact on misstatement/ conformance
	Checks performed				
Rank 1 On-site Project stocks (inventory) (CP,TREE,t)	2023 Inventory, volume and biomass equations, calculation methods	2,948,675	2,948,651	24	Impact on OMM
Rank 2 On-site Project stocks; beginning of RP (CP,TREE,t -BORP)	2023 Inventory, volume and biomass estimates, grown modeling results, grown tree list. Model appropriateness and use. Data systems.	2,838,759	2,838,776	-17	Impact on OMM
Rank 3 On-site Project stocks; end of RP (CP,TREE,t- EORP)	2023 Inventory, volume and biomass estimates, grown modeling results, grown tree list. Model appropriateness and use. Data systems.	2,797,109	2,797,126	-17	Impact on OMM
	Checks of accumulations and correct transfer to Monitoring Report				
Rank 4 20-Yr Average Baseline stocks (live and dead tree CO ₂ e) CBSL,AVE (total)	Monitoring Report and supporting modeling documents. Model appropriateness and use. Data systems.	2,404,175	2,404,175	0	No impact on Materiality
	Checks correct transfer to Monitoring Report. Calculation check uses PP values.				

Rank 5 Baseline Harvested Wood Products (CBSL,HWP,t)	Monitoring Report, supporting worksheets	18,638	18,638	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 6 HWP Project (CP,HWP,t)	Monitoring Report, supporting worksheets; On-site observations, GIS review, interviews with the PP.	11,912	11,912	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 7 Emissions Reduction at t (before buffer deduction) (CACR,t)	Monitoring Report	8,633	8,633	0	No impact on Materiality
	Checks that all PP entries are correct. Check sources. Checks that calculations within the worksheet are correct. Calculation check uses PP values.				
Rank 8 Buffer - Permanence Risk Rating (BUFrp,t)	Monitoring Report, calculation workbooks, supporting worksheets	1,900 (22%)	1,900 (22%)	0	No impact on Materiality
	Checks that all PP entries are correct. Check risk rating and calculations have been calculated correctly.				
Rank 9 Market Leakage Discount Factor (LK)	Monitoring Report, supporting documents.	959 (10%)	959 (10%)	0	No impact on Materiality
Rank 10 Total Uncertainty (UNct)	Monitoring Report supporting worksheets	0 (<10%)	0 (<10%)	0	No impact on Materiality
	Use PP data for 2023 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 the GHG removals and emission reductions assertion.

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

$$\text{Percent error} = \frac{[8,633 - 8,648]}{8,648} \times 100 = -0.173\%$$

Project ERTs – Verifier ERTs (tCO ₂ e)	Verifier ERTs (w/o buffer deductions) (tCO ₂ e)	Calculated Materiality %
-15	8,648	-0.173%

The materiality check was carried out according to ACR guidance using the equation above. The verifiers independently calculated the reporting period ERTs utilizing Equation 24 (ACR IFM Methodology) and the verifiers estimate of the total project level stock, which resulted in ERTs of 8,648 tCO₂e. The verifiers' ERTs was 15 tCO₂e higher than the PP's ERTs. The Materiality Calculation shows the project was slightly underestimated (0.173%). Thus, 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 **8,633 tCO₂e** for the Reporting Period of 1/1/2023 to 4/30/2023. S&A has also verified removals and other ERRs, which is summarized in the table below for this reporting period.

ALL GHG PROJECTS		AFOLU & GEOLOGIC SEQUESTRATION PROJECTS ONLY			
VINTAGE	TOTAL ERRS (VI.4)	BUFFER POOL / RESERVE ACCOUNT CONTRIBUTION (VI.5, IF APPLICABLE)	NET ERRS (VI.6, IF APPLICABLE)	REMOVALS SUBSET (IF APPLICABLE)	EMISSION REDUCTIONS SUBSET (IF APPLICABLE)
2023	8,633 mt CO2e	1,900 mt CO2e	6,733 mt CO2e	0 mt CO2e	6,733 mt CO2e
Totals	8,633 mt CO2e	1,900 mt CO2e	6,733 mt CO2e	0 mt CO2e	6,733 mt CO2e

Appendix A: Reference List

Project Proponent Documents & References

Description	Filename
Listing	ACR Listing Approval.msg
	Intent to Develop - Rosetta IFM Carbon Offset Project.pdf
	Rosetta IFM ACR Listing Form.pdf
GHG Plan	Rosetta GHG Plan 11042024.pdf
	Appendices: A. PROJECT ELIGIBILITY B. ACR BUFFER CONTRIBUTION C. SUSTAINABLE FOREST INITIATIVE (SFI) CERTIFICATION D. MEASUREMENT PROTOCOL E. ENVIRONMENTAL MANAGEMENT PLAN F. INVENTORY AND PLOT LIST G. EX ANTE OFFSET PROJECTION H. MODELING PARAMETERS I. SPATIAL DATA J. SDG CONTRIBUTIONS REPORT (Rosetta ACR-SDG-Cont-Report-AFOLU-Project-v1.0-1.xlsx)
	RosettaInventorySOP03212024.pdf
	RosettaStratificationSOP03212024.pdf
Monitoring Report	ACR Risk Tool v1.0.pdf
	Risk and Buffer Determination 030124.xlsx
	Rosetta ERT Actuals Monitoring Report 032124.xlsx
	Rosetta IFM ACR 878 RP1 Monitoring Report.pdf
Property Deeds-Ownership	BulkExport_Rosetta_CarbonForest_042823.xlsx
	Maps & Records
	Rosetta Ownership Map.pdf
	WY Legal Spatial Ownership Methodology.pdf
Forest Management Plan/Certification	Harvesting in SMZs and Reserve Cover Types 2023.pdf
	SFI Standards Rules 2015_2019S_2_June2019.pdf
	STL Biodiversity Program 2023.pdf
	STL FS_FM External Audit Report-SFI Final.pdf
	STL Soil Disturbance Guidelines 2023.pdf
	STL Special Places T-E Species and FECV Program 2023.pdf
	STL Stocking Requirements 2023.pdf
	WY SFI Certificate.pdf
GIS Files – Spatial Data	01_Rosetta_GHGPlanMap_Vicinity_113023.pdf
	02_Rosetta_GHGPlanMap_ProjectArea_Hydrology_12192023.pdf
	03_Rosetta_GHGPlanMap_ProjectArea_Roads_12192023.pdf

	04_Rosetta_GHGPlanMap_ProjectArea_12192023.pdf
	05_Rosetta_GHGPlanMap_ProjectArea_Imagery_12192023.pdf
	06_Rosetta_GHGPlanMap_StrataOverview_12192023.pdf
	07_Rosetta_GHGPlanMap_Strata_12192023_Area #.pdf
	Map Metadata_Updated12192023.docx
	Rosetta_AdditionalEdgePlots_FINAL_07262023_15_55_39_Strata.shp
	Rosetta_AdditionalWholeSamplingFramePlots_FINAL_07262023_15_54_26_Strata.shp
	Rosetta_AllAdditionalPlots_FINAL_07262023.shp
	Rosetta_EnvironmentalConcerns_11012023.shp
	Rosetta_FinalAreasNoNP_10mEdgeAreas_06222023_MergedByStrata.shp
	Rosetta_FinalAreasNoNP_StrataSamplingFrame_06022023_MergedByStrata.shp
	Rosetta_HarvestStands_Updated11302023.shp
	Rosetta_HydrologyLine_Updated11162023.shp
	Rosetta_HydrologyPolygons.shp
	Rosetta_ORIGINALPlots_Albers.shp
	Rosetta_PlotLocations_ALLCombined.shp
	Rosetta_PlotWYMoveLine.shp
	Rosetta_ProjectCentroid.shp
	Rosetta_ProjectFootprint_12192023.shp
	Rosetta_ProjectGeneralArea.shp
	Rosetta_StandsAndStrata_NoNP_Updated12192023.shp
	Rosetta_StandsMergedByStrata_10mInnerBuffer.shp
	Rosetta_SurroundingCounties.shp
	Rosetta_UtilityLines_Updated11162023.shp
	Rosetta_WYExternal_Roads.shp
	Rosetta_WYInternal_Roads_Updated12182023.shp
	Rosetta_WYMovedPlots_Albers.shp
	Rosetta_ZoomAreas.shp
	US_States.shp
	Weyerhaeuser Streams vs NHD Streams.pptx
Inventory	CarbonReportRosettaFVS20240321.zip
	Cruiser_Tree_Comment_Abbreviations.xlsx
	FRS Raw Cruise Data Batch 1.xlsx (2-5)
	plot_helper_Updated06212023.R
	Plot_Move_Explainer_03212024.xlsx
	PlotCarbonInit_20240321_SOP_calcs.xlsx
	Raw_Cruise_Plots_AprilInventory_Updated08232023.xlsx
	Raw_Cruise_Plots_Rosetta_08312023.xlsx

	Rosetta Buffer Plots Execution Plan - Shared Version.pptx
	Rosetta Buffer Plots Summary.pptx
	Rosetta Plot Distribution Method.md
	Rosetta_AdditionalEdge_points_07172023.R
	Rosetta_AdditionalInterior_points_07172023.R
	Rosetta_Audit_M-DD-YY.xlsx
	Rosetta_Carbon_Audit_Tracking_Spreadsheet.xlsx
	Rosetta_nPlotsBuffer_ACRShared.xlsx
	Rosetta_PlotStandStrataXref_08312023.csv
	Rosetta_ProductiveONLYAcres_Explainer.pptx
	Rosetta_strata_points_Updated06212023.R
	RosettaRP1InventoryUpdates20231220.pdf
	RosettaYieldAdjustmentDroppedPlots.pdf
	Strata_Inventory_Summary_Explainer.pdf
	StrataStats_calcs_20230605.xlsx
	StrataStats_nPlotsRecalculated.xlsx
	Verification Appendix/RosettaRP1InventoryUpdates20231220.pdf
Modelling	carbon_yield_explainer.zip
	Clearcut Harvest Age Data.xlsx
	Forisk 2022 Southern Silviculture Survey.pdf
	MerchExplainer.pdf
	Rosetta 8 Qtr Avg TMS Price.xlsx
	Rosetta BSL vs PRJ NPV Comparison 030124.xlsx
	RosettaFVS20231201.zip
	RosettaTreeSubsetMerchDemo.xlsx
	Rosetta Ex Ante Offset Projection 032124.xlsx
	RosettaWoodstock20231220.zip
	Weyerhaeuser Harvested Wood Products.pdf
Other Documents	Field Risks Brookhaven - Safety.docx
	Organization Chart.docx
	Rosetta Site Visit_WY_J.Gibson.docx
Data Sources	Mississippi BMPs.pdf
	TimberCruisingHandbook_USFS.pdf
	UA Loblolly Management.pdf
	USFWS RCW Private Land Guidance.pdf
Project Harvesting	08_Rosetta_GHGPlanMap_HarvestStands_113023.pdf
	MLT100755599 Settlement Doc.pdf
	RosettaHarvestLoads120123.xlsx

Verifier Documents

Document Description	Filename
Project Specific COI Form	ACR878_COI Form.docx
Validation/Verification Plan	ACR878-RP1_Validation-Verification Plan.docx
Sampling Plan	ACR878-RP1_SamplingPlan.docx
Data Check Log	ACR878_DataCheckLog_9Aug2024.xlsx
Issues Log	ACR878_Rosetta_Issues_Log_v5.1_Closed_17April2024.docx
Site Visit -Plot Sampling t-Test	ACR878-Rosetta_T-Test Worksheet_19Sept2023.xlsx
Validation/Verification Opinion	ACR878-RP1_Validation-Verification Opinion v4.0-20241106.pdf

Appendix B: Findings List

Verifier Issue	Issue ID:	23-1	Status: Closed	Checked by: SB	Date Identified	17-May-23																				
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments																				
ACR Standard (A.3.2) IFM 2.0 4.2.2	GHG Plan	Non conformance. May impact materiality or conformance.	<p>Verifiers have the following questions regarding the carbon calculations:</p> <p>1.) The Protocol Section 4.2.2.1 outlines three options for biomass estimation where Option 1 calculates carbon using Jenkins et al. 2003 and Option 2 utilizes the biomass algorithms in the FVS Fire and Fuels Extension (FFE) Stand Carbon Report when run in default mode.</p> <p>Verifiers understand that the PP has produced their plot carbon totals utilizing FVS FFE and the CARBCALC keyword with the parameter for Jenkins et al. 2003 (not the default). Verifiers seek clarification regarding if the PP received approval/guidance from ACR to use the Jenkins et al. 2003 Stand Carbon Report from FVS as well as to use black oak coefficients (hard maple/oak/hickory/beech) as a reasonable substitution for “Other Hardwoods” (FIA Code 998). If ACR guidance/approval was provided, please provide.</p> <p>2.) Table 2 of the Stratification SOP includes the Total Carbon Stock by strata statistics. Using this table verifiers were unable to verify the “Strata Total MTCO2” for any given strata via multiplying the “Mean MTCO2 per Acre” by the “Net Prod Acres”. The PlotInitCarbonRosetta by Plot Summary were also aggregated and produced a different Mean MTCO2 per acre than those in Table 2 of the Stratification SOP. An example for Strata H_BA<90 is provided below:</p> <table><tr><th>Source</th><th>Strata</th><th>Mean MTCO2 per Acre</th><th>Net Prod Acres</th><th>Strata Total MTCO2</th></tr><tr><td>OPO</td><td>H_BA<90</td><td>99.72</td><td>858.41</td><td>85,605</td></tr><tr><td>VB</td><td>H_BA<90</td><td>99.72</td><td>858.41</td><td>85,601</td></tr><tr><td>PlotInitCarbonRosetta</td><td>H_BA<90</td><td>97.80</td><td></td><td></td></tr></table> <p>Verifiers seek clarification as to how these numbers were derived and why they differ. Please include strata and plot summaries in Excel so verifiers are able to track and check data and associated calculations to their source.</p>			Source	Strata	Mean MTCO2 per Acre	Net Prod Acres	Strata Total MTCO2	OPO	H_BA<90	99.72	858.41	85,605	VB	H_BA<90	99.72	858.41	85,601	PlotInitCarbonRosetta	H_BA<90	97.80			<p>RosettaStratificationSOP.pdf</p> <p>PlotInitCarbonRosetta.xlsx</p> <p>1. Based on update to V2.0 from V1.3/1.4 E&C, Jenkins is no longer a valid aboveground equation and must use default FFE settings for aboveground biomass despite belowground calculations using Jenkins as the default equation.</p> <p>2. Provide excel format of data for auditor to replicate calculations with true data that hasn’t been rounded to two decimal places.</p> <p>3. Verification depletion exercise to be completed</p>
Source	Strata	Mean MTCO2 per Acre	Net Prod Acres	Strata Total MTCO2																						
OPO	H_BA<90	99.72	858.41	85,605																						
VB	H_BA<90	99.72	858.41	85,601																						
PlotInitCarbonRosetta	H_BA<90	97.80																								

			<p>3.) Please provide carbon calculations for both the beginning of the reporting period and end of reporting period EORP time frames for verifiers to confirm values reported in the ERT Workbook and Monitoring Report.</p> <p>4.) Please add units to the headers in "PlotInitCarbonRosetta.xlsx" and update headers in associated tables and documents to be consistent.</p>	
			<p><u>June 8, 2023 Findings</u></p> <p>1.) Verifiers were able to confirm the PP updated the .key files and the Stand Carbon Report from FVS is now being produced in a way that aligns with Option 2 in the protocol. This issue item is closed.</p> <p>2.) Table 2 of the Stratification SOP requires revisions and/or clarification. Specifically, these include:</p> <p>a.) The Mean MTCO2 per acre appears not to account for defect (avg missing volume).</p> <p>b.) The sum of the Net Prod Acres does not align with the sum "NetProdAcr" in the attributes of Rosetta_StandsAndStrata_06022023.shp. All project acreages and calculations should reconcile between the GHG Plan, Monitoring Report, ERT Actuals, Plot/Strata Calcs, and the GIS information.</p> <p>c.) The Net Productive Acres multiplied by the Mean MTCO2 per Acre does not align with the Strata Total MTCO2.</p> <p>d.) Please provide these documents and supporting calculations in excel with more significant figures included in the calculations so we are able to verify the estimated carbon values.</p> <p>3.) Please provide plot level carbon summaries for the beginning of the reporting period taking into account defect and then the plots summarized to produce BORP and EORP/inventory strata statistics.</p> <p>4.) Verifiers were able to confirm the addition of units to the PlotInitCarbonRosetta table. This issue item is closed.</p> <p>One new finding was added:</p> <p>5.) Please update Raw_Cruise_Plots_Rosetta_05112023.xlsx to remove plot information where plots are no longer being considered as part of the project. Tree list data workbooks should be a matched set.</p>	<p><i>RosettaFVS20230602\PlotAsStands_.key</i></p> <p><i>Rosetta_Stratification_SOP.pdf</i></p> <p><i>Rosetta_StandsAndStrata_06022023.shp</i></p> <p><i>PlotInitCarbonRosetta20230602.xlsx</i></p> <p><i>Raw_Cruise_Plots_Rosetta_05112023.xlsx</i></p> <p><i>StrataCarbonWithDegrowAndCullRosetta20230602.xlsx</i></p>
			<p><u>June 23, 2023 Finding</u></p> <p>2.)</p>	<p><i>RosettaStratificationSOP20230620.dfx</i></p> <p><i>RosettaInventorySOP20230620.pdf</i></p>

			<p>a.) Verifiers understand the need to apply defect after FVS processing given that Damage and Severity do not impact the Stand Carbon Report. Therefore, defect will not impact variability in the strata statistics. During this review verifiers misunderstood the summary as it is believed to be the only representation (outside of <i>StrataCarbonWith DegrowandCullRosetta20230602-OriginalFVS</i>) that shows Inventory/EORP stocking. To avoid confusion in the future, please include in the StratificationSOP.pdf Table 2 title, that the values given are prior to defect removal.</p> <p>b.) Verifiers were able to confirm the NetProdAcres in the revised Rosetta_StandsAndStrata_Updated06152023.shp file match those in the carbon calculations. This issue item is closed.</p> <p>c.) Verifiers were able to confirm the calculation totals for Inventory, Degrown, and Degrown with defect removed using the acres presented in the GIS and StratificationSOP. This issue item is closed.</p> <p>d.) As stated above, verifiers were able to confirm the total carbon for Inventory, Degrown, and Degrown with defect removed using the strata means and acres presented in <i>StrataCarbonWith Degrowand CullRosetta 20230602.xlsx</i>. Please provide a fourth data set which would be used in developing Inventory/EORP total carbon that removes defect from the OriginalFVS output. Verifiers were able to confirm the defect values used by stand type but could not verify the “Live Tree CO₂ Project” in the ERT Calculations and in the Monitoring Report. The method used included taking the OriginalFVS output, deducting defect from “Aboveground_Total_Live (metric ton C/ac)”, adding that to the Belowground values, converting to mTCO₂e, multiplying by the acreage, and summing the total carbon stocks.</p> <p>3.) Verifiers were able to follow the Strata_Inventory_Explainer.pdf but were unable to find data to confirm the EORP/Inventory total carbon with defect removed (as indicated in 2d. above). Please confirm steps as outlined in <i>Strata_Inventory_S ummary_Explainer.pdf</i> and that those strata totals without defect have been included in <i>StrataCarbonWithDegrowAndCullRosetta20230602.xlsx</i>.</p> <p>5.) Verifiers were able to confirm in Raw_Cruise_Plots_Rosetta_Updated06192023 .xlsx that 282 plots were represented, and Strata acres were as found in GIS data, the InventorySOP.pdf and the StratificationSOP.pdf. This issue item is closed.</p>	<p><i>Rosetta_StandsAndStrata_Updated0615 2023.shp</i></p> <p><i>StrataCarbonWithDegrowAndCullRosetta 20230602.xlsx</i></p> <p><i>Strata_Inventory_Summary_Explainer.pdf</i></p> <p><i>Raw_Cruise_Plots_Rosetta_Updated061 92023</i></p>
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		<p>CruiseDataProcessingForCarbon document to include below ground or update calculations to be consistent with the description.</p> <p>8.) Accounting for the disconnect in 7 above, verifiers were able to confirm the WithCullStrata means in Table 5 of the Inventory SOP but when multiplied by the strata acres and summing could not generate the 2,878,055 mTCO2e at the beginning of the reporting period (BORP). Please provide verifiers with a workbook showing how the final value for the BORP was derived from the strata means (adjusted by defect).</p>	
		<p><u>December 6, 2023 Findings</u></p> <p>2a.) Verifiers were able to track through the Stratification SOP tables the steps at which cull was removed. This issue item is closed.</p> <p>2b.) Verifiers checked the degrown project start total carbon stocks to within 4 mtCO2e of 2,873,776.7 in Table 5 of the Inventory SOP. This represents only 0.0001% of the TCS. This issue item is closed.</p> <p>6.) Verifiers confirmed the PP calculated Uncertainty using their inventory plot carbon values prior to cull removal. This is in line with ACR IFM 2.0 Section 5.6 Equation 20. This issue item is closed.</p> <p>7.) Verifiers confirmed that cull was applied to aboveground carbon only estimates as specified in the Inventory SOP. This issue item is closed.</p> <p>8.) Verifiers confirmed the cruise and beginning of reporting period total carbon stocks using the latest acreages and cull application (aboveground only). This issue item is closed.</p> <p>All issue items have been resolved and thus this issue is closed.</p>	<p><i>RosettaStratificationSOP120123.pdf</i></p> <p><i>RosettaInventorySOP120123.pdf</i></p> <p><i>CruiseDataProcessingForCarbonInventoryRosetta20231122.pdf</i></p> <p><i>PlotCarbonInit_20231116_SOP_calcs.xlsx</i></p>
PP Response			
Date	PP Comment		Additional evidence submitted for review by PP
25-May-23	<p>1. PP has revised the biomass estimation technique to align with Option 2 of the IFM V2.0 methodology and set FVS FFE to its default state which calculates aboveground biomass using the default FFE allometric equations as opposed to the Jenkins extension, and calculates belowground biomass using the Jenkins equation which is the default output of FVS.</p> <p>2. PP has provided the stratification workup data in excel format as the differences in values are related to decimals that exist beyond the 2 that were rounded off for the stratification SOP document. Also, the PlotInitCarbonRosetta numbers reflect the original strata CO2 values but with defect applied to bring the mean CO2 per acre down to reflect inventory measurements. PP has also provided</p>		<p>StrataCarbonWithDegrowAndCullRosetta20230602.xlsx</p> <p>Rosetta IFM ACR 878 Monitoring Report.pdf</p>

	<p>StrataCarbonWithDegrowAndCullRosetta20230602 to demonstrate original strata level estimates and how the impacts of inventory degrowth and cull application impact mean CO2 values.</p> <p>3. Carbon calculations for beginning/end of reporting period have been included in Rosetta ERT Actuals Monitoring Report.xlsx and the Rosetta IFM ACR 878 Monitoring Report.</p> <p>4. Units have been added to the headers "PlotInltCarbonRosetta.xlsx".</p>	
22-June-23	<p>2.)</p> <p>a). Correct, the Mean MTCO2 per acre as shown in Table 2 of the Stratification SOP does not yet account for defect, as the process of degrowing and application of cull is explained in the Inventory SOP. Initial strata-level carbon estimates as shown in Table 2 of the Stratification SOP align with the values presented in Section 2.2.2 of the Inventory SOP which represents the starting point for application of degrowth and cull. This order of operations exists due to the need to apply cull deductions manually after FVS carbon estimate as the defect input column in FVS does not have an impact to carbon calculations.</p> <p>b). Rosetta_StandsAndStrata_Updated06152023.shp in Appendix I has been updated to correct a data error and display the correct net productive acres of the project as displayed in StrataCarbonWithDegrowAndCullRosetta20230602.xlsx, the Table 2 of the Stratification SOP, and Section 2.2.3 the Inventory SOP.</p> <p>c). The net productive acres as shown in StrataCarbonWithDegrowAndCullRosetta20230602.xlsx, Table 2 of the Stratification SOP, and Section 2.2.3 of the Inventory SOP multiplied by the Strata Mean MTCO2 per Acre aligns with the calculated Strata Total MTCO2 values of the tables. This calculation can be replicated in StrataCarbonWithDegrowAndCullRosetta20230602.xlsx by multiplying column C by Column F for all values in which column B is "OriginalFVS".</p> <p>d). The documents referenced in this PP response should allow for the VVB to verify the estimated carbon values.</p> <p>3.) Plot level carbon summaries are provided only for raw FVS output prior to strata aggregation due to the order of operations for the application of degrowth and cull as a result of how the FVS defect column does not impact carbon calculations as explained in Strata_Inventory_Summary_Explainer.pdf provided in Appendix D.</p> <p>5.) Raw_Cruise_Plots_Rosetta_Updated06192023.xlsx in Appendix F has been updated to remove plot information where plots are no longer being considered as part of the project. Additionally, "Strata" tab has been updated to display Total GIS and Net Productive Acres by strata to align with Stratification and Inventory SOP's as well as calculation workbooks. Total GIS acres as shown in Raw_Cruise_Plots_Rosetta_Updated06192023.xlsx and the Stratification SOP have been corrected from 32,489.74 to 32,489.56 which was the result of internal database rounding.</p>	<p>Rosetta_StandsAndStrata_Updated06152023.shp</p> <p>RosettaInventorySOP20230620.pdf</p> <p>Strata_Inventory_Summary_Explainer.pdf</p> <p>Raw_Cruise_Plots_Rosetta_Updated06192023.xlsx</p>
8-Sep-23	<p>2.)</p> <p>a.) Project Proponent has included a title for Table 2 in the Stratification SOP</p>	<p>RosettaStratificationSOP_20230908.pdf</p>

	d.) Data in originalFVS output now has defect removed.	<i>PlotCarbonRosetta20230908.xlsx</i>
1-Dec-23	<p>2a.) Project Proponent has updated the Stratification SOP and Inventory SOP to clarify where values shown are based on inventory data prior to cull removal or after cull has been applied.</p> <p>9.) Project Proponent has updated the uncertainty calculation to be expressed at time of inventory in PlotCarbonInit_20231116_SOP_calcs CruiseSummary tab in Appendix D. The "PlotCarbonInit_11162023" tab, column D has been updated from "Degrow_MTCO2Total" in the previous submission version to "Cruise_MTCO2Total". Table 2 of the Stratification SOP and Section E4 of the GHG plan have been revised accordingly with the updated uncertainty value.</p> <p>10.) Project Proponent has updated the defect application calculations to be applied to aboveground carbon only as described in the Inventory SOP.</p> <p>11.) Project Proponent has added columns to Inventory SOP to walk verifier from strata means at cruise time (no cull), strata means degrown to project start date (no cull), strata means degrown to project start date (cull applied), which is then multiplied by GIS acres to determine the BORP starting inventory value.</p>	<p><i>RosettaStratificationSOP120123.pdf</i></p> <p><i>Rosetta GHG Plan 120123.pdf</i></p> <p><i>RosettaInventorySOP120123.pdf</i></p>

<u>Verifier Issue</u>	<u>Issue ID:</u>	<u>23-2</u>	<u>Status:</u>	<u>Closed</u>	<u>Checked by:</u>	<u>MD/SB</u>	<u>Date Identified</u>	<u>19-May-23</u>
ACR Standard ref	GHG Plan Section	Significance	Issue Description				Comments	
ACR Standard (A.3.2); IFM Methodology v2.0 (3.0)	GHG Plan	Possible non conformance. <i>May impact materiality or conformance.</i>	<p>Verifiers have the following questions / concerns regarding Project Area Acres and Stratification:</p> <ol style="list-style-type: none"> 1.) Rosetta_StandsAndStrata.shp includes two columns Geo_Acres and NetProdAcr for a given Strata and County. The Productive indicator for all acres with a Strata designation other than #N/A is set to Yes. If that is the case, why do the values differ between the Geo_Acres and NetProdAcr differ? Verifiers seek clarification regarding the separation of acres within a polygon. Please provide a GIS shape file supporting the "NetProdAcr" project area as carbon calculations appear to only be based off these areas. 2.) In the RosettaStatificationSOP.pdf the PP states the non-productive areas (Strata #N/A) are areas excluded from the inventory so the VB assumes these are excluded from the carbon project. The PP further states the non-productive areas include "utility right-of-ways, roads and more". <p>In an initial review of the stands and strata boundaries over aerial imagery the PP finds some of these features correctly designated as non-productive however we also see numerous instances where these features are included within the forested / project strata.</p>				<p><i>Rosetta_StandsandStrata.shp</i></p> <p><i>RosettaStratificationSOP.pdf</i></p>	

			<p>Please provide a more detailed description of the stratification rules utilized for the exclusion or inclusion of roads, road rights-of-ways (if applicable), water resources (wetlands, ponds, rivers), landings, utility rights-of-ways, and other non-forest features within the project area so we can assess and verifier the delineation of the project area. If applicable, please include references to minimum mapping unit (if any) and spatial data sources (if utilized).</p> <p>Lastly, verifiers also request that any road, utility, hydrology or other public GIS data sources used in designating project areas be provided as shape files or public spatial data source links. (<u>Please note</u>: verifiers use QGIS and are unable to import/convert MXD file format).</p>	
			<p><u>June 8, 2023 Findings</u></p> <p>1.) Verifiers appreciate the explanation regarding the delineation of NetProdAcres. The difference between GIS_Acres and NetProdAcres is about 1,200+ acres across the project area. Please include a summary description in the Stratification SOP specifying the source data/features and the buffer distance parameters used in the SQL spatial intersection algorithm to explain the difference. Please provide all the supporting spatial data and associated attributes used in the SQL Spatial Intersection code. Verifiers are trying to ascertain the process steps, assumptions/constraints (if applicable), and the source data used so we can verify the NetProdAcres.</p> <p>2.) Verifiers acknowledge receipt of the Hydrology, Utility Lines, External and Internal roads layer provided by the PP. This issue item is closed.</p>	<p><i>Rosetta_Stratification_SOP.pdf(6/6/23)</i></p> <p><i>Rosetta_StandsAndStrata_06022023.shp</i></p>
			<p><u>June 30, 2023 Findings</u></p> <p>1.) Verifiers found the submitted <i>NetProdAcresCalculation_Explainer</i> PowerPoint and the supporting GIS files very helpful in clarifying the process utilized to determine the Net Productive acreage within the project area. Thank you.</p> <p>Upon reviewing these documents, verifiers (Alexa Kandarlis and Bill Stack) met with the PP (Jason Gibson and David Newton) on June 29, 2023 to discuss this process in delineating project area. Verifiers noted that nonproductive areas such as roads, water resources, utility right-of-ways, log decks/landings, and other NP areas, such as wildlife food plots, have been excluded from the sampling frame (i.e., inventory plots were constrained from allocation in these areas). Currently these noted areas (~1,200 acres), however, are being retained within the project area. As these areas represent non-productive areas (e.g., paved road) and are not</p>	<p><i>NetProdAcresCalculation_Explainer.pptx</i></p> <p><i>Rosetta_StandsAndStrata_Updated06152023.shp</i></p> <p><i>NetProductiveAcres_Example</i> (folder)</p> <p><i>Rosetta_WYInternal_Roads_Updated06152023.shp</i></p> <p><i>Rosetta_HydrologyLine_Updated06152023.shp</i></p>

		part of the sampling frame they should be removed from the project area. Please provide supporting documentation to justify retaining these NP areas or revise the project documents and associated spatial data to exclude them from the project area.	<i>Rosetta_UtilityLines_Updated06152023.shp</i>
		<u>October 3, 2023 Findings</u> 1.) Verifiers confirmed that the non-productive areas as previously defined were removed from the project calculations and spatial data. This issue item is closed.	<i>Rosetta_StandsandStrata_NoNP_Update07192023.shp</i>
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
25-May-23	<p>PP does not utilize a “Net Productive Acres” layer. Generally, most areas are configured to perform SQL spatial intersections against buffered line features (roads, utility right-of-way and hydrology) to clip non-productive features from the stand GIS area and allocate the non-productive acres appropriately. This operation is performed in SQL spatial and does not export a spatial layer, instead this operation simply updates the “Net Productive Acres” attribute within the stand layer.</p> <p>PP has delineated more non-productive areas, mainly wildlife food plots, that were not delineated as non-productive in the first round of submission.</p> <p>Map Metadata document in Appendix I will explain more detail on PP’s mapping data.</p> <p>Within the provided maps, PP primarily uses publicly available reference layers and basemaps from ESRI. Within PP’s internal spatial databases, internal layers for hydrology, roads, and utility layers are used to calculate net productive acres. Spatial data is generally digitized manually using the latest internal high-flight, NAIP, Sentinel, or Planet imagery. Stream lines are generally created using a combination of internal remote sensing data and/or public datasets. Internal remote sensing data may also be used to assist in digitizing roads. PP will provide internal spatial data for roads, streams, and utility lines within the project footprint to VVB.</p>	Map Metadata.docx	
22-June-23	<p>1.) Project Proponent has provided a summary description of the Net Productive Acres calculation in section 1.1 of the Stratification SOP specifying the source data/features and the buffer distance parameters used in the SQL spatial intersection algorithm. Project proponent has reproduced steps of the SQL spatial intersect script in QGIS in the provided NetProdAcresCalculation_Explainer.pptx file which demonstrates this calculation in fine detail. Project proponent has updated spatial data to include attributes required for calculating Net Productive Acres and provided supporting spatial data "intermediate layers" as referenced in NetProdAcresCalculation_Explainer.pptx in Appendix I, new folder NetProductiveAcres_Example.</p>	<i>Rosetta_StandsAndStrata_Updated06152023.shp</i> <i>Rosetta_WYInternal_Roads_Updated06152023.shp</i> <i>Rosetta_HydrologyLine_Updated06152023.shp</i> <i>Rosetta_UtilityLines_Updated06152023.shp</i> NetProdAcresCalculation_Explainer.pptx NetProductiveAcres_Example (folder)	

8-Sept-23	PP has removed all non-productive acres currently being accounted for in the Net Productive Acres calculation, as well as all acres included in non-productive strata from the project area.	Rosetta_StandsAndStrata_NoNP_Updated07192023.shp
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Verifier Issue	Issue ID:	23-3	Status: Closed	Checked by: BS	Date Identified	15-May-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR IFM Methodology v2.0 (4.2.2) & (7.3)		Non conformance. May impact materiality or conformance.	<p>To prepare for the upcoming site visit and duplicate the PP's inventory data collection methods for sampling, verifiers request detailed descriptions be added to the appropriate project documents that include the following:</p> <p>(1) Inventory Plot information –The Raw Cruise workbook (Plot tab) information regarding null plots, walk-through plots and cruiser comments (e.g., monumentation adjustments, plot center relocations, presence of “hard” edges, stratum observations and associated changes, etc.). These columns are blank.</p> <p>(2) Missing biomass – Please clarify the inventory data collection process for estimating total missing biomass (“defect”/“cull”). Based on the Carbon Cruise specifications, verifiers understand the cruiser assessed the percentage of missing biomass for the entire bole (at 10% increments). Verifiers intend to apply the same approach used by the PP during the site visit, however, we are unclear on the method: Did the cruiser assess individual areas of missing biomass within the bole, for example say there were 3 places in the bole that had missing biomass, and assess each area at 10% increment and then total up the final percentage missing? Or did the cruiser assess each area's percentage and then total them up and round to nearest 10%. Example: a tree with three areas of missing biomass (5%, 5% and 5%). Did the cruiser enter total missing biomass as 30% (i.e., 10%, 10%, 10%) or as 20% (15% summed up and then rounded to nearest 10%)?</p> <p>(3) Edge Plots –The data collection process for edge plots (plots along project boundaries or “hard” edges along strata edges (e.g., non-forest and forest strata)? How were edges defined and was there an edge plot methodology that was used (e.g., mirage, walk-through)? If so, what were the specifications for the cruiser to implement (e.g., identification features to determine the edge, measurements or flagging the distinct edge so we are able to verify the process was implemented as specified)?</p> <p>(4) Border-line trees – The method that cruisers used to assess trees along the plot radius to determine if they were in or out of the plot (i.e., assessment of limiting distance).</p>		<p><i>RosettaInventorySOP</i></p> <p><i>Raw_Cruise_Plots_Rosetta_05112023</i></p> <p><i>Rosetta Carbon Cruise Specs</i></p>	

		<p>(5) Rounding rules – The Carbon Cruise document notes for measuring DBH: <i>“If diameter tape reading is not exactly on 0.1” inch, take the next lower reading.”</i> Verifiers request clarifications on the rounding rules. For example, how did the cruisers record trees with DBH’s that were just shy of 2.0” (1.95”) or 5.56” or 12.94”? Please include the rounding rules in the Carbon Cruise document.</p> <p>(6) Blown down trees – How did cruisers assess and record live trees that had been blown over at plots during the inventory? Were they included in the plot carbon estimates?</p> <p>(7) Re-locating missing plot center – if a plot center is missing or disturbed, how does the PP intend to relocate these plots in subsequent inventories? How will they be relocated during the verifiers site visit if one is missing? Are there witness trees to aid in relocating plot centers (i.e., tree azimuth and distance records to plot center)?</p>	
		<p><u>June 12, 2023 Findings</u></p> <p>(1) Verifiers understand the Raw Cruise workbook (Plot tab) is the PP’s internal cruise template. This workbook was provided by the inventory contractor. Verifiers assume the blank plot information regarding the heading for null plots, walk-through plots and cruiser comments was not collected by the contractor. Is this correct?</p> <p>(2) Verifiers acknowledge the PP has added clarifications for the assessing defect/missing volume (cull) clarifications to the revised Rosetta_Inventory_SOP (Section 5 (4)) and that the SOP now incorporates the previously submitted Cruise Spec. Verifiers understand that less than 5% defect is not recorded and percentages above 5% are rounded to nearest 10%. Verifiers request further clarification on defect/cull estimates. Example: If 7% defect is observed in the bottom 1/3 of the tree and 7% is observed in the top of the tree, did the cruiser round each of those estimates to 10% each and then total those defects to 20%? Or did the cruiser add the two individual 7% defect observations to equal 14% and round down to 10%? This issue item will remain open until this process is clarified in the SOP.</p> <p>3) Verifiers have requested clarifications on how edge plots were assessed during the cruise. The PP has responded that clarifications have been added to revised Inventory SOP. We note that Section 4 of this SOP now includes the following specification:</p> <p><i>“If plots landed on the edge of a strata boundary, cruisers must move one chain into the stand boundary with the appropriate strata characteristics.”</i></p> <p>Based on this specification, verifiers assume the PP did not apply an edge plot methodology, such as the walk-thru method, to assess plots that fell along strata</p>	<p><i>RosettaInventorySOP (6/6/2023)</i></p> <p><i>Rosetta Carbon Cruise Specs</i></p> <p><i>Raw_Cruise_Plots_Rosetta_05112023</i></p> <p><i>Rosetta_06022023PlotLocations_Albers.s hp</i></p>

		<p>boundaries. Rather, the cruiser relocated the plot, away from the edge, into the designated stratum that the plot was intended for. Is this correct? If so, how often did this occur?</p> <p>Also, if plots were relocated one chain along strata boundaries, how did the cruiser determine the bearing for each plot re-location to avoid potential bias? Was a consistent approach utilized. While we understand the plot spatial data has been provided showing the final plot locations, verifiers do request these descriptive details are incorporated into the SOP both for long term monitoring (new plots added) and for understanding the cruise design and implementation.</p> <p>(4) The PP has added clarifications on the borderline tree assessment method in the revised <i>Rosetta_Inventory_SOP (Section 5 (5))</i>. This section states that “<i>trees that fall near the plot radius are assessed by pulling a measuring tape from the established plot center to the estimated pith center</i>”. We understand this assessment is based on distance between plot center and estimated center of tree pith and have the following questions:</p> <p>(a) Did cruisers assess this measurement at ground level or at 4.5 ft (DBH)?</p> <p>(b) We understand the project area is relatively flat with some local areas that contain moderate to steep slopes, did the cruisers assess slopes in determining in and out trees for plots that fell in these areas (i.e., calculating horizontal distance)?</p> <p>Please clarify and incorporate into the SOP.</p> <p>Items (5) & (6) regarding Rounding Rules and Blown down trees. The PP have provided the requested clarifications and have incorporated these specifications and details into the revised <i>Rosetta_Inventory_SOP</i> (dated 6/6/2023). These issue items are now closed.</p> <p>(7) Re-locating missing plot center. Verifiers did not find details explaining how plots will be relocated if they can't be found for future long-term monitoring/inventories or for the upcoming site visit in the revised <i>Inventory SOP</i>. Please explain and/or point out the location in the document where this is described if we missed it.</p> <p><u>One new finding was added:</u></p> <p>(8) Cruiser tree comments. Please provide detail on cruiser abbreviations pasted below that were provided in the Raw Cruiser Plot workbook. We are not familiar</p>	
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			<p>with what these mean. Cruiser abbreviations assist verifiers in understanding inventory observations during the site visit.</p> <p>B_MAPLE</p> <p>C</p> <p>CA</p> <p>Cjb</p> <p>JB</p> <p>MOVED</p> <p>OO</p> <p>OO_SKIPPED</p> <p>ooo</p> <p>S</p> <p>SF</p>	
			<p>June 30, 2023 Findings</p> <p>(1) The PP notes the headings used in the plot tab of the FRS Raw Cruise Data Batches 1, 2 and 3 workbooks (e.g., null plots column) are part of an existing PP inventory template. Verifiers understand that the inventory contractor did not record any plot information pertaining to null plots, walk-through plots or comments. This issue item is now closed.</p> <p>(2) The PP has provided the requested clarifications on methodology for assessing missing volume (“defect”), which has been incorporated into the revised Rosetta InventorySOP. Verifiers understand each individual measurement on a tree is rounded to the nearest 10% and then summed to obtain the total missing volume. This issue item is now closed.</p> <p>(3) PP has described the stratification process that included 10m buffer around strata and project boundaries, which constrained plot allocation along these boundaries. Verifiers understand that due to the buffer, no edge plots occurred and thus no edge plot methodology was utilized. This issue item is closed.</p> <p>(4) The PP has provided the requested clarifications on inventory methods for assessing borderline trees on slopes, which has been incorporated into the revised Inventory SOP. Verifiers understand that no slope correction table/coefficients were used to adjust for slope in calculating horizontal distance. Rather the PP corrected slope distances by holding the measuring tape horizontal (flat) noting that the measured end points did “not always align with DBH” (RosettaInventorySOP 20230620.pdf). The center of the tree, estimated location of the pith, was used in all measurements. This issue item is now closed.</p>	<p><i>Cruiser_Tree_Comment_Abbreviations.xlsx</i></p> <p><i>RosettaInventorySOP20230620.pdf</i></p> <p><i>Plot_Move_Explainer.xlsx</i></p> <p><i>Rosetta_ORIGINALPlots_Albers.shp</i></p> <p><i>Rosetta_06022023PlotLocations_Albers.zip</i></p> <p><i>Cruiser_Tree_Comment_Abbreviations.xlsx</i></p>

		<p>(7) Verifiers understand plot centers have been monumented with a plastic stake and a 20 penny nail. The latter of which would be used, along with a metal detector, to re-locate plot center in the event the stake could not be located or was disturbed. This issue item is closed.</p> <p>(8) The PP has provided the requested cruiser abbreviations in the Cruiser_Tree_Comment_Abbreviations.xlsx document. This issue item is now closed.</p> <p>As all issue items have been resolved; this issue is now closed.</p>	
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
25-May-23	<p>1. PP clarifies that the Plot tab of the cruise plot workbook is simply part an existing PP internal cruise template that was used to compile raw cruise data into one location. PP has provided raw cruise data worksheets as received from Forest Resource Services (cruise contractor) in the FRS Raw Cruise Data folder of Appendix F to show original cruiser comments as received by the PP.</p> <p>Items 2 through 8 have been incorporated into Rosetta_Inventory_SOP in Appendix D as the cruise specs file has also been integrated into this standalone SOP document.</p>	Raw Cruise Data as received from the cruise contractor	
22-June-23	<p>1.) Correct. The blank plot information regarding the heading for null plots, walk-through plots and cruiser comments was not collected by the contractor. Comprehensive cruise data as collected by the contractor and received by the Project Proponent can be viewed in the FRS Raw Cruise Data Batch 1, 2, and 3 files contained in the "FRS Raw Cruise Data" folder of Appendix F.</p> <p>2.) In the example provided where 7% defect is observed in the bottom 1/3 of the tree and 7% defect is observed in the top of the tree, each of those estimates would be rounded to 10% and totaled to 20%. The project proponent has clarified the process in the Inventory SOP using this example.</p> <p>3.) The project proponent has clarified with the internal inventory operations team that oversaw cruise implementation that no plots were relocated due to landing on the edge of a strata boundary. While this is part of the Project Proponent's standard internal cruise specification, cruisers were not given the directive to perform relocations from strata edges during field implementation. Cruisers were instructed to take the plots where they landed as relocation from strata edges was not necessary due to the 10 meter strata edge buffer applied during the plot distribution process and subsequent visual inspection of plot locations prior to cruise as described in Section 1.2 of the Inventory SOP. Reference to edge plot relocation method in Section 1.4 of the Inventory SOP has been removed to reflect this operational reality. The only plot relocations executed by the cruisers themselves were plots 137, 140, and 141 (See "MOVED" cruiser comments in Raw_Cruise_Plots_Rosetta_Updated06192023.xlsx) and this was due to active thinning harvest occurring on the stand in which these plots fell. The state of all relocated plots, whether moved by the project proponent or the three identified as moved by the cruisers, are explained in further detail in Plot_Move_Explainer.xlsx included in Appendix F.</p>	<p>Raw_Cruise_Plots_Rosetta_Updated06192023.xlsx</p> <p>RosettaInventorySOP20230620.pdf</p> <p>Plot_Move_Explainer.xlsx</p> <p>Cruiser_Tree_Comment_Abbreviations.xlsx</p>	

	<p>4.)</p> <p>a) Cruisers assessed the estimated center of tree pith at 4.5 ft (DBH) on relatively flat ground.</p> <p>b). On areas where more slope was present, the cruise contractor clarified to the Project Proponent that cruisers were able to measure center of tree pith while still holding a measuring tape flat, though this may not always align with DBH. Project proponent has clarified these details in the Inventory SOP.</p> <p>7.) Project Proponent points out that this process had been described in the Inventory SOP Section 1.4 Plot Installation, step 2 that a 20-penny nail is driven into the ground at plot center so that the plot can be relocated with a metal detector if needed in the case of surface disturbance that renders normal relocation efforts invalid.</p> <p>8.) Project Proponent has provided detail on the requested cruiser abbreviations in the Cruiser_Tree_Comment_Abbreviations.xlsx file provided in the "Field Inventory" folder of Appendix F.</p>	
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Verifier Issue	Issue ID:	23-4	Status: Closed	Checked by: BS	Date Identified	17-May-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR IFM Methodology (4.2.2) & (7.3)	Inventory SOPs	Non conformance. <i>May impact conformance; no materiality</i>	<p>As specified in the ACR IFM Methodology, please include the following descriptive details into the appropriate project documents:</p> <p>(1) The procedures for updating the forest inventory following harvests or natural disturbances such as from insects, fire, wind events, etc. Procedures should include such items as threshold acreage needed to trigger an update (e.g., areal extent, MBF/acre impacts), types of events, implementation timing of plot remeasurement, and plot allocation & densities (e.g., determination of new plots installed).</p> <p>(2) The project's data management systems and processes. Verifiers acknowledge some aspects of the QA/QC process it summarized in Section D of the GHG plan, however, additional details are needed on the overall process from data collection to carbon calculations to reporting (e.g., QA/QC steps for inventory data collection and transfer, carbon calculation checks, GIS spatial data for strata/re-stratification (attributes used), harvest wood products accounting, overall management of the QA/QC process (staff completing checks), and archiving records/ long term document storage).</p>		<p><i>RosettaInventorySOP</i></p> <p><i>Rosetta GHG Draft 5-15</i></p> <p><i>Rosetta Carbon Cruise Specs</i></p> <p><i>RosettaStratificationSOP</i></p>	
			<u>June 12, 2023 Findings</u>			

			This issue remains open and under review – pending resolution on other issues within this Issues Log.	
			<p><u>October 10, 2023 Findings</u></p> <p>(1) As noted in the revised Inventory SOP, following a significant natural disturbance (e.g., insects, blowdown, fire), the PP plans to update the project stocks by completing a re-inventory along with the installation of any new plots (if needed). This process will be completed with the same methods (random grid orientation) and at the same plot density (acres/plot) as the original inventory. Verifiers understand the PP plans has selected a 15% acreage natural disturbance threshold for triggering a re-inventory for each stratum impacted. Please explain the rationale for selecting a disturbance area of greater than or equal to 15% of the stratum area to initiate a re-inventory in the impacted strata areas. Also, please clarify if the 15% area threshold is a cumulative acreage for a given stratum (i.e., pine beetle impact that covers numerous stands within a stratum that are isolated pockets spread out over the project area) or whether the 15% area only applies to a contiguous area within a stratum (e.g., localized blowdown disturbance).</p> <p>Also, verifiers are seeking additional information that outlines the annual monitoring procedures for assessing the 15% disturbance thresholds (e.g., aerial imagery assessments, drones, on site observations) and protocols for assessing the natural disturbance area to determine if the >15% area threshold has been met. Please provide further details on the monitoring system used to track disturbances and management/implementation steps that will be taken to assess if a re-inventory process of the disturbance area is warranted.</p> <p>(2) Verifiers acknowledge the PP has added the requested details on the project's overall QA/QC process in the revised project documents (Inventory SOP and GHG Plan). In addition, during the September 2023 site visit, verifiers met members of the Weyerhaeuser's forest carbon team to discuss further details on the QA/QC process for internal storage, record keeping and overall monitoring of the carbon project at the Brookhaven field office (WY staff included Anne Watts, Tommy Tadlock, David Newton, Donna ? and Jason Gibson). The PP provided details, clarifications, and demonstrations of WY's internal Forest Management System (FMS). Verifiers understand the PP routinely conducts audit cruises during the inventory data collection process and stores all project data on internal WY servers (FMS) and cloud-based backup systems for long term record keeping. As part of the QA/QC process review, the PP also provided a demonstration of WY's internal Log Inventory and Management System (LIMS) which tracks timber harvest products and accounting for track and report long term storage of carbon in harvest wood products. The PP has provided the request details on the QA/QC process as a result this issue item is closed.</p>	<p><i>RosettaInventorySOP09192023</i> <i>Rosetta GHG Draft 09222023</i></p>

		<p><u>December 6, 2023 Findings</u></p> <p>(1) PP has clarified significant natural disturbance area is based on cumulative acreage for a given stratum (rather than contiguous disturbance area). PP has also described the annual monitoring procedures that would be utilized to identify and quantify such disturbance areas (satellite & aerial imagery, drones or site visit observations). For clarity in the project's long term monitoring procedures, please include a description in the Inventory SOP to clarify these assessment details and methods.</p> <p>Verifiers understand the 15% disturbance area threshold is based on strata-level allowable error that was utilized for the inventory. The logic for establishing this threshold appears questionable: one is based on allowable error (%) while the other threshold is based on an area (ac). We are struggling to see how these are directly connected. Won't a threshold based on a set area (e.g., X disturbance acreage) be more applicable and add more clarity for long term monitoring when strata acreages could be changing over time?</p> <p>From a practical perspective, the 15% threshold does appear reasonable though for the smaller strata (for a stratum that is ~1,000 acres, that equates to ~150 acres disturbance threshold). For larger strata, however, this can correspond to a relatively large disturbance area for triggering a re-inventory (e.g., strata P 6-10 year old, has 6,655 acres, 15% disturbance threshold = ~1,000 acres). Verifiers concern is that such a relatively large disturbance area, if not re-inventoried or adjusted in some way following a disturbance, could lead to potential risks for over estimating stocks.</p> <p>Also, if a natural disturbance occurs below the 15% threshold, for example within a larger strata area (700 acres in the P 6-10), how will this relatively large area be tracked and accounted for in estimating project stocks? Will it be restratified when the event occurs? As noted in this section of the Inventory SOP, will such events follow a similar internal WY accounting process as disturbance areas associated with forest management activities (harvesting)?</p>	RosettaInventorySOP120123
		<p><u>March 7, 2024 Findings</u></p> <p>Verifiers find that Section 2.5 of the revised Inventory SOP includes the requested monitoring details and the inventory processes for areas impacted by natural disturbances. This section of the revised SOP states disturbance monitoring and quantification will be completed annually using satellite and aerial imagery with additional drones and onsite observations used if deemed necessary.</p> <p>The revised inventory SOP describes the threshold for triggering an inventory update as <i>"the lesser of 15% of the cumulative acreage or 250 cumulative acres within a given stratum being impacted by the disturbance."</i> Verifiers concerns regarding</p>	RosettaInventorySOP03012024.pdf

		<p>relatively large disturbance areas not being re-inventoried if 15% of the strata is disturbed are resolved by the limitation that 250 disturbed acres in any one strata will trigger a re-inventory (regardless of strata size). This accounts for the potential risk in over-estimating project stocks in strata with more acres following a disturbance.</p> <p>To account for natural disturbance below the 15% threshold the SOP indicates, “Disturbances requiring silvicultural action such as replanting or salvage harvests will be restratified similar to the process utilized during a routine harvest activity”. Re-stratification would reallocate the acres to strata with carbon stocking more in line with that of the actual acreage. Verifiers find this approach verifiable and reasonable for monitoring the project stocks following a natural disturbance event. This issue is closed.</p>	
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
25-May-23	<ol style="list-style-type: none"> 1. PP has included procedures for updating the forest inventory in Rosetta_Inventory_SOP and 2. PP has added detail to section D the Rosetta GHG Plan document to elaborate on the project’s data management systems and processes. 		
1-Dec-23	<ol style="list-style-type: none"> 1. The 15% disturbance threshold was selected for consistency with our stratification work, which used strata-level allowable error of 15% for the initial inventory. The Project Proponent clarifies that the 15% area disturbance threshold is based on cumulative acreage for a given stratum. In the example listed by the VVB, a “pine beetle impact that covers numerous stands within a stratum that are isolated pockets spread out over the project area” would trigger this threshold as opposed to only contiguous disturbances. The annual monitoring procedures primarily utilize satellite and aerial imagery to identify and assess disturbances and can utilize drones or on-site observations if necessary. If a disturbance is detected, the impacted acreage will be quantified and digitized in GIS using satellite or aerial imagery gathered following the disturbance activity and assessed against the total stratum acreage to determine whether the 15% disturbance threshold has been triggered in order to require a re-inventory cruise. As noted by the VVB, re-inventory procedures will follow the original inventory data collection processes as outlined in the Inventory SOP. 		
1-Mar-24	<ol style="list-style-type: none"> 1. PP has included description of disturbance assessment methods and details in the revised Inventory SOP. Based on verifier’s feedback, the disturbance threshold has been revised in the Inventory SOP to be the lesser of 15% of stratum acreage or 250 acres of a given stratum in order to reduce the risk of over estimating project stocks in larger strata which could withstand relatively large acreage disturbances without reaching the 15% threshold based on the example provided by the verifier. Though relatively large disturbances will no longer be possible without triggering an inventory remeasurement, disturbances that require silvicultural action (replanting a burned stand following wildfire, salvage harvest following wind/bug damage) will be restratified similar to the process utilized during a routine harvest activity. 	RosettaInventorySOP03012024.pdf	

Verifier Issue	Issue ID:	23-5	Status: Closed	Checked by: BS/DD	Date Identified	15-May-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR IFM Methodology (4.2.2) & (7.3)	Inventory SOP	New information request. <i>May impact materiality or conformance.</i>	Verifiers request information be added to the Inventory SOP or other appropriate project document that provides details on the inventory process including the actual dates of inventory data measurements; method of data collection (data recorders used); transfer/downloading data (process, frequency, QA/QC checks); navigation process to plot centers (instruments used and method used to determine one was at the specified plot center); and the number of cruisers the inventory contractor used to conduct the inventory. Also, as specified in Section 6 of the Carbon Cruise document, verifiers understand checking cruising was completed to ensure the inventory methodology was being implemented as designed. Verifiers request additional information on the check cruising process that includes the dates completed, plots checked, cruiser/check-cruiser names, check cruise scorecards for plots, and overall results/summary of check cruising process (percentage of plots checks, inventory corrections/changes implemented). Lastly, was check cruising completed by staff from Weyerhaeuser or by the inventory contractor?		RosettaInventorySOP Rosetta GHG Draft 5-15 Rosetta Carbon Cruise Specs	
			<u>June 12, 2023 Findings</u> Verifiers confirm that PP has provided the requested inventory details and have included these in the revised Rosetta_Inventory_SOP. The PP has also provided the requested documents regarding the check cruise process. This issue is considered closed.		WY Check Cruise Scorecard Documents	
PP Response						
Date	PP Comment				Additional evidence submitted for review by PP	
25-May-23	PP has added detail to Rosetta_Inventory_SOP to include dates of inventory data measurement, method of data collection, transfer/downloading process, navigation process to plot centers, and the number of cruisers used by the inventory contractor to conduct the inventory. PP has added detail to RosettaInventorySOP to include dates of check cruise completion, check cruiser names, and clarified that check cruising was completed by Weyerhaeuser staff. Additionally, check cruise scorecards have been provided in the WY Check Cruise Data folder of Appendix F.				WY Check Cruise Scorecard Documents	

Verifier Issue	Issue ID:	23-6	Status: Closed	Checked by: BS/DD/SB	Date Identified	17-May-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR IFM Methodology v2.0 (4.2.2) & (7.3); ACR V&V (7 & 9)	Inventory/ Carbon Cruise Specs	New information request. <i>May impact materiality or conformance.</i>	As specified in Section 3(f) of the Carbon Cruise document, verifiers understand cruisers did not collect GPS points at plot center unless the plot center was relocated (Section 3 (I)). To help verifiers relocate these plots during the site visit, please provide the shape files for these relocated plots.		Rosetta Carbon Cruise Specs	
			<p><u>June 12, 2023 Findings</u></p> <p>Verifiers acknowledge the PP has provided the spatial data for the final plot allocation. Verifiers conducted a GIS spatial analysis of the original plot allocations (spatial plot data 5/15/23) and the recently submitted plots (6/6/2023). Verifiers found the plot locations to be the same except for 17 plots that have been dropped from the revised plot spatial data.</p> <p>We understand 16 plots were associated with the <i>P_Age=1 to 5</i> stratum, which according to the revised Stratification SOP (Section 1), have a small amount of carbon; this stratum, even though plots were installed and measured, is assumed to now have zero carbon. Verifiers are unclear, however, why Plot 296 within Stratum <i>P>25_TPA230</i> has been dropped. Please explain.</p> <p>Additionally, the Inventory SOP indicates, for example in Section 2, that the initial plot allocation for some plots may have changed prior to the inventory (e.g., GIS analysis -if the plot fell into a non-productive area such as a road). There are also specifications that indicate plots may have been relocated during the cruise (e.g., if the plot did not land within the strata that was assigned to it based on the pre-cruise stratification process; or if the plot fell along a strata boundary).</p> <p>Verifiers are trying to reconcile what plots were initially selected (i.e., the random plots selected from the grid, prior to relocating any plots that fell into non-productive areas) that were changed pre- and post-inventory. To help us understand these changes, please provide the inventory plot spatial data for each step of the process for the project area (or for each strata if there are individual grids for each stratum): (1) the grid and the selected random plots (prior to relocating any plots); (2) the plots relocated due to falling in a non-productive area (pre-inventory); and (3) plots relocated by cruisers after the inventory was completed.</p>		<p>Rosetta_2023PlotLocations_Albers.shp(5/15/2023)</p> <p>Rosetta_06022023PlotLocations_Albers.shp</p> <p>Inventory SOP</p> <p>Stratification SOP</p>	
ACR IFM Methodology v2.0 (5.1)			<p><u>July 5, 2023 Findings</u></p> <p>Verifiers understand Plot 296 was removed from the plot list as the stand around this plot within Stratum <i>P>25_TPA230</i> was recently harvested. As the recent strata</p>		Rosetta_06022023PlotLocations_Albers.shp	

		<p>spatial data still shows the same strata type where Plot 296 was previously located prior to the harvest, we assume this area was harvested after the end of the reporting period (4/30/2023). Is that correct?</p> <p>If that is the case, the trees within Plot 296, prior to harvest, can still be included in the estimate for total project stocks during the reporting period if supporting harvest evidence, such as log load trip tickets with associated dates, is provided. If harvest occurred during the reporting period, verifiers assume the strata type would need to be revised. Please clarify as appropriate.</p> <p>The PP has provided clarifications on the process used to initially allocate plots and how plots were re-located, if needed if they landed in a nonproductive area (offset back into the stratum of interest using a random chain length and bearing). Verifiers acknowledge these requested steps have been incorporated into the revised Inventory and Stratification SOPs. Verifiers understand individual grids were constructed within an R script and random plots allocated. Spatial data for these stratum-generated grids were not provided by the PP and we understand this step was completed internally in R which did not produce grid outputs.</p> <p>In reviewing the submitted files, verifiers note approximately 19 plots of the total 282 plots (7%) have been offset from their original plot location. These include: (1) 16 plots relocated in GIS prior to inventory data collection as they landed in a nonproductive area (e.g., Plots 106, 109, and 214) and (2) three plots moved by the inventory contractor due to harvest or incorrect strata to be sampled (e.g., Plot 137). The extent of relocation of these latter three plots is unknown as verifiers are not clear on the original allocated plot locations.</p> <p>Based on past voluntary verification projects and associated ACR guidance, verifiers understand that plot offsetting has not been allowed. To clarify the current status of plot offsetting, verifiers consulted with ACR (Andrew Taylor, Gabriel Burns, and Kurt Krapfl) on June 28, 2023.</p> <p>On July 5, 2023, ACR provided the following guidance (Kurt Krapfl): <i>"The inventory needs to be representative of the project area. Purposely offsetting plots from edges or to avoid harvests introduces potential bias and shouldn't be practiced. Post stratification is allowable following disturbance but the area still needs to be represented by taking plots where they lie or potentially other indisputably conservative methods."</i></p> <p>Please review and revise project documents as needed to comply with this guidance.</p>	<p><i>NetProdAcresCalculation_Explainer.pptx</i></p> <p><i>RosettaStratificationSOP20230620</i></p> <p><i>Plot_Move_Explainer.xlsx</i></p> <p><i>Rosetta_StandsMergedByStrata_10mInnerBuffer.shp</i></p> <p><i>plot_helper_Updated06212023.R</i></p> <p><i>Rosetta_OriginalPlots_Albers.shp</i></p> <p><i>Rosetta_WYMMovedPlots_Albers.shp</i></p> <p><i>Rosetta_PlotWYMoveLine.shp</i></p> <p><i>RosettaInventorySOP20230620.pdf</i></p> <p><i>Map Metadata_Updated06192023.docx</i></p>
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		<p>Lastly, verifiers note Plot 161 appears to have originally landed in the intended sampling area (in the chosen stratum and not in a nonproductive area) and did not need to be offset. Please review and clarify or revise as appropriate.</p>	
		<p><u>October 3, 2023 Findings</u></p> <ol style="list-style-type: none"> 1.) <u>Plot 296</u>: The plot move explainer states the following: <i>"In Final Plot List?: No, Comments: Plot 296 fell within the unharvested portion of the suspended harvest associated with plots 293, 294, and 295 but was later clearcut. To maintain plot integrity for the audit <u>we chose to drop this plot.</u>"</i> This plot was not dropped from calculations and was included in the final plot list. Please reconcile the Plot Explainer Spreadsheet and the Final Plot List. 2.) <u>Plot 161</u>: Verifiers were able to confirm offsetting of 66 feet given the Plot_WYMoveLine.shp layer. Verifiers also understand that this offsetting occurred prior to inventory given its proximity to a roadway and that this plot was dropped from the final plot list. This issue item is closed. <p><u>The following issues and points of clarification regarding plot allocation were derived from the latest project documents following the inventory of edges and the re-inventory of interior areas necessary to account for unsampled project acres and plot offsetting.</u></p> <ol style="list-style-type: none"> 3.) <u>Plot 299</u>: The plot move explainer states the following: <i>"In Final Plot List?: No, Comments: Plot installed in freshly thinned stand, stand information was updated to reflect thinned state and the plot's assigned strata was updated accordingly."</i> This plot was included in the Final Plot List. Please reconcile the Plot Explainer Spreadsheet and the Final Plot List. 4.) <u>Plots 127-131</u>: These plots <u>changed</u> from the P_Age=14to16 TPA435 strata to P_Age=14to16_TPA230. Please include a note in the Plot Move Explainer justifying this change. 5.) <u>Plots 333, 386, 387</u>: Verifiers understand that these edge plot locations were generated to meet the target "Additional Plots on Buffer" counts in the updated StrataStats_nPlotsRecalculated workbook. Please update the Plot Move Explainer with the additional plots and add comments regarding why these plots were dropped. 6.) <u>All Additional Plots</u>: Please confirm all additional plots were kept in their originally assigned strata. 	<p><i>Plot_Move_Explainer_IncludeAllPlots_Updated09122023</i></p> <p><i>Original/Rosetta_PlotWYMoveLine.shp</i></p> <p><i>StrataStats_nPlotsRecalculated.xlsx</i></p>

		<p>7.) <u>Updated Plot Explainer workbook</u>: To avoid confusion on later reviews of this project, verifiers request that the Plot Explainer spreadsheet be updated to include all plots that were generated, dropped, offset, or inventoried as well as an attribute about their Establishment (Original, Additional (Edge/Interior), Dropped). This would give reviewers a single repository of plot information where “In Final Plot List” can be used as a filter to generate the final plot list used in the calculations.</p>	
		<p><u>December 6, 2023 Findings</u></p> <p>1.) <u>Plot 296</u> - Verifiers were able to confirm that Plot 296 was updated to “In Final Plot List” – Yes in the Plot Move Explainer workbook. This is consistent with its inclusion in the carbon calculations for the project. This issue item is closed.</p> <p>3.) <u>Plot 299</u> – Verifiers found that Plot 299 was updated to “In Final Plot List” – Yes in the Plot Move Explainer workbook. This is consistent with its inclusion in the carbon calculations for the project. This issue item is closed.</p> <p>4.) <u>Plots 127-131</u> – Verifiers confirmed the PPs strata update to these plots tracks with the project’s development. Comments in the StrataStats_Calcs_20230605.xlsx indicate “Upon cruising it was discovered that some of the stands in these strata had been thinned, and as a result a new strata P_Age=14to16_TPA230 was created post-cruise using the thinned stands from these strata.” The plots are appropriately summarized as such in the Plot Move Explainer Workbook. Potential issues regarding the restratification will be raised under Issue 23-12 going forward. This issue item is closed.</p> <p>5.) <u>Plots 333, 386, 387</u>: Verifiers find these plots to contain a comment of “When cruiser GPS indicated they had arrived at the plot location the cruiser observed that they were across the ownership boundary line. As a result, this plot was not installed.” in the Plot Move Explainer workbook. Given their proximity to the edge of the project area this is reasonable. Concerns regarding the dropping of plots required to adequately sample the edge proportionately to the interior will be raised under Issue 23-7. This issue item is closed.</p> <p>6.) Verifiers acknowledge this confirmation given that new plot allocation. This issue item is closed.</p> <p>7.) Verifiers appreciate the updates made to the Plot Move Explainer to create a central plot history repository given the complexities of plot allocation on this project. The document has been confirmed to accurately capture the</p>	<p><i>Plot_Move_Explainer_12012023.xlsx</i></p> <p><i>StrataStats_Calcs_20230605.xlsx</i></p>

		plot history for all plots in the initial allocation and the additional ones. This issue item is closed.	
		As all issue items have been resolved; this issue is now closed.	
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
25-May-23	PP provided a shapefile of all carbon cruise inventory plots in an updated copy of 2023PlotLocations_Albers.zip which reflects the plots as implemented on the ground, accounting for any plot centers that may have been relocated and had the new GPS coordinates recorded by the cruise contractor.		
22-June-23	<p>As noted in Plot_Move_Explainer.xlsx, Plot 296 fell within the unharvested portion of a suspended harvest, but was clearcut after measurement when harvest activities resumed. To maintain plot integrity for the audit, the Project Proponent chose to drop this plot from the inventory.</p> <p>Plot Allocation Request:</p> <p>(1). Original state plot location spatial data, which incorporated the 10 meter strata edge inner buffer as provided in Rosetta_StandsMergedByStrata_10mInnerBuffer.shp prior to any relocations has been provided in Rosetta_OriginalPlots_Albers.shp located in Appendix I (folder RandomPlotSelectionFiles). Rosetta_strata_points_Updated06212023.R has been updated in Appendix D to reflect attribute names within Rosetta_StandsMergedByStrata_10mInnerBuffer.shp, as Rosetta_StandsMergedByStrata_10mInnerBuffer.shp is used in the R script to distribute plots within each strata.</p> <p>(2). Plot location spatial data state following relocation of plots found to fall in non-productive areas of productive strata (adjustments made prior to cruise start date) has been provided in Rosetta_WYMovedPlots_Albers.shp located in Appendix I. Rosetta_PlotWYMoveLine.shp has also been provided in Appendix I to show the angle and distance plots in Rosetta_OriginalPlots_Albers.shp were relocated to their location as displayed in Rosetta_WYMovedPlots_Albers.shp. The shapefile Rosetta_WYMovedPlots_Albers.shp reflects what was provided to the cruise contractor prior to cruise start date.</p> <p>(3). Plots 137, 140, and 141 were relocated by the cruisers during implementation of the inventory from the unthinned portion of a stand being actively thinned into the thinned portion. While this was not how the cruiser was instructed to take the plots, they did this with the intent of avoiding plot disturbance as a result of ongoing thinning harvest activities. Final plot locations which account for the relocation of these three plots by the cruise contractor as well as plots moved/replaced by the Project Proponent are provided in Rosetta_06022023PlotLocations_Albers.shp which was provided to the VVB with the project submission on 6/6/23.</p> <p>The steps of this plot allocation and relocation process are described in Section 1.2 of the Inventory SOP. Map Metadata_Updated06192023.docx has also been updated to include details on the additional shapefiles provided. Lastly, Plot_Move_Explainer.xlsx gives additional details on the three plots moved by contractors (137, 140, and 141) as well as any other plots that were dropped, replaced, and/or relocated during the cruise.</p>	<p>Plot_Move_Explainer.xlsx</p> <p>Rosetta_StandsMergedByStrata_10mInnerBuffer.shp plot_helper_Updated06212023.R</p> <p>Rosetta_strata_points_Updated06212023.R</p> <p>Rosetta_OriginalPlots_Albers.shp</p> <p>Rosetta_WYMovedPlots_Albers.shp</p> <p>Rosetta_PlotWYMoveLine.shp</p> <p>RosettaInventorySOP20230620.pdf</p> <p>Map Metadata_Updated06192023.docx</p>	

8-Sept-23	<p>1.) Plot 296 was harvested after the reporting period and will remain dropped as it landed on the border of the area that had already been clearcut and should have received a walk-through method sample under the updated cruise specifications. Since this plot area was harvested between the two inventory sample collections, a proper walk-through plot was unable to be installed in August. The dropping of plot 296 was factored in when determining the appropriate number of additional sample plots to be taken in the August inventory.</p> <p>2.) The 19 plots identified as having been offset will be dropped from the project in order to comply with ACR guidance.</p>	
1-Dec-23	<p>1). <u>Plot 296</u> – Originally the Project Proponent had planned to remove all plots that were harvested after inventory cruise was performed. As such they were marked as “in final plot list = No” to indicate that they should not be in the final plot list. After discussions with the auditor, we were advised these plots could remain in the final plot list even though they were harvested. The “in final plot list” column was not properly updated for this plot, it should have said “in final plot list = Yes”. The Plot Explainer spreadsheet and Final Plot List have been updated accordingly to reflect this plots inclusion.</p> <p>3). <u>Plot 299</u> - The “in final plot list” column was not properly updated for this plot, it should have said “in final plot list = Yes”. The Plot Explainer spreadsheet and Final Plot List have been updated accordingly to reflect this plots inclusion.</p> <p>4). <u>Plots 127-131</u> – Plots 127-131 have not changed strata in the carbon calculations. The “Original Planned Strata” of “P_Age=14to16_UT435” differs from “P_Age=14to16_TPA435” in that the “UT” designated strata were used to initially plan for the project stratification and included Plots 127-131 before the creation of the “P_Age=14to16_TPA230” strata which has been used for these plots since the first batch of submitted project documents. “P_Age=14to16_UT435” when initially planned included all stands with TPA under 435 prior to the creation of the “P_Age=14to16_TPA435” and “P_Age=14to16_TPA230” strata. Project Proponent has noted this in the Plot Move Explainer and the creation of the “P_Age=14to16_TPA230” strata is explained in Section 1.2.1 of the Inventory SOP.</p> <p>5). <u>Plots 333, 386, 387</u> – These plots have been added to the Plot Move Explainer and comments have been added as to why they were dropped.</p> <p>6). Confirmed, all additional plots remained in their assigned strata</p> <p>7). The plot explainer spreadsheet has been updated to include all plots that were generated, dropped, offset, or inventoried, as well as an attribute about their establishment (Original, Additional (Edge/Interior), Dropped) with the columns “Additional or Original”, “Additional Plot Type”, and “Plot Action”. See “Plot_Move_Explainer_IncludeAllPlots_Updated10302023.xlsx”.</p>	Plot_Move_Explainer_12012023.xlsx

Verifier Issue	Issue ID:	23-7	Status: Closed	Checked by: BS/SB/EM	Date Identified 17-May-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description	Comments	
ACR IFM Methodology v2.0 (4.2.2) & (7.3); ACR V&V (7 & 9)		New information request. <i>May impact materiality or conformance.</i>	As noted in the Carbon Cruise Specs document (Sections 2 & 3), verifiers understand plots were randomly allocated. Please provide the descriptive steps used in the appropriate project document (e.g., methods, constraints, inputs). If a GIS algorithm (e.g., python code) was utilized please provide as well (note: verifiers utilize QGIS).	Rosetta_2023PlotLocations_Albers Rosetta Carbon Cruise Specs Map Metadata	
			<u>June 7, 2023 Findings</u> Verifiers understand an R script was used in this process as noted in the PP’s revised Inventory SOP (Section 2) and request this R script.	Rosetta_Inventory_SOP (6/6/23 submittal)	
			<u>June 7, 2023 Findings</u> Verifiers acknowledge submittal of the requested R script document and associated clarification documents.	Plot Allocation Code folder: plot_helper.R Rosetta Plot Distribution Method.md Rosetta_strata_points.R	
			<u>June 12, 2023 Findings</u> Verifiers acknowledge the PP has added descriptive details on the plot allocation process within the revised Inventory SOP (Section 2). Upon review, we request additional information and/or clarifications on the plot allocation process. Specifically, these include: (1) Please include a definition of a “randomly oriented grid rotation” and the general steps associated with developing this grid within the Inventory SOP (Section 2) for clarity and long-term monitoring. We understand detail descriptive steps are embedded in the R script. (2) Based on the PP’s response to Issue item 23-6 above, please provide the initial grid specifications (X & Y -bearing and distances) within the Inventory SOP depending on whether one grid was used for the entire project area or individual grids were used for each stratum. (3) Please provide input and output shape files generated by the R script.	Inventory SOP Stratification SOP Plot allocation code folder	
			<u>July 3, 2023 Findings</u> (1) The PP has included the requested definition of a “randomly oriented grid rotation” along with the steps associated with developing this grid and the selection of plots within the revised Inventory SOP. Verifiers acknowledge a summary	RosettaInventorySOP20230620.pdf plot_helper_Updated06212023.R Rosetta_StandsMergedByStrata_10mInnerBuffer.shp	

		<p>schematic of this process has also been incorporated into this SOP to provide further clarity. This issue item is closed.</p> <p>(2) Verifiers understand the PP's process to develop the plot grid occurs internally within the R script, which creates individual grids within each stratum. Output grids are not produced in this process and thus have not been provided.</p> <p>The challenge for the verification process is: (a) we don't know what the PP's criteria was for selecting the number of plots for each stratum (to verify if that was implemented as intended) and (b) we don't have a grid to check to see if those plots were spatially accurate – correct locations. Is it possible for the PP to write an R script to generate spatial data that would satisfy our needs? Can the grid used for each strata be recreated and provided to verifiers?</p> <p>(3) The PP has provided the requested information utilized for inputs and the outputs generated in running the R script in the plot allocation process. This process has been clarified and adequately described in the revised Inventory SOP. This issue item is closed.</p>	<p><i>Rosetta_OriginalPlots_Albers.shp</i></p> <p><i>Rosetta_WYMovedPlots_Albers.shp</i></p> <p><i>Rosetta_PlotWYMoveLine.shp</i></p>
		<p><u>October 12, 2023</u></p> <p>(2a) Verifiers have received the document illustrating how the original number of plots for each strata were derived, verifiers have completed a partial review and while no issues were noted, the issue will remain open while the check is completed.</p> <p>(2b) Verifiers have confirmed the randomization process of the R script provided. While an approximation of the grid would be useful, verifiers are reasonably assured that original plot allocations are consistent with the script provided. This issue is considered closed.</p>	<p><i>StrataStats_nPlotsRecalculated.xlsx</i></p>
		<p><u>December 6, 2023 Findings</u></p> <p>(2a) Verifiers have reviewed the plot allocation workbook and the additional plots necessary to meet the sampling intensity on the edges of the project area given acreage proportions. Verifiers found two strata edges that were not sampled as anticipated given the dropping of plots 333, 386, and 387 which fell outside the project area (two plots in P_Age=11to13_TPA435 and one plot in P_Age>19_TPA435). ACR Guidance (7/5/2023) regarding sample area buffering required the PP to install plots at the same weighted proportion as the interior areas. The removal of these three plots without a suitable random replacement results in the strata edge area being under sampled in these strata as required by ACR guidance.</p>	<p><i>Plot_Move_Explainer_12012023.xlsx</i></p> <p><i>StrataStats_nPlotsRecalculated.xlsx</i></p> <p><i>ACR Guidance via email from Kurt Krapfl received on 7/5/2023</i></p>

		Additional findings are also provided in Issue #23-18. As this same issue is being concurrently addressed there, this issue item for #23-7 is now considered to be closed. Please refer to Issue 23-18 for further information.	
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
25-May-23	PP has added a description of how cruise plots were randomly allocated to the Rosetta_Inventory_SOP document.		
7-June-23	PP email from David Newton: <i>"We've provided the following folder Plot_Allocation_Code within Appendix D. MEASUREMENT PROTOCOL with the requested R scripts and a short markdown file description written by the senior inventory analyst who assisted our team with the plot allocation."</i>	Plot Allocation Code folder: <i>plot_helper.R</i> <i>Rosetta Plot Distribution Method.md</i> <i>Rosetta_strata_points.R</i>	
22-June-23	1.) Project Proponent has included additional information on the plot allocation process through adding the definition of randomly oriented grid rotation and the general steps associated with developing these grids to Section 1.2 of the Inventory SOP. Additional detail has been incorporated into plot_helper_Updated06212023.R through comments explaining where random angle rotation and plot allocation functions are each occurring within the provided R scripts. 2.) Project Proponent has provided an explanation of initial grid specifications in Section 1.2 of the Inventory SOP. 3.) Project Proponent has provided input and output shapefiles generated by the R script in our response to Finding 23-6 above.	RosettaInventorySOP20230620.pdf plot_helper_Updated06212023.R Rosetta_StandsMergedByStrata_10mInnerBuffer.shp Rosetta_OriginalPlots_Albers.shp Rosetta_WYMovedPlots_Albers.shp Rosetta_PlotWYMoveLine.shp	
8-Sept-23	2.) a.) PP has provided a document to illustrate how original number of plots for each strata were derived. b.) It is not possible for the PP to write an R script to generate the spatial data associated with a grid that can be guaranteed to match the original grid, as this is a randomized process.	StrataStats_nPlotsRecalculated.xlsx	

Verifier Issue	Issue ID:	23-8	Status:	Closed	Checked by:	BS/SB	Date Identified	18-May-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description				Comments	
ACR Standard v7, ACR IFM Methodology v2.0 (2.4)	GHG Plan	New information request. <i>May impact materiality or conformance.</i>	The GHG Plan (Section A6) notes: <i>"The Rosetta IFM project will achieve GHG reductions and removals by maintaining existing forest cover and growing more biomass than will be harvested, reducing commercial harvest volumes to below what would have been achieved in a business-as-usual context. This will be accomplished through extended rotations and by generally reducing harvest below what could have been achieved in the baseline scenario."</i>				Rosetta GHG Draft 5-15	

		<p>Verifiers request the PP define the <i>business-as-usual</i> practice within the GHG Plan and the proposed extended rotational age for harvesting that is planned for this project.</p> <p>Lastly, verifiers request a copy of the PP’s Environmental Management Plan for its Southern Timberlands.</p>	
		<p><u>June 12, 2023 Findings</u></p> <p>Verifiers confirmed the business as usual practice has been described in the revised GHG plan Section B5, which states the baseline model includes a regime with “artificial regeneration of clearcut stands with loblolly pine seedlings at a planting density of approximately 500 trees per acre, with a single thinning treatment applied between age 14 and 20 leaving a residual stand density of approximately 150 to 200 pine trees per acre post-thin. This scenario assumes clearcut final harvest of pine stands, typically in the mid-20s age range, and a 30% basal area removal thinning treatment applied to hardwood stands...”. This aligns with the typical even-aged management prescription stated for the dominant forest type (loblolly pine) in the PP’s supporting document (<i>Managing Loblolly Pine Stands...from A to Z</i> prepared by the University of Arkansas): a clear cut area is planted at 400-700 pine trees per acre; thinned at 12 and 15 years old; and final harvest between 25-35 years.</p> <p>The revised GHG Plan (Section E2) describes the Project Scenario as being determined using the mixed integer programming model accounting for carbon values with some additional constraints to ensure the project’s objective of reducing timber production, as stated in Section A6, is obtained. Verifiers request additional descriptive information be incorporated to the GHG Plan regarding the outcomes of the integer programming model as it relates to rotation age and specifics on the “extra constraints” and “more strict constraints” applied that were mentioned in the GHG Plan. Verifiers will need this information in confirming the inputs and outputs of the baseline and project model runs in addition to confirming additionality and long-term monitoring during the crediting period.</p> <p>Verifiers understand the EMP is not a stand-alone document but rather comprised of various sections that address individual aspects of environmental management that are applicable to the project area (part of the Southern Timberlands division). The PP has provided the noted sections of the EMP and this issue item is closed.</p>	<p><i>Rosetta GHG Plan.pdf</i></p> <p><i>Managing Loblolly Pine Stands from A-Z.pdf</i></p> <p><i>Table 14. Applicable laws and regulations in the project area and Weyerhaeuser’s compliance</i></p>
		<p><u>June 28, 2023 Findings</u></p> <p>Verifiers understand the PP is in the process of providing supporting documents that describe the inputs and outputs of the baseline and project modeling to address the request for additional clarification and specifications on the Project Scenario. The PP intends to add this information to sections E1 and E2 of the forthcoming revised GHG</p>	

		plan as well as provide further clarification during an upcoming baseline model review call. Thus, this issue remains open.	
		Verifiers understand the PP will address this issue item after the site visit.	
		October 23, 2023 Findings Pending PP response.	
		December 6, 2023 Findings Verifiers find that the revised GHG Plan includes requested descriptions around the fundamental differences in the baseline and project scenarios. Specific to the baseline, the GHG Plan references limitations considered around SMZs, adjacency and opening size constraints, maximum harvest level and maximum harvest acres per year, delivered wood volume target at tactical level and harvest flow fluctuations. The project scenario describes maximizing the total of timber NPV and carbon values over harvest timber NPV. Verifiers understand this was completed by not harvesting in the project SMZs and reducing the delivered wood volume due to a 5-year increase in the average rotational age for pine stands. This issue is closed.	<i>Rosetta GHG Plan 120123.pdf</i>
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
25-May-23	PP has defined the <i>business-as-usual</i> practice in the GHG Plan and added a description of project action as it relates to harvest activities. PP has provided sections of the EMP in Appendix E (Biodiversity, soil disturbance, T&E species, stocking requirements), though the EMP does not exist in a single standalone document. PP can provide additional sections of the EMP upon request.		
22-June-23	Project Proponent is currently developing standalone model explainer documents that describe the inputs and outputs of the baseline and project modeling exercises in detail and will support a modeling-specific working session call with the VVB. These model details will be added to sections E1 and E2 of the GHG plan following VVB model review.		
1-Dec-23	Model Constraints were discussed with the VVB during the Baseline Model Review call on October 27, 2023. As indicated in the response to IL item 23-25, Project Proponent has added descriptive details to Section E2 of the GHG plan regarding the changes to SMZ harvest constraints and clearcut rotational ages for the loblolly pine plantations. The project scenario reflects an extension of the average clearcut rotational age by 5 years during the 20 year crediting period as can be derived from the oCcAvgAge output in the allrep_Baseline and allrep_Project model output files. This extended rotation age accomplishes the gain of reducing delivered wood volume at a tactical level.	<i>Rosetta GHG Plan 120123.pdf</i>	

Verifier Issue	Issue ID:	23-9	Status:	Closed	Checked by:	BS/DD	Date Identified	18-May-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description					Comments
ACR IFM v2 (4.2.2)		New information request. <i>May impact materiality or conformance.</i>	In the Stakeholder list within the PP’s responses to the S&A’s document request list (data request checklist), verifiers request contact information for the inventory contractor (Jerry Lambert, Forest Resource Services LLC). We were not available to find this information during a web search.					<i>Data_Request_Checklist</i>
			<u>June 12, 2023 Findings</u> The PP has provided the requested contact information for Jerry Lambert in the revised Organization/stakeholder document. This issue is closed.					<i>Revised Organization Chart.doc</i>
PP Response								
Date	PP Comment						Additional evidence submitted for review by PP	
25-May-23	PP has included this contact information in an updated organization chart/stakeholder list to be provided to the VVB.						<i>Revised Organization Chart.doc</i>	

Verifier Issue	Issue ID:	23-10	Status: Closed	Checked by:	BS/DD	Date Identified	19-May-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments	
ACR IFM Methodology v2.0 (4.2.2); ACR V&V (7 & 9)		Clarification. <i>May impact materiality or conformance.</i>	The PP uses tree age (stand) as one aspect to delineate strata. Stand ages are provided in the strata attribute table (stands and strata spatial data). Verifiers request clarification on how stand ages have been determined (e.g., remote sensing, tree cores, planting records, etc.) and how they will be tracked for long term monitoring for potential re-stratification that will likely occur in subsequent reporting periods. Please include this information in the appropriate project document(s).			RosettaStratificationSOP Rosetta_StandsAndStrata.shp	
			<u>June 12, 2023 Findings</u> PP provided clarification on determining stand age in the Rosetta_Stratification_SOP. Verifiers understand that PP based tree/stand age on internal stand planting records in Weyerhaeuser internal inventory databases.			RosettaStratificationSOP (6/6/2023)	
PP Response							
Date	PP Comment					Additional evidence submitted for review by PP	
25-May-23	PP has specified in the stratification SOP document that stand age as used to stratify the footprint is determined based on planting records stored in PP’s proprietary internal GIS Inventory Management system. These age records will be updated on an annual basis and will account for clearcut harvest and artificial regeneration activities as executed through time.						

Hardwood stands were subsequently stratified without age as a determining factor as these are natural stands without verified established planting records.

Verifier Issue	Issue ID:	23-11	Status: Closed	Checked by: DD/BS	Date Identified 12-Jun-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments
ACR Standard v7 (A3.2, 3.3); IFM Methodology v2.0 (2.2, 3.0)	B3	Possible non conformance. <i>May impact materiality or conformance.</i>	<p>Verifiers completed spot data checks on roads and associated road right-of-way (ROW) widths for potential county and state roads within the project area. Verifiers utilized the noted roads spatial data information provided by the PP to complete these initial checks.</p> <p>Verifiers found several instances where paved county roads are within the project area (non-productive strata). In numerous other situations, state highways and county roads have been removed from the project area while other county (local) roads and some highway segments have been included in the project area (within productive strata).</p> <p>For example, Cole Rd (a county road), east of plot 182 has not been entirely placed into non-productive strata and parts of Cole Rd are included within productive strata. Another example is State Hwy 28 approximately 8.7 miles east of Fayette, Mississippi: Hwy 28 has been removed from project area in segments, however, in some segments the project area stretches across the road and ROW and old Hwy 20B (a road segment adjacent to Hwy 28) has not been removed from productive strata. Please see the attached pdf that includes screen shots of these examples for additional clarification.</p> <p>Through our recent conversations with county officials(Jimmy Bass, Franklin County, President of Board of Supervisors), and Mississippi Department of Transportation Planning Group (Andy Daughdrill), verifiers understand ROW widths vary throughout the state and between counties. County and state road ROW widths can typically range from 6'-30' from centerline and state road ROWs from 20'-150' from centerline, respectively.</p> <p>Verifiers understanding is that lands owned by non-project participants, such as county and state roads owned, should be excluded from the project area (and from the estimate of project carbon stocks). Please review and revise project documents as appropriate. Verifiers also request a description on the specifications, methods, and data sources the PP used to determine what roads and associated ROW widths</p>		<p><i>Rosetta_WYExternal_Roads.zip</i></p> <p><i>Rosetta_WYInternal_Roads.zip</i></p> <p><i>Rosetta_StandsAndStrata_06022023.shp</i></p> <p><u>Verifier provided attachment:</u> <i>Rosetta_IL_23-11_RoadOverlap.pdf</i></p>

		have been included/excluded within the project area be added to the Stratification SOP.											
		<p><u>June 30, 2023 Findings</u></p> <p>The PP has provided additional road, hydrology, and utility buffer spatial data detailing the procedures the PP used to buffer stands and strata within the project area. For roads, verifiers understand some roads and associated rights-of-way (ROWs) widths have been excluded from the project area while some other roads have been included within the project area but have been delineated as non-productive. Listed below are more specific clarifications needed in the process to include/exclude roads within the project area.</p> <p>(1) <u>Road width (buffers)</u></p> <p>Verifiers are seeking details on the procedures the PP used to delineate road width buffers. The verifiers understand there are various road types within the project area as tabulated in the Map Metadata_Updated6192023 (shown below).</p> <table><tr><th><u>Attribute Name</u></th><th><u>Description</u></th></tr><tr><td><u>RoadID</u></td><td>Internal Identification number of the road, used for internal lookup purposes.</td></tr><tr><td><u>RoadDesc</u></td><td>Description of Road</td></tr><tr><td><u>RoadTypeID</u></td><td>Type of Road (i.e. Woods, Haul, etc.). Abandoned roads are no longer maintained but may still be used as trails to allow public recreation access (i.e. hunting leases). Road Type IDs: 0 = Unknown Type 1 = Abandoned 2 = Haul 3 = Woods 4 = Public 5 = Surplus 6 = Planned 7 = Private 8 = Railroad</td></tr><tr><td><u>BufferWidt</u></td><td>Width of buffer that should be applied to road (in feet)</td></tr></table> <p>Verifiers request further details on if/how the PP used road type classifications to define and delineate the road widths (including ROW widths). For example, South Spur Bill Road is classified as road type 2 (Haul). It has a buffer width of 15’ while road T7N-R3E is also a road type 2 (Haul) but has a buffer width of 25’. Additionally, Bill Arnold Rd, is a road type 4 (public), but has the same width (15’) as South Spur Bill Road, road type 2(Haul). This information along with the Road ID is summarized below. These road examples are located near plot 174.</p>	<u>Attribute Name</u>	<u>Description</u>	<u>RoadID</u>	Internal Identification number of the road, used for internal lookup purposes.	<u>RoadDesc</u>	Description of Road	<u>RoadTypeID</u>	Type of Road (i.e. Woods, Haul, etc.). Abandoned roads are no longer maintained but may still be used as trails to allow public recreation access (i.e. hunting leases). Road Type IDs: 0 = Unknown Type 1 = Abandoned 2 = Haul 3 = Woods 4 = Public 5 = Surplus 6 = Planned 7 = Private 8 = Railroad	<u>BufferWidt</u>	Width of buffer that should be applied to road (in feet)	<p><i>Map Metadata_Updated6192023</i></p> <p><i>Stands AllBufferDifference-Stands_AllBufferDifference.shp</i></p> <p><i>Rosetta_StandsMergedByStrata_10mInnerBuffer.shp</i></p> <p><i>Rosetta_WYInternal_Roads.zip</i></p> <p><i>Rosetta_WYExternal_Roads.zip</i></p> <p><i>Road Buffer.shp</i></p> <p><i>NetProdAcresCalculation_Explainer.pptx</i></p>
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<u>BufferWidt</u>	Width of buffer that should be applied to road (in feet)												

Road ID	Road Description	Buffer Width (Source: Road Buffer.shp)	Road Type(Source: Metadata_Updated6192023)
194000114	South Spur Bill	15'	2-Haul
194000222	T7N-R3E	25'	2-Haul
1000465855	Bill Arnold Rd	15'	4-Public

Based on our road width spatial data checks, road types do not appear to consistently correlate with road buffer widths. Verifiers are trying to ascertain the criteria utilized for establishing road and ROWs buffer widths to confirm methods are consistently and accurately applied within the project's spatial data. Please provide clarification for the procedure(s) used to define and delineate road types and associated ROW buffer widths.

(2) Inclusion/Exclusion of Roads within the Project Area

Verifiers realize there are numerous roads and road types within the project area that have different purposes for forest management; some of these roads have been incorporated into productive strata while others have been placed within the nonproductive stratum. We note some examples below that need further clarifications and/or revisions.

Verifiers have located roads, some paved, that have not been buffered from the project area and remain included in productive strata such as Sullivan Road (Rosetta_WYInternal_Roads.shp), a paved local road, near plot 183. This road has not been removed from the project area and is currently within the productive strata.

Willie Neyland Road, near plot 277, is included in the non-productive strata within the project area. Verifiers believe this to be a local, county road while internal WY roads adjacent to Willie Neyland Road (Rosetta_WYInternal_Roads.shp) have been buffered and removed from the project area.

Another example of public roads being included in the project area is Dry Fork Road, near plot 282 and State Highway 28 north of plot 298 that have been included in non-productive strata.

Verifiers understanding, based on previous verification projects, is (a) roads that are excluded from the sampling frame should be excluded from the project area and associated total project acreage; and (b) all roads not owned by the PP such as public roads should be removed from the project area and excluded from non-productive strata as those entities are not listed as a project proponent.

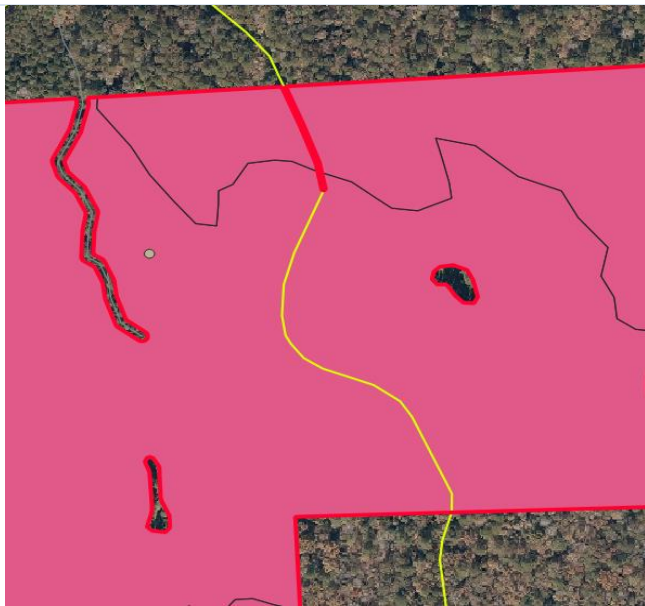
			Please review and revise as appropriate to clarify the road delineation methods including any criteria used to include/exclude roads from the project area and/or to justify the inclusion of roads not within the sampling frame that are being included in the project area.	
			<p><u>October 9, 2023 Findings</u></p> <p>(1) Verifiers understand the road right-of-way (ROW) width designations are made at the local level by planning/road foresters. Many of the previous noted project boundary overlaps of the ROWs have been removed in the revised spatial data. However, through spot checks of the revised spatial data, verifiers still observe some overlaps of project strata/area onto these ROWs. For example, northeast of plot 72, Serepta Rd. Here, the ROW is included within the project area and appears to not be adequately buffered. Another example exists along Macedonia Rd., east of plot 278 approximately 750'. Verifiers understand some minor ROW overlaps (<1 acre) exist along project boundaries and edges depending on aerial imagery quality and projection. Verifiers are requesting the more significant ROW discrepancies be reviewed and revised as these tend to overestimate the project area and the associated project stocks. Please review the external/public road ROW overlaps, and revise and/or clarify as appropriate. Also, please update the Rosetta Inventory SOP to include road width classifications and road identification types to clarify the road delineation process.</p> <p>(2) Verifiers understand that many external roads and non-productive areas have been removed from the sampling frame and the revised project area (<i>Rosetta_StandsAndStrata_NoNP_Updated7192023</i>). Verifiers appreciate the efforts made by WY to remove all non-productive areas and external roads.</p> <p>However, verifiers are still observing some public roads within the project area that we believe should be removed from the project area. Some examples include: Willie Neyland Road, a local road immediately south of Plot 157; Hiram McGraw rd, a local, paved road, East of plot 323; and Bruce Road. There are likely other existing external roads still in the project area. Please review and revise/clarify as appropriate.</p>	<p><i>Rosetta_StandsAndStrata_NoNP_Update d7192023</i></p> <p><i>Rosetta_WYExternal_Roads.zip</i></p> <p><i>Rosetta_PlotLocations_AllCombined</i></p>
			<p><u>December 6, Findings</u></p> <p>(1) Verifiers appreciate the efforts of the PP to remove roads from the Rosetta project area. Verifiers confirm that PP has provided updates to the Rosetta Inventory SOP (1.2, Pg. 2) that include a description of road width classifications and road id types. This issue item is closed.</p> <p>(2) Verifiers continued spot checks of roads within the updated project area and strata files (<i>Rosetta_StandsAndStrata_NoNP_Updated 11162023</i>) provided by the PP. Verifiers clipped the external road layer (<i>Rosetta_WY_External_Roads</i>) to the project area and though there are many minor/insignificant overlaps,</p>	<p><i>Rosetta_StandsAndStrata_NoNP_Update d11162023</i></p> <p><i>Rosetta_WY_External_Roads.shp</i></p> <p><i>RosettaInventorySOP12012023</i></p>

verifiers located several roads with more than 200' of overlap that remain in the project area. This issue item remains open pending PP's review and removal of all significant public road overlaps and public road inclusions within the project area.

A couple of examples are shown below:



Area is east of Plot 53. Yellow line is public road (~1,500 ft). Red is project area boundaries

			
		<p>Area is east of Plot 223. Yellow line is public road. Red is project area boundaries.</p>	
		<p><u>March 7, 2024 Findings</u></p> <p>Verifiers review of the revised project spatial data found the areas east of Plot 53 and east of Plot 223 have been removed from the project area. The revised spatial data has removed approximately 16 acres of project area that were associated with roadway delineations and small parcels that were isolated by these road removals.</p> <p>Verifiers were able to confirm the only Internal roads to overlap with the project acres were <i>RoadTypeID = 1</i> which were synonymous with woods roads and trails that were included in the original sampling frame. The external roads layer was intersected with the project area and areas of overlap were confirmed to be associated to slight differences in delineation. Verifiers are reasonably assured the revised project area has now removed the requested roads. Thus, this issue can now be closed.</p>	<p><i>Rosetta_WYInternal_Roads_Updated11162023.shp</i></p> <p><i>Rosetta_WYInternal_Roads_Updated12182023.shp</i></p> <p><i>Rosetta_StandsAndStrata_NoNP_Update d12192023</i></p>
PP Response			
Date	PP Comment		Additional evidence submitted for review by PP
22-Jun-23	As stated in the updated Inventory SOP: "In some cases, road and/or utility right of ways are pre-designated as non-productive in our internal databases. Through this buffering and removal process, all utility and road right of ways (as well as non-productive hydrology areas) are removed from the overall stand acres as part of the net productive acres calculation.". An example of this process has been provided in NetProdAcresCalculation_Explainer.pptx in Appendix I.		<p>RosettaInventorySOP20230620.pdf</p> <p>NetProdAcresCalculation_Explainer.pptx</p>

8-Sept-23	Road type does not necessarily correlate with a designated road width. This attribute was included only for navigation purposes. Road buffer widths are determined and assigned by local planning/roads foresters. Roads excluded from sampling frame and roads not owned by the PP will be removed from the project along with all other non-productive areas being removed as referenced in Finding 23-2's reference to net productive acres calculation.	
1-Dec-23	1). The Project Proponent has reviewed all roads and ROWs in the project and added additional roads and/or buffers as appropriate and addressed VVB examples provided. Section 1.2 of the Inventory SOP has been updated to include references and description of road width classifications and road identification types to better clarify the road delineation process. 2). As stated in #1, all roads and ROWs in the project have been reviewed and additional roads have been digitized and/or buffered as appropriate and VVB examples addressed.	<i>RosettaInventorySOP120123.pdf</i> <i>Rosetta_StandsAndStrata_NoNP_Updated11162023.shp</i> <i>Rosetta_ProjectFootprint_11162023.shp</i> <i>Rosetta_WYInternal_Roads_Updated11162023.shp</i> <i>Rosetta_UtilityLines_Updated11162023.shp</i>
1-Mar-24	2. PP has reviewed significant public road overlaps with the project footprint meeting the criteria utilized by the VVB and have corrected these instances to be removed from the project area. Project acreage changes related to these removals have been incorporated into all relevant project documents and carbon stock calculations.	<i>RosettaInventorySOP03012024.pdf</i> <i>RosettaStratificationSOP03012024.pdf</i> <i>Rosetta GHG Plan 03012024.pdf</i> <i>Rosetta_ProjectFootprint_12192023.shp</i> <i>Rosetta_StandsAndStrata_NoNP_Updated12192023.shp</i> <i>Rosetta_WYInternal_Roads_Updated12182023.shp</i>

Verifier Issue	Issue ID:	23-12	Status: Closed	Checked by: MD/EM	Date Identified	12-Jun-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR IFM Methodology v2.0 (3.0, 4.2.2)		Clarification. May impact materiality or conformance.	Verifiers note that the Section 3 of the Stratification SOP details a method used to update strata based on field observations. Verifiers require further detail regarding when and how strata were updated and detail on which strata polygons and plots were affected. The clarification should include an explanation of the process used to account for the difference in sampling intensities when stands (or parts thereof) are switched to a different stratum.		<i>RosettaStratificationSOP</i> <i>Rosetta_StandsAndStrata.shp</i>	

		<p><u>July 5, 2023 Findings</u></p> <p>Verifiers acknowledge that the “Plot_Move_Explainer” document describes the changes that were made to the plots and the strata polygons during the inventory. Given the inventory was pre-stratified, verifiers have concerns regarding the changes made to visited plots/strata polygons based on field observations. Verifiers have not seen an explanation of the potential impact or bias on the inventory that can result when a portion of the stands within a stratum are updated based on field observations and have some additional questions, which are listed below.</p> <p>The pre-stratification is used to determine the classification of strata polygons and the allocation and placement of plots, if field data is used to update the stratification for only a portion of the stands/polygons, what assurance is there that the variability that exists in the original strata is represented in the sample? The fact that updates were made to the stands/strata polygons based on field data means that the pre-inventory strata had some error/variability and unless all stands/polygons were visited and updated there is concern that the variability across the pre-inventory strata is no longer represented by the inventory.</p> <p>Please clarify the reasoning and any potential bias that resulted from updating the strata during measurement given that the inventory was pre-stratified.</p>	Plot_Move_Explainer.xlsx																																								
		<p><u>October 14, 2023 Findings</u></p> <p>Verifiers note that the following plots are still used in the calculations but had a stratum change as compared to their original allocation, can you clarify the source of these changes and provide justification for their inclusion?</p> <table border="1"> <thead> <tr> <th>PlotID</th><th>Original Strata</th><th>Final Strata</th><th>PlotType</th></tr> </thead> <tbody> <tr> <td>127</td><td>P_Age=14to16_TPA435</td><td>P_Age=14to16_TPA230</td><td>Original</td></tr> <tr> <td>128</td><td>P_Age=14to16_TPA435</td><td>P_Age=14to16_TPA230</td><td>Original</td></tr> <tr> <td>129</td><td>P_Age=14to16_TPA435</td><td>P_Age=14to16_TPA230</td><td>Original</td></tr> <tr> <td>130</td><td>P_Age=14to16_TPA435</td><td>P_Age=14to16_TPA230</td><td>Original</td></tr> <tr> <td>131</td><td>P_Age=14to16_TPA435</td><td>P_Age=14to16_TPA230</td><td>Original</td></tr> <tr> <td>146</td><td>P_Age=17to19_TPA125</td><td>P_Age=17to19_TPA520</td><td>Original</td></tr> <tr> <td>188</td><td>P_Age=17to19_TPA435</td><td>P_Age=17to19_TPA520</td><td>Original</td></tr> <tr> <td>189</td><td>P_Age=17to19_TPA435</td><td>P_Age=17to19_TPA185</td><td>Original</td></tr> <tr> <td>216</td><td>P_Age=20to22_TPA185</td><td>P_Age=20to22_TPA125</td><td>Original</td></tr> </tbody> </table>	PlotID	Original Strata	Final Strata	PlotType	127	P_Age=14to16_TPA435	P_Age=14to16_TPA230	Original	128	P_Age=14to16_TPA435	P_Age=14to16_TPA230	Original	129	P_Age=14to16_TPA435	P_Age=14to16_TPA230	Original	130	P_Age=14to16_TPA435	P_Age=14to16_TPA230	Original	131	P_Age=14to16_TPA435	P_Age=14to16_TPA230	Original	146	P_Age=17to19_TPA125	P_Age=17to19_TPA520	Original	188	P_Age=17to19_TPA435	P_Age=17to19_TPA520	Original	189	P_Age=17to19_TPA435	P_Age=17to19_TPA185	Original	216	P_Age=20to22_TPA185	P_Age=20to22_TPA125	Original	
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			299	P_Age=14to16_TPA520	P_Age=14to16_TPA230	Original	
			<u>December 7, 2023 Findings</u> Verifiers have reviewed the changes to the strata assignments and are satisfied with the changes related to the update to the stratification used on the project area. The remaining questions surround the updates to plots 146, 189, 216, and 299. Verifiers are seeking clarification as to whether the strata and stand delineation changes related to these plots would have occurred without the installation of a plot in the area. Verifiers need to confirm that any strata or stand delineation updates are the result of a systematic update that is applied equally across the entire project area. When updates are linked to only plot installation the range of variability within the strata is no longer captured. If the variables and systems used to apply the stratification across the entire project area prior to the field inventory are resulting in deviances on the ground, those deviances need to be reflected in the measured plots to accurately measure the within-stratum variability. Please clarify if and how the strata designation and stand delineations in the areas surrounding plots 146, 189, 216, and 299 would have been updated if these areas had not been visited during the field inventory.				
			<u>March 7, 2024 Findings</u> Verifiers have reviewed the response provided in conjunction with the GIS spatial data and satellite imagery and are reasonably assured that the updates to the strata were made in a systematic manner across the project area. This issue is considered closed.				
PP Response							
Date	PP Comment					Additional evidence submitted for review by PP	
22-Jun-23	Project Proponent has included detail on when and where strata were updated and which strata polygons (Stands tab) and plots (Plots tab) were affected by these updates in Plot_Move_Explainer.xlsx. In cases where sampling intensity of a given strata was impacted by a proactive strata update due to active or suspended harvest, replacement plots for the originally designated strata were added to the inventory sample in lieu of those plots either dropped or incorporated into their newly updated strata.					Plot_Move_Explainer.xlsx	
8-Sept-23	Updates to strata based on field observations were related only to harvest activity, which represents a small portion of the overall plots. These updates were made to increase the accuracy of the inventory estimates to reflect the strata on the ground instead of what was reflected from GIS system data. To solve this, we will drop all the replacement plots.						
1-Dec-23	All plots in the original plot list experienced a change in stratum assignment when the stratification for the entire project was updated from the “TH” and “UT” strata designation to the “TPA” stratification. The original strata were used to allocate the number of plots per strata, which is why we included this attribute in the plot list. We later realized that the original stratification design did not fully represent the diversity of stands in the project, so we decided to update the stratification for the project. After updating the project stratification, plot locations were maintained but the strata assigned to that plot was updated accordingly if it fell within one of the newly added strata					Plot_Move_Explainer_12012023.xlsx	

described in Section 1.2.1 of the Inventory SOP (i.e. plots were taken where they fell). Thus, despite the change in strata assignment on these plots, they were kept in the project as they still represented the stand that they fell within. In some cases, harvest activity also caused the stratum assigned to the plot to change. In the case of plots 146, 189, 216, and 299, thinning activity in or around the plot prior to installation led to a change in the strata assigned to these plots (see table below). Thus, the strata were updated to match the appropriate strata of the stand. To ensure desired confidence intervals were maintained, plot statistics were re-run and more plots were added to strata that no longer met the desired confidence interval when installing additional plots. The calculations for these additional plots (which were measured during the August additional plot inventory effort) can be seen in the provided document: "GHG Plan & Validation Documents\Appendices\F. INVENTORY AND PLOT LIST\StrataStats_nPlotsRecalculated.xlsx".

Plot Number	Comments
127	Stratum was updated along with all stands for the entire project. No changes to the stand itself, only stratum was updated. Stratum change referenced in Plot Move Explainer.
128	Stratum was updated along with all stands for the entire project. No changes to the stand itself, only stratum was updated. Stratum change referenced in Plot Move Explainer.
129	Stratum was updated along with all stands for the entire project. No changes to the stand itself, only stratum was updated. Stratum change referenced in Plot Move Explainer.
130	Stratum was updated along with all stands for the entire project. No changes to the stand itself, only stratum was updated. Stratum change referenced in Plot Move Explainer.
131	Stratum was updated along with all stands for the entire project. No changes to the stand itself, only stratum was updated. Stratum change referenced in Plot Move Explainer.
146	This plot fell into a stand that had mostly been thinned, except for the unthinned area where this plot fell. New stand was created to reflect unthinned area containing plot 146, strata was updated accordingly to match the new (unthinned) stand strata.
188	Stratum was updated along with all stands for the entire project based on TPA threshold. No changes to the stand itself, only stratum was updated.
189	This stand was realigned to separate the thinned from the unthinned areas of a partially thinned stand. Thinned areas assigned to original stand key, new stand key created for thinned areas. Plot 189 fell in thinned strata and had assigned strata designations updated accordingly.
216	Updated strata on plot to reflect thinning activity that occurred on the stand prior to cruise measurement and should have been updated previously.

	299	Plot installed in thinned stand where thin status in internal data had not yet been updated, stand information was updated to reflect thinned state and the plot's assigned strata was updated accordingly.	
1-Mar-24	<p>The stand-level updates to strata that resulted in a strata update to plots 146, 189, 216, and 299 were systematically applied across the entire project area. When it was observed that strata were changed on some stands due to harvest activity, an internal query of suspended or partially complete harvests was performed and all impacted stand strata were updated accordingly, whether they contained a carbon inventory plot or not. The latest available high-resolution satellite imagery was used to split stands that were partially harvested (or in progress) to ensure the correct strata was assigned at the time of initial cruising.</p> <p>Following this update performed during the April 2023 cruise efforts, strata was not updated further. The August 2023 plots were taken where they fell, even if the strata may have changed from its original assignment due to harvests between April and August 2023 so that any deviances on the ground were reflective of the April strata assignment.</p>		

Verifier Issue	Issue ID:	23-13	Status: Closed	Checked by: EM	Date Identified 12-Jun-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments
ACR IFM Methodology v2.0 (4.2.2)		Clarification. May impact materiality or conformance.	Verifiers are seeking clarification on the method used to calculate statistics for the project area. From the documents provided it appears that the inventory is designed as a stratified sample with optimal allocation of plots. It is the verifiers understanding of stratified sampling that all strata must be sampled in a stratified sample to correctly calculate project-level statistics. Please clarify the process used to calculate statistics and provide references indicating that the method used to incorporate strata with no plots is statistically sound.		RosettaStratificationSOP
			<p>July 4, 2023 Findings</p> <p>Verifiers have reviewed the stratified sample calculation document, and have the following requests and/or clarifications:</p> <ol style="list-style-type: none"> 1- Please provide the calculations used to determine the number of plots allocated to each stratum. 2- Verifiers note the strata with no plots allocated (P_Age=1to5) assumes that any plots allocated to these areas would result in no tally plots. Given the initial raw inventory data submitted, there is at least one of the plots dropped from this stratum that had trees. While assuming zero carbon stocks for this stratum may be conservative, verifiers note that dropping all plots in this area also results in a zero for variance which means that these areas are not considered in the uncertainty calculations. It is not clear to 		<p>Stratified_Sample_Calc.xlsx</p> <p>RosettaStratificationSOP20230620.pdf</p> <p>Raw_Cruise_Plots_Rosetta_05112023</p> <p>Rosetta_StandsAndStrata.shp (5/11/23)</p> <p>Rosetta_2023PlotLocations_Albers.shp (5/11/23)</p>

		<p>verifiers how this assumption regarding the error for this stratum affects both the project and baseline stocks. Please clarify.</p> <p>3- Please clarify if plots will ever be measured in the areas of the project currently classified as no plot strata.</p>	
		<p>October 4, 2023 Findings</p> <p>1.) Verifiers acknowledge receipt of the calculations used to determine the number of plots allocated to each stratum as described in Section 3 of the Stratification SOP. The strata level target allowable error was 15% based at a 90% confidence level using estimated means and standard deviations derived from the PP's internal inventory system. The number of allocated plots in stands <11 years old and the low mean estimate resulted in the strata being separated into two based on age (P_Age=1to5 and P_Age=6to10). Verifiers understand the number of plots sampled in those strata was adjusted given the low carbon mean, a lack of trees in the youngest strata and cost considerations. This issue item is closed.</p> <p>2.) Verifiers were able to confirm in the Uncertainty calcs that the 16 plots sampled in the P_Age=1to5 have been included. This issue item is closed.</p> <p>3.) Verifiers understand that plots will be installed in the "Open Productive" cover type once these clearcut stands are replanted to pine. This is summarized in Section 1.3 "Bareground Strata Rules and Thresholds" in the Stratification SOP. This issue item is closed.</p> <p>This issue is now considered closed.</p>	<p><i>StrataStats_calcs_20230605.xlsx</i></p> <p><i>StrataStats_nPlotsRecalculated.xlsx</i></p> <p><i>RosettaStratificationSOP20230921.pdf</i></p> <p><i>PlotCarbonInit_09082023_SOP_updated_calcs.xlsx</i></p>
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
22-Jun-23	Project Proponent has provided Stratified_Sample_Calc.xlsx in Appendix F which demonstrates how project statistics were calculated in detail. Project Proponent has clarified in Table 2 of the Stratification SOP that unsampled strata highlighted in red are not used in the calculation of project area statistics which is demonstrated in Stratified_Sample_Calc.xlsx.	<p>Stratified_Sample_Calc.xlsx</p> <p>RosettaStratificationSOP20230620.pdf</p>	
8-Sept-23	<p>1.) PP has included documentation in issue 23-7 to illustrate how original plot numbers were derived.</p> <p>2.) PP has included strata P_Age=1to5 in uncertainty calculations.</p> <p>3.) Yes, we intend to sample stands that are currently classified in the P_Bareground strata in subsequent verifications.</p>	<p><i>StrataStats_nPlotsRecalculated.xlsx</i></p> <p><i>RosettaStratificationSOP_20230908.pdf</i></p>	

Verifier Issue	Issue ID:	23-14	Status: Closed	Checked by: EM	Date Identified	12-Jun-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR IFM Methodology v2.0 (4.2.2)		Clarification. May impact materiality or conformance.	Verifiers are seeking clarity on the sampling frame used in the inventory design. In relation to issues 23-1, 23-6 and 23-7, it is unclear at what stage of the process the sampling frame was determined, whether or not the total or net productive acres were used, and the strata delineation/extents used to allocate plots. Please clarify the exact extent and delineation of the sampling frame and include spatial data if possible.		RosettaStratificationSOP.pdf Rosetta_Inventory_SOP.pdf	
			July 4, 2023 Findings Verifiers appreciate the clarification surrounding the sampling frame and the inventory design. While issues remain with the sampling frame, these are now covered by issues #6, 11 and 18. The issue of clarifying the design is considered closed.			

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
22-Jun-23	Project Proponent clarifies that all GIS acres within productive strata (with the exception of those specifically identified in this response below) were included in the inventory design sampling frame (all GIS acres associated with strata other than "NonProductive" in Table 1 of the Stratification SOP). This sampling frame was determined prior to restratification of the P_Age=1to5 and P_Age=6to10 strata which were originally designated as P_Age<11_UT435 and P_Age<11_UT520. As noted by the VVB in finding 23-6, plots originally taken as part of P_Age<11_UT435 and P_Age<11_UT520 that were then reclassified as P_Age=1to5 were subsequently dropped from the inventory. While total GIS acres for the productive strata were used, a 10 meter inner buffer off of each strata boundary is applied to avoid plots landing on the edge of strata and visual inspection and random plot location adjustments as described in the responses to items 23-7 and 23-11 were used to relocate plots away from acres that are not digitized as "NonProductive" but are removed during the Net Productive Acres calculation process as detailed in the Section 1.2 of Inventory SOP and NetProdAcresCalculation_Explainer.pptx. Rosetta_StandsMergedByStrata_10mInnerBuffer.shp reflects the sampling frame used to generate original plot locations prior to relocation away from non-productive areas of productive stands.	NetProdAcresCalculation_Explainer.pptx Rosetta_StandsMergedByStrata_10mInnerBuffer.shp RosettaInventorySOP20230620.pdf

Verifier Issue	Issue ID:	23-15	Status: Closed	Checked by: SB	Date Identified	16-Jun-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR IFM Methodology v2.0 (4.2.2)		Clarification. May impact materiality or conformance.	The Inventory SOP indicates that "Percent defect is the difference in the total height of the surrounding tree and measured top of the defected tree" for trees with broken tops. Verifiers are seeking clarification regarding the four trees in the inventory with		Rosetta_Inventory_SOP.pdf Raw_Cruise_Plots_Rosetta_05112023.xlsx.	

			broken tops and no defect percentage. These trees are located on Plots 8, 220, and 296 (removed in plot lists but not the raw cruise plots tree list).	
ISO 14064-2:2006(E)			<p>June 23, 2023 Findings</p> <p>Verifiers agree with the PPs assessment that these trees should have received defect percentages due to the presence of a broken top. This issue will remain open pending updates.</p>	Raw_Cruise_Plots_Rosetta_Updated06192023
			<p>October 4, 2023 Findings</p> <p>Verifiers understand the PP intends to retain the recorded cruise data with defect values of 0 for the broken trees. During the site visit (9/25/2023-9/28/2023), verifiers reviewed defect measurements and determined the overall defect values assessed on the project were conservative (i.e., overestimated). Verifiers are reasonably assured the risk of not correcting these errors is immaterial. This issue item is closed.</p>	
PP Response				
Date	PP Comment			Additional evidence submitted for review by PP
22-Jun-23	Project Proponent clarifies that the four trees identified as having broken tops with no defect percentage assigned are sampling errors in the recording of cruise data. Per the project's standard inventory process, these trees should have received an assigned defect percentage due to the presence of a broken top.			

Verifier Issue	Issue ID:	23-16	Status: Closed	Checked by: SB	Date Identified	16-Jun-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR IFM Methodology v2.0		Clarification. May impact materiality or conformance.	<p>Verifiers have reviewed the plot GIS files along with the Plot Move Explainer.xlsx to recreate the history of plot allocation on the project area. Please clarify or update as appropriate given the following concerns.</p> <p>1.) The Plot Move Explainer.xlsx indicates that Plot 216 was replaced by 319 but the description and latest GIS files indicate that both are still active plots. Please clarify in the Plot Move Explainer why both were kept.</p> <p>2.) Given the lack of Plot ID in the ORIGINALPlots_Albers.shp file, verifiers joined it to the WYMovedPlots_Albers based on the closet point. Plots 161 and 263 were to be offset 1 chain if necessary, based on the Rand_Chain in WYMovedPlots_Albers.shp but the distance between the original and the Moved plots were found to be 20.55m and 17.91m, respectively. What rationale was used to move them a distance not consistent with the Rand_Chain? (Most other plots were found to be moved exactly 20m, 40m, and 60m). If the verifiers method for</p>		<p>Plot_Move_Explainer.xlsx</p> <p>Rosetta_ORIGINALPlots_Albers.shp</p> <p>Rosetta_WYMovedPlots_Albers.shp</p> <p>Rosetta_06022023PlotLocations_Albers.shp</p>	

		<p>determining measured plot origin is not correct, please provide an updated "ORIGINALPlots_Albers" layer that includes the final Plot_ID.</p> <p>3.) For plots with a Plot Action of "Moved" what criteria was used to determine distance and angle of move. Was any randomness introduced in the field when the plots were offset into an unharvested strata?</p> <p>4.) How were the locations of plots with a Plot Action of "Replacement Plot" chosen? Verifiers were unable to tie these plots to the Rosetta_ORIGINALPlots_Albers.shp points indicating that they were not in the original allocation. Please provide any supporting files that may have been generated from the allocation of replacement plots.</p>	
		<p><u>October 4, 2023 Findings</u></p> <p>1.) Plot 216: The latest Plot Move Explainer spreadsheet indicates the following information "<i>In Final Plot List: No, Comments: Updated strata on plot to reflect second thinning harvest that occurred prior to cruise measurement. To ensure original strata maintained desired sampling intensity, plot 319 was added to take its place in the originally designated strata.</i>" The latest combined GIS and calculation files indicate that this plot was retained in the P_Age=20to22_TPA125 strata while initially assessed to be P_Age=20to22_TH185. Please clarify why the plot was kept when indicated that it should not be in the final plot list.</p> <p>2.) Verifiers were able to confirm that all moved plots were removed from the inventory. This is further described in the Inventory SOP. This issue item is closed.</p> <p>3.) Verifiers acknowledge that all moved plots were removed from the inventory. This is further described in the Inventory SOP. This issue item is closed.</p> <p>4.) Verifiers confirmed that replacement plots installed in the initial inventory were removed from the inventory. This issue item is closed.</p>	<p><i>Plot_Move_Explainer_IncludeAllPlots_Updated09122023.xlsx.</i></p> <p><i>Rosetta_PlotLocations_ALLCombined.shp</i></p> <p><i>RosettaInventorySOP20230919.pdf</i></p>
		<p><u>December 6, 2023 Findings</u></p> <p>1.) Plot 216 was confirmed to have an "<i>In Final Plot List</i>" = Yes in the Plot Move Explainer workbook. This aligns with its use in the carbon calculations for the project. The strata change made to this plot will be further reviewed under Issue 23-12. This issue is closed.</p>	<p><i>Plot_Move_Explainer_12012023.xlsx</i></p>
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	

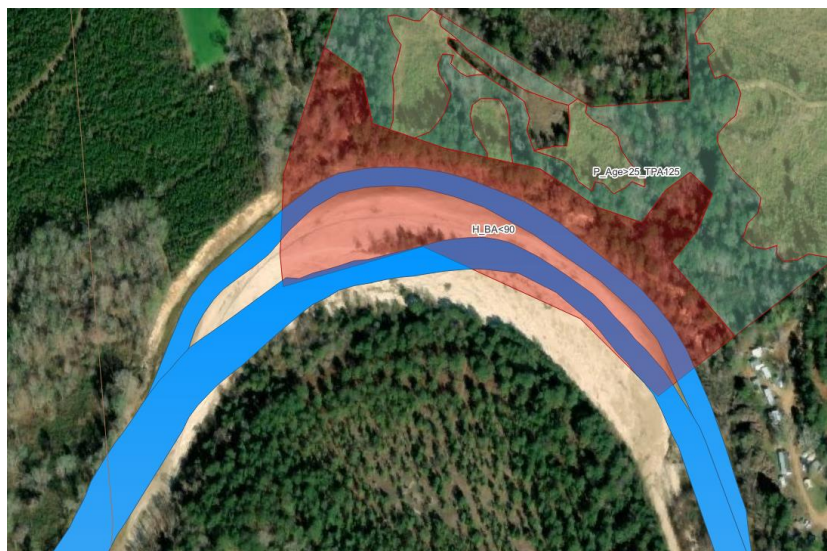
8-Sept-23	<ol style="list-style-type: none"> 1. Clarification added to Plot Move Explainer as to why plot 216 was retained. 2. Plots identified in this finding are to be dropped along with all offset plots as mentioned in finding 23-6 3. Plots identified in this finding are to be dropped along with all offset plots as mentioned in finding 23-6 4. All replacement plots are to be dropped along with offset plots. 	Plot_Move_Explainer_IncludeAllPlots_Update d08292023.xlsx
1-Dec-23	<ol style="list-style-type: none"> 1. In the case of this plot, the "in final plot list" column was not properly updated for this plot, it should say "in final plot list = Yes". As referenced in finding 23-12 this plot to reflect thinning activity that occurred on the stand prior to cruise measurement and should have been updated previously. 	Plot_Move_Explainer_12012023.xlsx

Verifier Issue	Issue ID:	23-17	Status: Closed	Checked by: SB/DD/BS/MD	Date Identified	30-Jun-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR IFM Methodology v2.0 (3; 5.1)		Clarification. <i>May impact materiality or conformance.</i>	<p>As noted in the Stratification SOP, verifiers understand the rationale for including non-productive strata within the project area as some of these areas could transition to being productive strata in later reporting periods (e.g., food plot being planted in trees). However, public roadways (as noted in issue 23-11), permanent pads/clearings, utility ROWs, buildings, significant hydrologic resources, and other features should be removed from project areas as it is highly unlikely any of these areas would be later re-stratified as productive strata.</p> <p>In reviewing the PP's spatial data, verifiers note below some examples of these nonproductive features that should be removed from the project area (total project acreage). Verifiers also noted some delineation inconsistencies, discrepancies, and/or needed clarifications relating to these features; some examples of these findings area are provided below for the various features. Please note this is not a comprehensive list but rather examples we observed in completing our spot checks.</p> <p><u>(1) Pads and Clearings</u> Verifiers conducted spot checks on the non-productive strata and observed 5 large, clearings that appear to be oil and gas infrastructure associated features (fracking site?). A couple of examples of these are near Plots 276 (& 216) and north of Plot 65. As they have been excluded from the sampling frame and are classified as nonproductive areas, verifiers believe such features should be removed from the project area. Please review, clarify and/or revise as appropriate.</p> <p><u>(2) Utility Right of Ways</u> Verifiers located utility right-of-ways that are included in nonproductive strata near Plot 20, (AllBufferDifference-Stands_AllBufferDifference, Standkey 1995089704). The nonproductive strata are oriented parallel to a buffered utility right of way. It is verifiers understanding that these utility ROWs should be removed from the project</p>		<p><i>Rosetta_StandsAndStrata_Updated06152023.shp</i></p> <p><i>Rosetta_HydrologyLine_Updated06152023.shp</i></p> <p><i>Stands AllBufferDifference-Stands_AllBufferDifference.shp</i></p> <p><i>Rosetta_StandsMergedByStrata_10mInnerBuffer.shp</i></p> <p><i>RosettaStratificationSOP20230620.pdf</i></p> <p><i>Rosetta_WYExternal_Roads.zip</i></p> <p><i>Rosetta_HydrologPolygons.zip</i></p> <p><i>Rosetta_UtilityLines_Updated06152023.shp</i></p> <p><i>Rosetta_WYInternal_Roads_Updated06152023.shp</i></p> <p><i>Map Metadata_Updated06192023</i></p>	

area. Also, to the northwest of Plot 88, a utility ROW has been removed from the project area but is included within the project area in another location; this buffer does not appear to be consistently applied and delineated. Please review, clarify and/or revise as appropriate.


(3) Water Resources

Verifiers noted areas where river bottoms and sand bars overlap the project area and are included within productive strata (*Rosetta_HydrologPolygons*). For example, the area west of Plot 264 (Stand Key 1995358076), where the river significantly overlaps a hardwood stratum as shown below.



Another example is the stream near plot 33 (Dry Creek). While we acknowledge portions of this stream are included *Hydro Line Buffer* (nonproductive strata), there are areas further downstream where this stream is within the productive strata. Moreover, given the size of this stream and visibility of nonproductive areas on aerial imagery (water/sand bars) and that it was excluded from the sampling frame, verifiers believe such water resources should be removed from the project area (total project acreage). Verifiers also note, this stream, according to the PP's attribute data in the *Hydrology Line Updated* spatial data set, narrows as it flows downstream from Plot 33 (50 ft to 25 ft), and there are lower portions that had no buffer applied.

		<p>While we understand the PP has provided the hydrologic spatial data used to determine productive and nonproductive areas, we find it challenging to verify the project area boundaries, specifically related to these nonproductive areas. We request descriptions be added to the Stratification SOP that provides the specific stratification rules the PP utilized in excluding/including such hydrologic features within the project area (e.g., widths, acreage thresholds, fish bearing, etc.). Verifiers note, that such detailed descriptions on this process are important so that we are able to assess that the stratification process was accurately and consistently delineated.</p> <p>Lastly, verifiers understand the <i>HydrologyLine_Updated</i> and the <i>Hydrology polygons</i> spatial data sets are based on WY internal layers. These data sets appear to closely match publicly available data sets (NHD flowlines and waterbodies). Please justify the use of the internal WY spatial data sets vs a public spatial data sets for hydrological features within the project area. Does the PP believe the internal spatial data sets are more accurate than the public data set for these hydrological features? What is the source for the stream width data provided in the PP's <i>HydrologyLine</i> spatial data and why are there only two values provided?</p> <p><u>(4) Log Decks and Other Nonproductive areas</u></p> <p>In the <i>StandsAndStrata_Updated</i> spatial data, verifiers note the presence of NumDecks > 0 without an AvgAcDeck. This appears to be the only attribute in the calculation overview not tied directly to spatial data. Please elaborate on the process the PP uses to assume Log Decks Number and size and how the condition of NumDecks > 0 AvgAcDeck = 0 is possible.</p> <p>Similarly, how are "OtherNPAC" areas maintained and updated without spatial information?</p> <p>The process for determining these nonproductive acres used in the carbon calculations is complex and not spatially explicit. Specific to log decks, verifiers can understand the desire to leave them in the project area as they could be prepped for planting and restratified as productive in the future. As currently depicted, verifiers are concerned that areas deemed nonproductive were not sampled (original allocated plots were removed from these areas) yet they may become productive in the future. For consistency and long-term monitoring, the project area should be delineated at onset and areas that may be ever be productive included in the sampling frame with allocated plots. Please update as appropriate.</p> <p><u>(5) Project Boundary Discrepancies</u></p>	
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		<p>In reviewing the project area boundaries on recent aerial imagery (MS NAIP 2021), verifiers noted areas where the project area boundary does not align with the vegetation types and management history (e.g., age classes). For example, along the western edge of the project area just west of Plot 126 - there is approximately 120-150 ft difference between these lines. This area is pasted below - yellow/red star shows the general location of this potential project area discrepancy.</p>  <p>Verifiers also noted some other areas containing buildings and fields/meadows within the project area (productive strata). These areas appear to be nonproductive features that likely need to be removed from the project area. Two examples include (a) in the NE section of the project parcel containing Plots 17 & 18; and (b) just south of Plot 21.</p> <p>Please review these types of potential project area discrepancies, clarify as needed and/or revise as appropriate.</p>	
		<p><u>October 9, Findings</u></p> <p>Verifiers understand and appreciate WY's efforts to remove non-productive areas, water resources, and log decks from the project area. Verifiers conducted spot checks on the updated spatial data and strata boundaries provided by WY (<i>Rosetta_StandsAndStrata_NoNP_Updated7192023</i>) and located the following findings:</p>	<p><i>Rosetta_StandsAndStrata_NoNP_Update d7192023</i></p> <p><i>Rosetta_PlotLocations_AllCombined</i></p>

		<p>(1) <u>Pads and Clearings</u> Verifiers acknowledge the removal of pads and clearings from the project area in the revised spatial data. No other pads and clearings were identified. This issue item is closed.</p> <p>(2) <u>Utility Right of Ways</u> Verifiers acknowledge the removal of utility right-of-ways from the project area in the revised spatial data. No other utility right-of-ways were identified. This issue item is closed.</p> <p>(3) <u>Water Resources</u> Through conversations with WY during the September 2023 site visit and the power point document (<i>Weyerhaeuser Streams vs NHD Streams.pptx</i>), verifiers understand WY uses and updates their own hydrology layer, which is based on local observations and they assert is more accurate than publicly available hydrology data sets. Verifiers concurs with the PP as local observations which are continually updated are likely to be more accurate than the NHD streams data set.</p> <p>Verifiers did, however, conduct a spot check of the spatial data and still find a discrepancy in the river polygon west of plot 264 (Stand Key 1995358076) where hardwood strata overlap the river bottom. This river bottom area has not been removed from the project area and hardwood strata overlaps the river polygon. Additional, river sand bars and river bottoms have also been left in the project 540' northwest of plot 332. Please review all hydrology/project boundaries and remove all non-productive hydrology zones and non-forest water resources from the project area.</p>	<p><i>Weyerhaeuser Streams vs NHD Streams.pptx.</i></p>
		<p><u>December 6, 2023 Findings</u></p> <p>(3) <u>Water Resources</u> Verifiers confirmed the area west of Plot 264 where hardwood strata overlapped with the river bottom, has been removed from the project area. The river sand bars and river bottoms northwest of Plot 332 have also been removed. Verifiers compared the revised project area to the previous spatial data and confirmed that 93 acres have been removed from the project acres with approximately 12 acres attributed to these hydrology updates. This issue item is closed.</p> <p>*Please note: Verifiers apologizes for missing to insert our findings to items #4 and #5 in the previous Issues Log for October 9, 2023ings. Here are those replies:</p> <p>(4) <u>Log Decks and Other Nonproductive areas</u></p>	<p><i>Shapefiles\Rosetta_Shapefiles_11302023.shp.zip-Rosetta_StandsAndStrata_NoNP_Updated11162023</i></p>

		<p>Verifiers are satisfied with the PP's explanation and ultimate removal of the log decks attributes from the stands layer in the spatial data. We understand the non-productive log deck polygons that were in the stands have been removed from the project area and if they were not removed from the project area, they are to remain in the project area and are included in the sampling frame. This issue item is now closed.</p> <p><u>(5) Project Boundary Discrepancies</u> Upon further review verifiers find the presence of very small non-productive areas within the project area to be insignificant (< 1 acre) overall. However, verifiers seek a response to the June 30 finding of the possible boundary discrepancy west of Plot 126. Appears there are approximately 8 acres that should not be included in the project area. Verifiers seek an explanation for this difference in the location of the project / property line. Please clarify/revise as appropriate.</p> <p>In addition, verifiers request descriptive information regarding the basis for the property boundary line locations. For instance, what was the starting point for location of the GIS boundaries? The PLSS lines, the tax parcel lines, surveys, old maps, aerial imagery or other sources? And then what was the basis for adjusting the ownership lines, if any is done? Verifiers agree with the PP, the deeds are the legal description but those need to be tied to the ground (spatial data) in some systematic and accurate process. We request this in order to understand the process utilized and to help us assess the accuracy and consistency of the project's property boundary locations as we complete our data checks.</p>	
		<p>March 7, 2024 Findings (5) The PP has provided the <i>WY Legal Spatial Ownership Methodology.docx</i> that provides the requested descriptive basis for delineating the property boundaries for the project area in GIS. This document also includes an example (from PNW) of a similar possible boundary discrepancy noted by the verifiers (near Plot 126) and supporting reasoning to show this is likely a misalignment and/or a spatial shift that is the result of the imagery layer which may not be consistent with the PP's actual legal ownership nor consistent with on the ground vegetation. We agree with the PP the noted misalignment that was observed by the verifiers is likely the result of differing spatial standards among the data sets being used. Based on the information provided and previous property boundary discussions with the PP, this issue is now considered closed.</p>	<p><i>WY Legal Spatial Ownership Methodology.pdf</i></p>
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
8-Sept-23	1. All non-productive acres, including pads and clearings, will be removed from the project as referenced in finding 23-2, if additional non-forested areas are observed, they were included in the sampling frame for August plots and will be included in the project area.	<p><i>Weyerhaeuser Streams vs NHD Streams.pptx</i></p> <p><i>RosettaStratificationSOP_20230908.pdf</i></p>	

	<ol style="list-style-type: none"> 2. All non-productive acres that had previously been removed tabularly through the Net Productive Acres calculation were removed spatially from the project area as referenced in finding 23-2 3. All non-productive acres, including hydrology polygons, will be removed from the project as referenced in finding 23-2. Internally collected LIDAR data is utilized to determine stream buffer width and these buffers were removed from the project as part of the non-productive acres removal. PP notes that no offset plots were moved away from streams, thus streams without hydrology buffers are included in the sampling frame. We used the Weyerhaeuser internal data as this hydrology data and attributes are directly related to our internal stand, road, and other spatial datasets. While we often use public data (NHD) as a starting place, we bring that data in and edit it to ensure that it is as accurate as possible. A presentation to illustrate this has been included Weyerhaeuser Streams vs NHD Streams.pptx. 4. This was a mistake missed during the digitizing process of the log decks. These “non-productive” tabular attributes were spatially digitized and removed from the project, so they should have been set to 0 and/or removed from the attributes table. In the updated spatial data have now removed the attributes NumDecks, AvgAcDeck, and OtherNPAC from the “Stands and Strata” shapefile attributes. 5. Project boundaries are aligned to legally deeded ownership, PP repaints boundary trees to update boundary lines every 5-7 years 	
1-Dec-23	<p>3). The part of Stand Key 1995358076 (west of plot 264) that was part of the river bank has been removed from the project. Additionally, the river bottoms 540’ northwest of plot 332 has also been removed from the project. PP has reviewed all hydrology boundaries in the project and digitized features and/or added buffers as appropriate.</p>	<p><i>Rosetta_StandsAndStrata_NoNP_Updated11162023.shp</i></p> <p><i>Rosetta_ProjectFootprint_11162023.shp</i></p> <p><i>Rosetta_HydrologyLine_Updated11162023.shp</i></p>
1-Mar-24	<p>5. PP provided WY Legal Spatial Ownership Methodology.docx to the VVB through email on 12/15/23 which describes the process for establishment of property boundary lines within PP’s spatial data and summarizes our proposed response that the example presented generally shows what appears to be a nonmaterial misalignment and/or a spatial shift, and that adjusting PP’s boundary line or stand line based on the provided imagery layer would not be consistent with PP’s legal ownership, and may not be consistent with on the ground vegetation, as the misalignment and shift shown in the example is similar to nonmaterial inconsistencies among data sets due to differing spatial standards among the data sets being used.</p> <p>In response to this supporting documentation, the VVB indicated through email on 12/18/23 that regarding issue 23-17 “We agree. With the noted WY clarifications/supporting doc we will close this issue”.</p> <p>A copy of WY Legal Spatial Ownership Methodology.pdf has been provided in Appendix A of the 3/1/24 project materials submission.</p>	<p><i>WY Legal Spatial Ownership Methodology.pdf</i></p>

Verifier Issue	Issue ID:	23-18	Status: Closed	Checked by: BS/EM	Date Identified 5-Jul-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description	Comments	
ACR IFM v2 (4.2.2; 5.1)	Stratification & Inventory SOPs.	Possible non conformance. <i>May impact materiality or conformance.</i>	<p>In reviewing the Inventory and Stratification SOPs, verifiers understand the PP utilized a 10 m buffer along strata boundaries during the plot allocation process to constrain plots from landing in this strata edge area. This buffered area represents about 21% of the project area.</p> <p>Based on past ACR project verification experiences and guidance, our understanding is the PP will need to (a) remove that buffered area from the project area or (b) install a representative number of plots in these buffered areas. To clarify the current ACR status of strata edge buffering during the plot allocation process, verifiers conducted a conference call with ACR (Andrew Taylor, Gabriel, and Kurt Krapfl) on June 28, 2023.</p> <p>On July 5, 2023 they provided the following guidance (Kurt Krapfl):</p> <p><i>"You're right that edges need to be proportionally represented in the inventory. Either of the two options you've laid out would remedy the situation."</i></p> <p>Please review and revise project documents as needed to comply with this guidance.</p>	<p><i>Rosetta_StandsMergedByStrata_10mInnerBuffer.shp</i></p> <p><i>Rosetta_StandsAndStrata_Updated06152023.shp</i></p> <p><i>RosettaStratificationSOP20230620.pdf</i></p> <p><i>RosettaInventorySOP20230620.pdf</i></p>	
			<p><u>October 14, 2023 Findings</u></p> <p>Verifiers understand that the PP determined the number of plots necessary to sample the edge based on the ratio of edge acres to project acres. The ratio was then used to weight the number of plots necessary to achieve the same sampling intensity. There appear to be 3 plots that were allocated but not measured. Please clarify how the sampling intensity requirements were met when plots were dropped.</p>	<i>StrataStats_nPlotsRecalculated.xlsx</i>	
			<p><u>December 9, 2023 Findings</u></p> <p>Verifiers have reviewed the findings provided in addition to the spatial data previously provided. Verifiers agree that overall sampling intensity based on the desired sample error are met in the current inventory, however; this issue is related to whether the edge was adequately sampled given the ACR requirements to add a proportional number of plots to the edge of each stratum.</p> <p>The response provided indicates that plots 333, 386, and 387 were not edge plots, but the spatial data indicates that they are edge plots. Given that these 3 plots were edge plots, verifiers reviewed the calculations in column "Z" of the "StrataStats_nPlotsRecalculated.xlsx" workbook on tab "nPlotsRecalculated" in conjunction with the spatial data provided to see if the number of edge plots have been met. Verifiers have concluded that stratum "P_Age>19_TPA435" required</p>	<i>StrataStats_nPlotsRecalculated.xlsx</i>	

		<p>three additional edge plots while stratum “P_Age=11to13_TPA435” required four edge plots. Stratum “P_Age>19_TPA435” added two plots (363 and 373) as edge plots, and as such, is below the requirement of three plots. Stratum “P_Age=11to13_TPA435” added two plots (371 and 383) to the edge, and as such, is below is the requirement of four plots.</p> <p>Given that both strata appear to fall below the requirement for proportional edge representation please clarify how the edge requirements are being met in the current inventory or detail how they will be met.</p> <p>For reference, verifiers understanding for projects that have had missing plots (e.g., hazard plots, inadequate required number of plots) have been resolved by (a) installing the needed plots or (b) deferring plot installment until the next re-inventory and assuming the needed plots have zero carbon for the reporting period and subsequent reporting periods until the plots are installed and measured.</p>	
		<p><u>February 14, 2024 Findings</u></p> <p>As noted above, the PP’s plot allocation in the buffered area, did not allocate the appropriate number of plots for two stratum based on the previous July 5, 2023 ACR guidance for installing additional plots in these buffered areas (buffered sampling densities to be proportionally based on the strata sampling densities for the non-buffered strata area). Verifiers found strata “P_Age>19_TPA435” is one plot under and “P_Age=11to13_TPA435” is two plots less than the specified sampling densities for the buffered/edge plot area.</p> <p>The PP’s 12/1 response asserts they met the intent of the ACR guidance for the sampling densities for the buffered areas. This assertion is based on the total number of plots within the total edge/buffered area over the project area. Verifiers believe the intent of the ACR guidance was to install additional plots within the buffered areas to meet individual stratum sampling densities (proportionally based on stratum areas) rather than the total project/buffered areas.</p> <p>A meeting occurred on January 5, 2024 with ACR, VB and PP to discuss and clarify the specifications and intent of the July 5, 2023 ACR guidance. In advance of the meeting both the PP and VB provided background documents (noted). On February 8, 2024, ACR provided clarifications on the plot allocations within the buffer areas (e-mail within VB supporting documents, submitted folder):</p> <p><i>“Concerning the two strata whose edges were under-sampled relative to the strata interiors, we find this difficult to overlook. We understand that matching the exact sampling density of the strata interior the edges may be difficult, so we would accept one plot less than the sampling density of the interior. That is, if adding just one more edge plot means the edge’s plots-per-acre would exceed the interior’s plots-per-acre,</i></p>	<p><u>Provided documents to ACR:</u> StrataStats_nPlotsRecalculated.xlsx</p> <p>Plot_Move_Explainer_12012023.xlsx</p> <p>ACR878_Rosetta_IFM_SAA_Background-Findings_IL_18 and 28_12Jan2024_revised</p> <p><u>ACR guidance 2/8/2024- email:</u> ACR878_Rosetta_IFM_ACR_guidance_A. Taylor_IL_items_18_28_8Feb2024</p>

		<p><i>then you're close enough, even if the edge's plots-per-acre is currently less than the interior's plots-per-acre. If any stratum is missing more plots than that, we would prefer allocating more plots (at new locations, if the original locations were found to be outside the property) and either measuring them or assigning them 0 for the time being, to be remeasured at a later point in time."</i></p> <p>Based on this guidance, for the two strata where previously buffered area (edge areas) were under sampled, verifiers understand the following:</p> <p>(1) "P_Age>19_TPA435" stratum is 1 plot below the specified sampling density. No additional plots are required in the edge area.</p> <p>(2) "P_Age=11to13_TPA435" stratum is 2 plots below the specified sampling density. One additional edge plot needs to be installed (or assigned zero carbon stocks until the plot is installed and measured).</p> <p>Please review and provide intentions for next steps along with the appropriate revised project documents.</p>	
		<p>March 7, 2024 Findings</p> <p>Verifiers acknowledge the PPs addition of three no tally plots to the project inventory (one in the "P_Age>19_TPA435" strata and two in the "P_Age=11to13_TPA435" strata), which presumably will be installed and measured during the next forest inventory. This complies with ACR's February 2024 guidance in addressing the issue for the under-sampled edge areas. As a result, this issue is closed.</p> <p>Please note, verifiers have questions regarding the calculations of strata means and Uncertainty that result from the incorporation of these 3 no tally plots within the project stocks. These questions are addressed in Issue #23-31.</p>	<p><i>DroppedPlotYieldAdjustment.pdf</i></p> <p><i>RosettaInventorySOP03012024.pdf</i></p> <p><i>ACR878_Rosetta_IFM_ACR_guidance_A. Taylor_IL_items_18_28_8Feb2024</i></p>
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
8-Sep-23	PP has resampled the entire project area including the 10m buffer originally applied. Statistics for number of plots needed by strata are shown in StrataStats_nPlotsRecalculated	<i>StrataStats_nPlotsRecalculated.xlsx</i>	
1-Dec-23	The three plots were removed were in strata that were being over-sampled due to the addition of edge/buffer plots, thus removing these three plots had no impact on the overall confidence or sampling intensity of the inventory. This can be seen by referring to the provided document, "StrataStats_nPlotsRecalculated.xlsx" (found in Appendix F). In the case of Plot 333, it was in the P_Age>19_TPA435 stratum (row 21 of the document StrataStats_nPlotsRecalculated.xlsx). In column F of this excel document we can see the updated number of plots needed to reach the sampling intensity requirements in that Stratum is 11. In column G we can see that 11 plots were measured in the June plot collection effort, and column H indicates that no plots were removed from this strata	<i>StrataStats_nPlotsRecalculated.xlsx</i> <i>Plot_Move_Explainer_12012023.xlsx</i>	

	<p>so we still have 11 usable plots in this stratum. This is further reflected in column I where we can see that we need 0 additional plots to reach our updated/planned number of plots. Despite needing 0 additional plots in this stratum, column M shows that we added 3 additional plots on the edge/buffer of this strata to ensure the edge was sufficiently represented. This means that we have 3 more plots than is required to meet the desired sampling intensity, thus dropping plot 333 did not impact our sampling intensity requirements.</p> <p>Plots 386 and 387 were in the stratum P_Age=11to13_TPA435, which is found in row 6 of the provided document StrataStats_nPlotsRecalculated.xlsx. In column F of this excel document we can see the updated number of plots needed to reach the sampling intensity requirements in that Stratum is 20. In column G we can see that 20 plots were measured in the June plot collection effort, and column H indicates that 2 plots were dropped from this strata, leaving 18 usable plots in this stratum. In column I we can see that 2 additional plots are needed to reach our updated/planned number of plots (18 + 2 = 20). Despite only needing 2 additional plots in this stratum, column M shows that we added 4 additional plots on the edge/buffer of this strata to ensure the edge was sufficiently represented. This means that we have 2 more plots than is required to meet the desired sampling intensity, thus dropping plots 386 and 387 did not impact our sampling intensity requirements.</p>	
1-Mar-24	<p>Based on ACR and verifier feedback, PP has assigned zero carbon stocks to the 3 dropped plots (333, 386, 387) and has reduced the per acre carbon yield for the impacted strata (P_Age>19_TPA435 and P_Age=11to13_TPA435). As a result, total standing carbon on the project is reduced by 1.2% so as not to overestimate project stocks in lieu of measured plot data. This reduced inventory level is reflected in all crediting estimate calculations and RP1 verifications documents. Upon the next field inventory measurement, new plot locations will be generated for the dropped plots and they will be integrated into the total project inventory with the latest collected data. The process for adjusting these strata yields has been documented in DroppedPlotYieldAdjustment.pdf provided in Appendix F and has been noted for future reference in Section 2.4.2 of RosettaInventorySOP03012024.pdf.</p>	<p><i>DroppedPlotYieldAdjustment.pdf</i></p> <p><i>RosettaInventorySOP03012024.pdf</i></p>

Verifier Issue	Issue ID:	23-19	Status: Closed	Checked by: EM	Date Identified	5-Jul-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR IFM v2 (4.2. 5.2)	E1. E6.	Clarification. May impact materiality or conformance.	Verifiers are seeking clarification on the calibration used in FVS. The output files provided indicate that several keywords related to growth modifiers were included but no description has been provided to indicate how modifiers were developed and no calculations for the modifiers is included. The modifiers included in the keywords include "BAIMULT", "BAMAX", "HTGMULT", "BAIMULT". Please provide the description and calculation used to develop any modifiers used in FVS.		.key and .out files	
			<u>October 14, 2023 Findings</u> Verifiers are familiar with the FVS keywords and how they function, the process and data used to calculate the values used for each of these keywords needs to be verified. Verifiers have been unable to locate where these variables are calculated. Please clarify and/or provide the calculations for the keywords.			

			December 8, 2023 Findings Verifiers agree that the modifiers were discussed in the model review call and have been explained in the PDF noted. During the verifiers review, it is typical that these modifiers are recalculated. Is the data or workbook/database used to create Figures 3, 4, and 5 available? While PDF's are helpful for documentation it is challenging to calculate checks using only the PDF.	<i>CruiseDataProcessingForCarbonInventoryRosetta20231122.pdf</i>
			March 12, 2024 Findings Verifiers have reviewed the .Rmd file and associated figures/modifiers and have no further questions regarding the modifiers used. This issue is considered closed.	<i>CruiseDataProcessingForCarbonInventoryRosetta20231122.Rmd</i>
PP Response				
Date	PP Comment			Additional evidence submitted for review by PP
8-Sep-23	These modifiers are detailed in the FVS documentation, see "Keyword Reference Guide for the Forest Vegetation Simulator": https://www.fs.usda.gov/fmcs/ftp/fvs/docs/gtr/keyword.pdf Their use is described in CruiseDataProcessingForCarbonInventoryRosetta20230908.pdf to be provided with full documentation.			<i>CruiseDataProcessingForCarbonInventoryRosetta20230908.pdf</i>
1-Dec-23	Discussions on how modifiers were developed and calculated occurred during the model review call held on October 27, 2023. Additionally, the document CruiseDataProcessingForCarbonInventoryRosetta20230918.pdf was provided in Appendix F. INVENTORY AND PLOT LIST -> FVS Formatted Data -> CarbonReportRosettaFVS with the project documents submission on September 22, 2023. An updated copy of <i>CruiseDataProcessingForCarbonInventoryRosetta20231122.pdf</i> is included in Appendix F for the December 1, 2023 submission.			<i>CruiseDataProcessingForCarbonInventoryRosetta20231122.pdf</i>
1-Mar-24	The CruiseDataProcessingForCarbonInventoryRosetta20231122.Rmd file associated with the PDF file explanation was also included in Appendix F to enable verifiers to reproduce the requested data and calculations. This .Rmd file has the directory embedded to other files in the CarbonReportRosettaFVS20231201.zip file (within the FVS Formatted Data folder of Appendix F) and has been tested for proper functionality so as to ensure the VVB can utilize this file as intended. Figures 3, 4, and 5 are produced by lines 401-417, 555-557, and 612-636 of the code, respectively.			<i>CruiseDataProcessingForCarbonInventoryRosetta20231122.Rmd</i>

Verifier Issue	Issue ID:	23-20	Status: Closed	Checked by: SB	Date Identified	2-Oct-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR IFM v2		Clarification. May impact materiality or conformance.	Verifiers noted the following typos and needed clarifications in the revised project documents: 1.) Rosetta Inventory SOP.pdf: a.) Update Section 1.3 Data Collection and Navigation to Plots to be 5 "distinct batches" instead of 3. b.) Please update Section 1.2.1 to include how many new plots were added during the inventory update.		RosettaInventorySOP20230919.pdf <i>CruiseDataProcessingForCarbonInventoryRosetta20230918.pdf</i> <i>Rosetta GHG Draft 09222023.pdf</i>	

		<p>2.) CruiseDataProcessingForCarbonInventoryRosetta20230918.pdf</p> <p>a.) Section 2.2.2.2 - "Uncalibrated" typo (x2)</p> <p>b.) Section 3.5 "Tabels"</p> <p>3.) Rosetta GHG Draft 09222023.pdf</p> <p>a.) Section H2 Project Timeline indicates that Forest inventory took place April 24, 2023 and August 26, 2023. The inventory SOP indicates that they were installed 4/3/2023-4/17/2023 and 8/22/2023-8/26/2023. Please update GHG Plan to be consistent with the dates of inventory.</p>	
		<p>December 5, 2023 Findings</p> <p>Verifiers acknowledge the requested edits have been completed in the revised project documents. Specifically these include:</p> <p>(1) <u>Rosetta Inventory SOP</u></p> <p>a.) Section 1.3 Data Collection and Navigation has been revised to clarify there were 5 distinct batches (pg 5).</p> <p>b.) Section 1.2.1 includes a description to clarify the correct number of new plots added during the inventory update (pg 5).</p> <p>(2) <u>CruiseDataProcessingForCarbonInventoryRosetta20230918</u></p> <p>a.) Both typos in Section 2.2.2.2 have been corrected (pg 3).</p> <p>b.) Typo in Section 3.5 has been corrected (pg 6).</p> <p>(3) <u>Rosetta GHG Draft 09222023</u></p> <p>a.) Section H2 Project Timeline for the Forest inventory (pg 54) has been revised to be consistent with the actual inventory dates noted in the Inventory SOP (4/3/2023-4/17/2023 and 8/22/2023-8/26/2023).</p> <p>As all of the requested corrections have been completed, this issue is now closed.</p>	<p><i>RosettaInventorySOP120123.pdf</i></p> <p><i>CruiseDataProcessingForCarbonInventoryRosetta20231122.pdf</i></p> <p><i>Rosetta GHG Plan 120123.pdf</i></p>
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
1-Dec-23	<p>1a). Inventory SOP has been updated to reflect "5 distinct batches" of inventory data collected in Section 1.3</p> <p>1b). The language "The installation of these additional plots was performed between 8/22/23 and 8/26/23. In total, 102 plots were added to the project. Of those 102 additional, 3 plots were dropped due to plot location issues leaving 99 total plots that were added and a total of 360 plots in the project." Has been added to section 1.2.1 (page 4) of the inventory SOP.</p> <p>2a,b) The typos in CruiseDataProcessingForCarbonInventoryRosetta20230918.pdf have been fixed in the latest version of the document, CruiseDataProcessingForCarbonInventoryRosetta20231122.pdf</p>	<p><i>RosettaInventorySOP120123.pdf</i></p> <p><i>CruiseDataProcessingForCarbonInventoryRosetta20231122.pdf</i></p> <p><i>Rosetta GHG Plan 120123.pdf</i></p>	

3a). Project Proponent has updated Section H2 of the GHG plan to reflect the dates during which the forest inventory was installed. Section H2 has generally been updated to match formatting and requested information feedback provided by ACR during the verification review of a previous project.

Verifier Issue	Issue ID:	23-21	Status: Closed	Checked by: SB	Date Identified	10-Oct-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR IFM v2 (4.2.4, 5.3.1)		Clarification. May impact materiality or conformance.	Verifiers have reviewed the harvested wood products calculations and have the following questions		Rosetta ERT Actuals Monitoring Report-HWP Baseline & HWP Actuals	
			<ol style="list-style-type: none"> 1.) Verifiers have found the Loblolly Pine bark ratios and moisture contents were used on hardwood saw timber and pulpwood. Please clarify or update as appropriate. 2.) In the Harvest Loads workbook MTL 100755599 tab LoadID 13875103 indicates that part was from 4/28/2023 (within the reporting period) and that LoadID 13821547 was double counted. Please provide system documentation used in evaluating each LoadID as such. 		Rosetta_Harvest_Loads_04302023_Summary.xlsx	
			December 7, 2023 Findings <ol style="list-style-type: none"> 1.) Verifiers acknowledge the consideration of the hardwood species in the derivation of bark % and moisture content where over 5% of the hardwood tree count was attributed to the species. Verifiers found each species was equally weighted despite a difference in hardwood count percentages ranging from 5% for hickory to 30% for sweetgum. What was the PPs justification for weighting each equally and using count as the variable to determine which species to include? Verifiers also noted in review of the Settlement document that some products included designations for the species (Red Oak Logs, White Oak Logs). Is this level of detail accounted for anywhere in Weyerhaeuser's information systems? 2.) Verifiers were able to track the adjustments made to the "NetAdjusted" field given the MLT100755599 Settlement Doc.pdf. Load ID 13875103 was adjusted from 72.83 to 23.39 tons which is consistent with only one load of hardwood being delivered on 4/28/2023. Load ID 13821547 was adjusted from 55.52 to 0 tons which is consistent with volume added and removed under Reference numbers 38769645 and 38769682. The provided document confirms these adjustments as valid. This issue item is closed. 		Rosetta ERT Actuals Monitoring Report 120123.xlsx – HWP Actuals MLT100755599 Settlement Doc.pdf RosettaHarvestLoads120123.pdf	

			3.) Verifiers noted the addition of harvested wood products information for stands MLT100682771 and MLT100682690 since the last workbook was received. Please describe the scenario which lead to this change and any potential mitigation steps to avoid similar occurrences during future reporting period transitions.	
			<p>March 7, 2024 Findings</p> <p>1.) Verifiers appreciate the clarification regarding the choice to average hardwood bark value % and moisture content equally across all species with counts >5%. Verifiers understand that hardwood harvest species mixes are difficult to speculate given the method of sale. Verifiers understand that only certain mill destinations utilize species specific loads for hardwood sawlogs and the rules for calculating were generalized to be applied consistently across reporting periods.</p> <p>Verifiers request these process steps/assumptions be included in Section E1 of the GHG Plan within the appropriate Wood Products Calculation step for long term HWP monitoring and clarity for subsequent verifications & ACR reviews.</p> <p>3.) Verifiers appreciate the clarification around the scenario that resulted in the incomplete information reported. The PPs assertion that mitigation measures have been developed to allow the carbon development team to directly access the harvest load information will eliminate data reporting discrepancies. This issue item is closed.</p>	Rosetta GHG Plan 03012024
			<p>April 12, 2024 Findings</p> <p>1.) Verifiers acknowledge the PP has included the requested description on the process and assumptions regarding the utilization of average hardwood bark ratios and moisture content to the revised GHG Plan (Section E1). This issue is closed.</p>	Rosetta GHG Plan 03212024.pdf
PP Response				
Date	PP Comment			Additional evidence submitted for review by PP
1-Dec-23	<p>1. Project Proponent has updated the HWP calculations for both the baseline and project scenarios in the Woodstock model as well as the Rosetta ERT Actuals Monitoring Report to utilize bark ratios and moisture contents appropriate for hardwood species. As the exact species mix of hardwood loads delivered to mills is unknown, these bark ratios and moisture contents reflect an average value for the hardwood species making up 5% or greater of the total hardwood tree count reflected by the project inventory. These species can be found in the HWP Baseline and HWP Project tabs of the Rosetta ERT Actuals Monitoring Report worksheet.</p> <p>2. Project Proponent has provided the load settlement document that documents that LoadID 13875103 was a batch of 3 load tickets submitted by the stumpage buyer, where only one load of hardwood pulpwood was delivered during the project reporting. The other two loads of this batch were delivered after the first</p>			<p>Rosetta ERT Actuals Monitoring Report 120123.xlsx</p> <p>MLT100755599 Settlement Doc.pdf</p> <p>RosettaHarvestLoads120123.xlsx</p> <p>RosettaWoodstock20231201.zip</p>

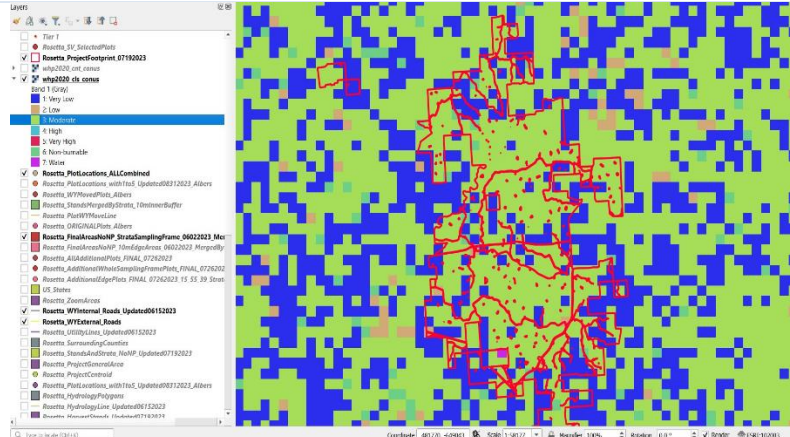
		reporting period. Also included in this settlement document is a record of the settlement for, and subsequent removal of, the batch of two loads represented by LoadID 13821547. The initial explanation that this load was overstated by 29.3 tons is incorrect. As can be seen in the settlement document, all 55.52 tons of the load batch were removed and the load of CNS delivered on 4/28 (LoadID 13875098) is representative of the correct 26.22 ton CNS delivery during the reporting period. This error has been corrected in the Harvest Loads workbook and the net adjusted value for LoadID 13821547 has been set to 0. Project Proponent has updated the harvested softwood sawlog volume in the corresponding ERT Actuals Monitoring Report worksheet as it relates to the Harvested Wood Product calculation.	
1-Mar-24	<ol style="list-style-type: none"> PP utilized an average weighting method for determining hardwood bark % and moisture content as the mix of species in any given harvest load is generally unknown based on the mixed-species method of sale. Ascribing a greater weight to any given species would be speculative as species mix varies across harvest units or pine vs hardwood strata in the case of baseline modeling where SMZ areas are eligible for thin harvests. <p>The settlement document examples as referenced by the VVB is the exception rather than the norm, as these examples of red oak and white oak logs being sold are to mill customers that purchase on a specific grade and species basis, in this case during a stumpage timber sale. As can also be seen on the same settlement document, hardwood pulpwood loads have no species designation as these are generally mixed-species loads along with most hardwood sawtimber loads. Only certain mill destinations utilize species specific loads for hardwood sawlogs and therefore we are unable to consistently apply a species-specific approach across the entire footprint and its associated harvest volume as the species mix of these loads is generally unknown.</p> <ol style="list-style-type: none"> This scenario occurred due to a process of having harvest load information relayed from the settlement team to the carbon development team through internal inventory staff that had communicated the active harvest sources to the settlement team on behalf of the carbon development team. Data unnecessarily changing hands in this manner introduced risk of incomplete data being delivered. This process has been revised to have the carbon development team source active harvest stands for the reporting period from internal inventory staff and then the carbon development team directly source the associated harvest loads for these active harvests from the settlement team to eliminate data changing hands with an intermediary between the settlement team and carbon development team which was the root cause of the initial issue. 		
27-Mar-24	<ol style="list-style-type: none"> PP has included a description of the process and assumptions as it relates to the application of average hardwood bark ratios and moisture content to Section E1 of the GHG plan as requested. 		<i>Rosetta GHG Plan 03212024.pdf</i>

Verifier Issue	Issue ID:	23-22	Status: Closed	Checked by: SB/DD	Date Identified	10-Oct-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments
ACR IFM v2 (Section 2.4, 4)	C1	Clarification.	The STL Biodiversity Program 2023.pdf references FMS Environmental Concern Layer for site and location information related to FECV and T&E species. Verifiers need to			STL Biodiversity Program 2023.pdf

		May impact materiality or conformance.	<p>confirm that baseline constraints are appropriately applied as these areas may need to be given restricted harvest prescriptions. Please provide this data layer and indicate in the GHG Plan how areas of concern are checked and managed within the project area.</p> <p>The STL Biodiversity Program 2023.pdf also references a SMZ Guidance Document. Please provide.</p>	Table 14. Applicable laws and regulations in the project area and Weyerhaeuser's compliance.docx.
			<p><u>December 8, 2023 Findings</u></p> <p>Verifiers were provided with the requested Environmental Concern Layer (ECL). Verifiers acknowledge that while this layer does show Red-Cockaded Woodpecker overlap with the project area, that the layer is outdated and does not reflect current management status. Verifiers confirmed this with USFWS Red-Cockaded Woodpecker (RCW) Recovery Coordinator, John Doresky. Additional verifier checks conducted on T&E Species included review of IPAC, ECOS, and Mississippi Natural Heritage websites. Verifiers are reasonably assured that T&E species have not been found within the project area and pose no management concerns to the baseline constraints of the project. Verifiers have also confirmed with John Doresky that the PP has no RCW Safe Harbor Agreements near the project area.</p> <p>Verifiers conducted an interview with Dan Perry (WY, Environmental Manager) and David Newton (Forest Carbon Team) on October 13, 2023 to discuss the PP's best management practices and T&E species. Verifiers confirmed the current PP procedures for detection and management of T&E species with review of the following documents provided by PP; <i>STL Special Places T-E Species and FECV Program 2023.pdf</i>, <i>STL Biodiversity Program 2023.pdf</i>.</p> <p>Verifiers acknowledge receipt of the Harvesting in SMZs and Reserve Cover Types 2023.pdf document. This issue is closed.</p>	<p><i>Rosetta_EnvironmentalConcerns_11012023.shp</i></p> <p><i>STL Biodiversity Program 2023.pdf</i></p> <p><i>STL Special Places T-E Species and FECV Program 2023.pdf</i></p> <p><i>USFWS RCW Private Land Guidance.pdf</i></p> <p><i>Harvesting in SMZs and Reserve Cover Types 2023.pdf</i></p> <p>https://ipac.ecosphere.fws.gov/</p>
PP Response				
Date	PP Comment			Additional evidence submitted for review by PP
1-Dec-23	<p>Project Proponent has provided the FMS Environmental Concern layer data that overlaps the project area as requested. As discussed on the call between the VVB, Project Proponent, and local environmental manager on October 13, 2023, the point identified in this layer is legacy data and no longer reflects an active Red-Cockaded Woodpecker site based on consultation with the local environmental manager who coordinates with local USFS personnel knowledgeable on active RCW sites.</p> <p>Project Proponent has indicated in Section F1 the GHG Plan how areas of concern related to FECV and T&E species are maintained and managed within the project area.</p>			<p><i>Rosetta_EnvironmentalConcerns_11012023.shp</i></p> <p><i>Harvesting in SMZs and Reserve Cover Types 2023.pdf</i></p> <p><i>Rosetta GHG Plan 120123.pdf</i></p>

Project Proponent has provided a copy of the STL SMZ Guidance Document in Appendix E.

Verifier Issue	Issue ID:	23-23	Status: Closed	Checked by: DD/BS	Date Identified 1-Oct-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments
ACR IFM v2 (2.5)		Possible non conformance. <i>May impact materiality or conformance.</i>	<p>WY uses default values assigned by ACR for risk assessment and carbon buffer analysis. Verifiers understand WY proposes a 2% default rating for fire risk as approved by the ACR Risk tool for project areas within the low-risk category. WY has provided three links to maps to support this conclusion. Verifiers understand FEMA map supports the low risk assessment for the project area. Please verify what maps WY intends to use to support findings of low fire risk rating of 2%.</p> <p>Verifiers routinely use the U.S. Forest Service Wildfire Hazard Potential map to assess fire risk. The USFS Wildfire Hazard map identifies the project area as low to moderate risk. Verifiers believe the USFS Wildfire Hazard map to be a more reliable and detailed source to assess the wildfire risk rating. The USFS Wildfire Hazard Potential map identifies the Rosetta project area as having a low to moderate fire risk (see below). A majority of (60-70%) of the Rosetta project footprint is identified as moderate fire risk. ACR Risk tool 1.0 sets a default high-risk fire rating of 4%. With >50% of the Rosetta Project area identified as having a moderate fire risk by the USFS Wildfire Potential map, verifiers believe a slightly higher fire risk rating is warranted and more conservative, such as 3%. Please review, revise/clarify as appropriate.</p>		<p>https://www.firelab.org/project/wildfire-hazard-potential/</p> <p>ACR Risk Tool V1.0.PDF</p>

			 <p>Source: WHP 2020 Classified Map</p>	
			<p>December 6, Findings</p> <p>PP has provided justification that includes “thinning harvests” and fuel reduction to minimize wildfire risk. Verifiers agree that fuel mitigation activities such as thinning, and fuels reduction reduces risks posed by wildfire. While important, the ACR Risk Rating Tool V1.0 does not incorporate such activities for risk reduction.</p> <p>The ACR Risk tool 1.0 provides two potential default wildfire risk ratings for the project area: 2% (low risk) and 4% (high risk). PP utilizes the FEMA Wildfire Risk Map (National Risk Index https://hazards.fema.gov/nri/wildfire) which classifies the Rosetta project area as low risk.</p> <p>Upon review of the PP’s response and FEMA Wildfire Risk Map, verifiers have the following findings:</p> <ol style="list-style-type: none"> 1.) ACR does not define requirements for the public data source used to support wildfire risk rating. Our understanding it that the data source reasonably applicable and up to date. The PP’s FEMA wildfire map appears to be outdated (2020 data). The above FEMA link does indicate there is an updated 2023 data source available (USFS based). Does using the 2023 data source change the risk ratings for the project area? 2.) The FEMA risk map also appears to utilize a social component (social vulnerability, community resilience) while also relying partially on the USFS Wildfire Hazard Potential in determining the wildfire risk. Verifiers believe adding a social component likely reduces the applicability as other factors besides forestland wildfire risk are incorporated into the FEMA risk assessment. 	<p>https://hazards.fema.gov/nri/wildfire</p> <p>https://www.firelab.org/project/wildfire-hazard-potential</p> <p>ACR Risk Tool V1.0.PDF</p>

		<p>Given that the FEMA wildfire map is more dated than the USFS wildfire map and relies on both a social component and USFS Wildfire risk data in assessing risk, verifiers contend that the USFS Wildfire risk rating is a more accurate and appropriate data source to use for assessing the fire risk.</p> <p>While the noted conservative weighting approach has sometimes been used on other projects where there is a range of wildfire risk ratings, it is not specified in the ACR Tool description for determining the risk rating. Given our assessment of the USFS Wildfire risk rating information (low to moderate for the project area), we do agree with the PP that the default value of 2% (low) is the most realistic fit for the project area in complying with the ACR IFM Methodology.</p> <p>This issue remains open, pending a response from the PP on the verifiers' findings.</p>	
		<p>March 4 Findings</p> <p>The PP asserts and verifiers agree that the impacts to the USFS Wildfire Hazard Potential map of the social component utilized by the FEMA Wildfire Risk Map are unknown. Additionally, verifiers agree that the USFS Wildfire Hazard Potential map more accurately predicts wildfire risk and support its use as the basis for the wildfire risk and fire buffer determination of 2%. This issue item is closed.</p>	<p>https://hazards.fema.gov/nri/wildfire</p> <p>https://www.firelab.org/project/wildfire-hazard-potential</p> <p>ACR Risk Tool V1.0.PDF</p> <p>Risk and Buffer Determination 030124.xlsx</p>
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
1-Dec-23	<p>Project Proponent clarifies that we intend to use the FEMA Wildfire Risk (National Risk Index) map to support the assessment of low fire risk for the project area.</p> <p>As stated by the USFS regarding the Wildfire Hazard Potential map (https://www.firelab.org/project/wildfire-hazard-potential) "on its own, WHP is not an explicit map of wildfire threat or risk. Its primary purpose is to highlight places where vegetation treatments may be needed to reduce the intensity of future wildfires. It is one of several factors used to prioritize limited fuel treatment resources". As depicted in the screenshot included by the VVB, the project area is generally classified as "Very Low" or "Moderate". The Project Proponent effectively mitigates much of the identified risk of Wildfire Hazard Potential through these "vegetation treatments" (thinning harvests) to manage the tree stocking density of pine stands. As the project scenario continues to include significant amounts of thinning harvests on mid-rotation pine stands, we feel the default value of 2% for low fire risk is appropriate based on our interpretation of the ACR Tool for Risk Analysis and Buffer Determination V1.0.</p>		
1-Mar-24	As the VVB has noted, the FEMA analysis utilizes a social component in addition to the USFS Wildfire Hazard Potential data. Since this social component modification has not been applied to the updated 2023 USFS Wildfire Hazard	Risk and Buffer Determination 030124.xlsx	

Potential data and only the 2020 version is currently available, it is unknown whether the 2023 USFS data source would change the project area's FEMA risk rating.	
PP agrees with the VVB's assertion that the USFS wildfire risk rating is a more accurate and appropriate data source for assessing fire risk since this is the most recent data available and does not rely on a social component. Based on the VVB's assessment, the default value of 2% (low fire risk) has been maintained in the Risk and Buffer Determination 030124.xlsx file but the supporting source referenced for this assessment has been revised from the previously utilized FEMA data to be the USFS Wildfire Hazard Potential.	

Verifier Issue	Issue ID:	23-24	Status: Closed	Checked by: BS/DD	Date Identified	15-Oct-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments
ACR IFM Methodology (5.4)		Potential Non conformance. <i>May impact materiality or conformance.</i>	<u>July 1, 2023 Findings</u> Verifiers acknowledge the ACR IFM Methodology applied by WY restricts activity shifting leakage beyond <i>de minimis</i> levels. WY presents an SFI entity wide certification to ensure no activity shifting leakage is occurring. Verifiers confirm evidence for enrollment of WY timberlands in Sustainable Forest Initiative (SFI) has provided SFI certificates that demonstrate sustainable management certification (certification #BV-SFIS-US011685-2) of approximately 9.8 million acres at 38 sites in the U.S. Additionally, verifiers searched for and confirmed PP's SFI certificate (BV-SFIS-CA011685-1) that cover 8,892,393 AC of Canadian timberlands (exp. 2-2-2026). Verifiers reviewed Weyerhaeuser website where the WY states that the company owns approximately 11 million acres of U.S. timberlands. There is a potential difference of 1.2 million acres of timberlands between acres reported in SFI certificates and acres reported on WY website. Verifiers learned through correspondence with SFI (Gregor Macintosh) that acreages are reported to SFI by WY and verified by a third-party auditor. Gregor Macintosh recommended that verifiers speak with Katie Cava (Sustainability Director) about acreage reported to SFI.			<i>US_FM_Final_Audit_Report_2022_FM</i> <i>US_FM_Final_Report_2021_FM</i> <i>Weyerhaeuser_-_10522186_-_SF63_-_Final_Report_-_SFI_FS_-_Renewal</i> <i>STL FS_FM External Audit Report-SFI Final</i>
			<u>September 25-29 Findings</u> Verifiers met with Jason Gibson, David Newton and Tommy Tadlock the week of Sept. 25 th during the Rosetta Site Visit. Verifiers talked with the WY team about SFI auditing and methods used for tracking land ownership changes. After discussion between S&A and WY teams, a call was arranged to discuss SFI			

		certification and process with verifiers and WY representatives Katie Cava and David Newton.	
		October 13, 2023 Verifiers conducted a conference call with WY representatives Katie Cava and David Newton (Forest Carbon Team) on 10/13/2023 where they provided clarification on the acreage discrepancy (between website statistics and the WY SFI Certificate). Katie Cava explained that not all lands are managed as timberlands and therefore not included within the SFI certificate. WY also provided the most recent audit report (2017) for the Rosetta Project area. As a result of discussions of this call, review of the SFI certificate and audit reports, verifiers are reasonably assured that activity-shifting leakage is restricted to <i>de minimis</i> levels. This issue is now considered closed.	
PP Response			
Date	PP Comment		Additional evidence submitted for review by PP
13-Oct-23	Discussions and clarifications provided during the Sept 2023 site visit and follow up video conference call with verifiers on Oct 13, 2023.		

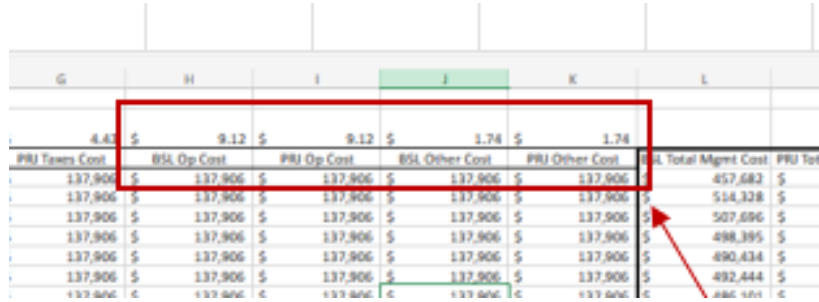
Verifier Issue	Issue ID:	23-25	Status: Closed	Checked by: DD/BS	Date Identified	9-Nov-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR IFM Methodology (2.4)	GHG Plan (B5, B6, E1, E2)	Clarification <i>May impact materiality or conformance.</i>	In the GHG Plan, the PP states that common practice of privately held timberlands in southern region of U.S. is "to maximize timber volumes and Net Present Value (NPV)." Verifiers understand the common practice is incorporated in the PP's baseline model as described in the GHG Plan (B5, pg 19): <i>"The baseline scenario represents a sustainable, active loblolly pine plantation management regime typical for the region, targeting maximum net present value at a 6% discount rate. This regime assumes artificial regeneration of clearcut stands with loblolly pine seedlings at a planting density of approximately 500 trees per acre, with a single thinning treatment applied between age 14 and 20 leaving a residual stand density of approximately 150 to 200 pine trees per acre post-thin. This scenario assumes clearcut final harvest of pine stands, typically in the mid-20s age range, and a 30% basal area removal thinning treatment applied to hardwood stands which represents a conservative approach compared to Streamside Management Zone Best Management Practices for Forestry in Mississippi (BMPs)."</i>		Rosetta BSL VS NPV PRJ Comparison09222023 Rosetta GHG Plan09222023.PDF Managing Loblolly Pine Stands...from A to Z - FSA5023 (uada.edu)	

		<p>The PP asserts the project scenario (Section B6) meets the ACR IFM Methodology additionality criteria (2.4) by managing towards a <i>“reduction in harvest levels...through a reduction in frequency of loblolly pine stand clearcut harvests compared to the baseline and a no-harvest regime applied to hardwood stands, which typically reside in Streamside Management Zones (SMZs).”</i></p> <p>As noted in section E2 of the GHG plan, the objective of the project scenario is to alter management from this baseline scenario that maximizes NPV through the use of a “mixed integer programming model” that changes the “objective function from maximizing(harvested) timber NPV to maximizing the total of timber NPV and carbon values.” Verifiers understand this will be achieved by reducing harvested activity in the SMZs and the overall delivered wood volume target at a tactical level, which will ultimately increase carbon sequestration compared to the baseline.</p> <p>Figure 6, in the GHG Plan (pg 39), illustrates the PP’s estimated project stocks are greater than the baseline stocks over the crediting period. While verifiers understand these projections are based on modeling, we are seeking further descriptive information on how WY’s “business-as-usual” approach is being altered to provide additionality. Verifiers acknowledge the change in SMZ management but are trying to ascertain the specifications associated with reductions in delivered wood volume at a tactical level. Moreover, how will this project objective be verifiable during subsequent reporting periods? Please provide further descriptive details in the GHG Plan regarding the reduction of wood proposed at the “tactical level”. Do such management practices incorporate changes to stocking levels and/or clearcut rotational ages for the loblolly pine plantations?</p>	
		<p><u>December 6, 2023 Findings</u></p> <p>PP has provided an extended length of 5-year average to rotational clearcuts of loblolly pine (LP) stands and verifiers confirm the Rosetta GHG plan has been updated to include a 5-year extension in LP rotational clearcuts (E2 P. 37).</p> <p>PP provided the article, <i>Managing Loblolly Pine Stands...from A to Z - FSA5023 (uada.edu)</i>, which suggests LP harvest rotation cycles, common for industrial LP management, between 25 and 50 years. Through discussions with Marc Krider (MS State Forestry) and Don Bragg (USFS Southern Research Station), verifiers understand that common LP rotation cycles vary between 25-35 years depending on the pulpwood and saw wood markets and that industrial timberlands rarely harvest loblolly pine stands beyond 35 years. Verifiers are seeking information to establish the “business-as-usual” approach and that a five-year extension in rotational age is additional to business-as-usual.</p> <p>Please provide information that demonstrates:</p>	<p><u><i>Managing Loblolly Pine Stands...from A to Z - FSA5023 (uada.edu)</i></u></p>

		<p>1) The current 25-year loblolly pine harvest rotations are the “business-as-usual” approach (e.g. 5-10 year historical records that demonstrate harvest rotations of 25 years).</p> <p>2) The no harvest practice in Streamside Management Zones (SMZs) is a change from “business-as-usual” approach (e.g. 5-10 year historical records that demonstrate harvests in SMZs).</p>	
		<p><u>March 4, 2024 Findings</u> Verifiers acknowledge and appreciate PP response and further documentation provided to establish common forest management practices.</p> <p>1.) The PP has provided clearcut records in <i>Clearcut Harvest Age Data.xlsx</i> that demonstrate an average cut age of 25.6 years over the last 5 years (2020-2024) in Loblolly Pine stands. Verifiers understand and acknowledge that the clearcut rotation age may vary between 18 and 33 years but that the average age of clearcuts for the Brookhaven ownership area is 25.6 years. Verifiers acknowledge this as PP’s business-as-usual approach over the last five years. This issue item is closed.</p> <p>2.) The PP has provided a document, <i>Harvesting in SMZs and Reserve Cover Types 2023.pdf</i>, that details PP practices for harvesting in SMZs. Verifiers understand that SMZs are not always available for harvest and that the harvest of SMZs often occurs due to SMZ proximity to harvested pine stands. Verifiers understand “clean” records of SMZ harvest volumes are not available as SMZ harvests occur simultaneously with pine stand harvests and they are only extracting “hardwood value where it exists”. Verifiers understand that PP harvests in SMZs are constrained by Mississippi State BMP standards and properly identified and integrated into the baseline modeling. This issue item is closed.</p> <p>As the outstanding issue items have been resolved, this issue is now closed.</p>	<p><i>Clearcut Harvest Age Data.xlsx</i></p> <p><i>Harvesting in SMZs and Reserve Cover Types 2023.pdf</i></p>
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
1-Dec-23	Project Proponent has added descriptive details to Section E2 of the GHG plan regarding the changes to SMZ harvest constraints and clearcut rotational ages for the loblolly pine plantations. The project scenario reflects an extension of the average clearcut rotational age by 5 years during the 20 year crediting period as can be derived from the oCcAvgAge output in the allrep_Baseline and allrep_Project model output files. This extended rotation age accomplishes the gain of reducing delivered wood volume at a tactical level. The objective of reduced wood volume	<i>Rosetta GHG Plan 120123.pdf</i>	

	will be verifiable during subsequent reporting periods based on actual harvest volume records compared to baseline modeled harvest volume output.	
1-Mar-24	<ol style="list-style-type: none"> PP clarifies that the average clearcut harvest age during the 20-year crediting period as observed in the allrep_Baseline.xlsx file is 26, not 25 as indicated by the verifier. PP has provided stand level records dating back through 2020 of pine stand clearcut harvest ages in the Brookhaven operating area in which the Rosetta project is located. While past management is not perfectly analogous to current or future management, the historical records available demonstrate that past management in terms of pine rotation age very closely reflects that of the modeled baseline activity. Clearcut Harvest Age Data.xlsx has been provided in Appendix H. Because of how harvest units are designed and maintained within PP's inventory and GIS system, a clean set of historical records for SMZ harvest is not readily available like was provided for pine clearcut rotation ages. SMZ's are available for thinning harvest only when a neighboring pine stand is harvested. The pine stand and SMZ together are considered to be a single harvest activity unit, with all volume from either stand consolidated to a single identifier. The records are generally designed to reference the harvested pine stand as the primary record. However, in response to request 23-22, provided the Harvesting in SMZs and Reserve Cover Types 2023.pdf document in Appendix E that details the management regime standards applied to harvesting within SMZ's within Southern Timberlands. Aligned with this document, the modeled baseline only prescribes SMZ's for thinning harvest "in conjunction with the harvest of adjacent or surrounding stands" as an operability constraint. Additionally, this document focuses on the fact that "where SMZs are present, there are opportunities to identify and extract pine and hardwood value where it exists". Finally, BMP compliance with biomass removal standards are ensured within the baseline scenario as thinning removals are capped below the allowable constraint defined by the Mississippi State BMP standards. 	<p><i>Clearcut Harvest Age Data.xlsx</i></p> <p><i>Harvesting in SMZs and Reserve Cover Types 2023.pdf</i></p>

<u>Verifier Issue</u>	<u>Issue ID:</u>	<u>23-26</u>	Status: Closed	Checked by: BS/DD	Date Identified	11-Nov-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR IFM Methodology (2.4)	GHG Plan (C3)	Information Request <i>May impact conformance.</i>	<p>The Rosetta GHG Plan (Sec C3, pg 25) notes:</p> <p><i>"The project activity without carbon revenue is expected to generate a lower NPV than the baseline scenario. However, carbon revenue from the project is expected to create a long-term incentive for project implementation."</i></p> <p>Verifiers are requesting the specific operational costs be described and included in the NPV assessments for both the project and baseline scenarios. Please provide information on operation costs such as road maintenance, property taxes, timber sale marking and administration, etc.</p>		<p><i>Rosetta BSL VS NPV PRJ Comparison09222023</i></p> <p><i>Rosetta GHG Plan09222023.PDF</i></p>	

			Also, verifiers understand the WY uses Timbermart-South eight quarter average stumpage price in projecting revenues in the NPV analyses. Please provide “eight-quarter average” stumpage pricing utilized as referenced in the <i>Rosetta GHG Plan09222023.PDF</i> .	
			<p>December 6, Findings</p> <p>Verifiers confirm that PP has provided management and operation costs (<i>Forisk 2022 Southern Silviculture Survey.PDF</i>) such as road maintenance, property taxes, timber sale marking and administration for the baseline and project scenarios in appendix H. PP provided these management costs in a worksheet (<i>Rosetta BSL VS NPV PRJ Comparison12012023</i>) that includes the per acre costs and associated management costs. PP has adjusted the NPV worksheet using those costs as a basis.</p> <p>1.) Verifiers identified errors in the PP calculations “MGMT_COST” worksheet of the <i>NPV worksheet Rosetta BSL VS NPV PRJ Comparison12012023</i> document. The per acre multiplier values in columns H-K(Table below) have been incorrect calculated using the per acre values from columns F and G. Those errors have been transferred to the NPV worksheet as the NPV worksheet relies on the management costs calculated in the “MGMT_COST” worksheet.</p>  <p>Please review and revise MGMT_COST and NPV worksheets appropriately.</p> <p>2.) Verifiers confirm that PP has provided cost associated with operational overhead, mech. and handplanting, taxes, and misc. fees. Please clarify that, SOFOR 2022, harvest management (provided by PP within operational overhead) includes costs associated with timber marking.</p>	<p><i>NPV worksheet Rosetta BSL VS NPV PRJ Comparison12012023</i></p> <p><i>Forisk 2022 Southern Silviculture Survey.PDF</i></p>
			<p>March 4 Findings</p> <p>1.) Verifiers completed checks of the NPV worksheet <i>Rosetta BSL VS NPV PRJ Comparison 03012024</i> and confirm the PP has made corrections to the per acre</p>	<p><i>Rosetta BSL VS NPV PRJ Comparison03012024</i></p>

		<p>multiplier values in columns H-K. The correct values have been transferred to the NPV worksheet tab. This issue item is closed.</p> <p>2.) Verifiers understand that timber marking is not utilized due to the method of “operator select harvest” utilized by the PP. Verifiers understand that “marking” costs associated with harvests are limited to boundary line maintenance and are included within the operational overhead costs referenced in <i>Forisk 2022 Southern Silviculture Survey.PDF</i>. Boundary marking costs are applied within columns H and I within the “Mgmt_Cost” worksheet. This issue item is closed.</p> <p>Both issue items have been resolved and this issue item is closed.</p>	<i>Forisk 2022 Southern Silviculture Survey.PDF</i>
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
1-Dec-23	<p>Project Proponent has included and described relevant management costs associated with the baseline and project scenarios in the NPV assessments file Rosetta BSL vs PRJ NPV Comparison120123.xlsx based on the FORISK 2022 Southern Silviculture Survey Upper Coastal Plain region which has been provided in Appendix H. These costs include operational overhead such as property taxes, harvest administration, boundary maintenance, road maintenance, and legal/accounting services. Additionally, costs to replant harvested acres have been quantified for the baseline and project scenarios based on the modeling activity files as the total acres replanted in the project scenario is reduced versus the baseline due to the lower harvest activity level and represents a reduced silviculture cost associated with the project action. Harvest and hauling costs have already been accounted for in the Timbermart-South pricing utilized in the model to determine initial Net Timber Revenue as these prices reflect final stumpage margins, not mill pricing.</p> <p>Timbermart-South eight quarter average stumpage price utilized in modeling project revenues has been provided in Appendix H.</p>	<p><i>Rosetta BSL vs PRJ NPV Comparison 120123.xlsx</i></p> <p><i>Rosetta 8 Qtr Avg TMS Price.xlsx</i></p> <p><i>Forisk 2022 Southern Silviculture Survey.pdf</i></p>	
1-Mar-24	<ol style="list-style-type: none"> 1. The cell reference errors identified by the VVB in the NPV worksheet have been corrected to reference the correct management cost per acre for the categories listed in columns H-K. NPV worksheet has been revised for these changes as well as updated for the latest model run relating to timber revenues and credit generation. 2. PP clarifies that timber marking for select cut harvests is not utilized as all operations are operator select harvests. The only “marking” that occurs relates to boundary line maintenance which is listed as a component of the “operational overhead” cost category. 	<i>Rosetta BSL vs PRJ NPV Comparison 030124.xlsx</i>	

Verifier Issue	Issue ID:	23-27	Status: Closed	Checked by: BS	Date Identified 11-Nov-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description	Comments	
ACR IFM Methodology v2.0 (4.2.2) & (7.3)	Inventory SOP	Observation. <i>No impact on materiality or conformance</i>	<p>During the September site visit verifiers observed that the PP's Inventory SOP document will likely need additional clarifications on the following items:</p> <p>(1) <u>Slope corrections</u>. Description is needed on the process for assessing limiting distance of borderline trees where slopes exceed 20%. While most of the project area is relatively flat (<10%) and no slope adjustment is needed for calculating the horizontal limiting distance, there were a couple of instances where slopes within riparian areas did exceed 20%. As there was no inventory specification for this situation, verifiers applied slope corrections as appropriate for limiting distance calculations.</p> <p>(2) <u>Recovered leaders</u>. There were numerous instances where sapling/pole size trees within sampled plots had broken tops with recovered leaders. The PP's inventory SOP did not include specification for measuring tree heights where tops were broken and a new leader was present (i.e., diameter of new leader was greater than a 1/3 of the diameter at bole at break). As no specification was present in the PP's Inventory SOP, verifiers applied FIA specification for broken tops in these situations.</p> <p>(3) <u>Non-Merchantable trees</u>. The PP does not measure or record carbon on selected non-merchantable species (e.g., hophornbeam). While this is a conservative measure, a clearly defined specification is needed to list the non-merchantable species in the SOP to avoid errors in plot carbon calculations during subsequent site visit verifications. Please note, the PP did provide a list of some of these species prior to the September 2023 site visit. These non-merchantable trees were also well marked on the sample plots visited by verifiers.</p>	RosettaInventorySOP_20230919	
			<p><u>December 8, 2023 Findings</u></p> <p>Verifiers appreciate the proactive revisions to the updated Inventory SOP. The intent of the November 11, 2023 findings was to list observations from the September site visit. The significance of the findings was classified as an "observation". This classification type is by definition a "closed" issue. We apologize that this was not fully explained earlier. .</p> <p>It was listed as an observation as the inventory had already been completed. Changing the Inventory SOP for this RP is not appropriate as these specifications were not in the original Inventory SOP that was utilized and applied by the cruisers. Verifiers listed these observations to document our processes and decisions that were implemented during site visit sampling where details on specifications were</p>	RosettaInventorySOP_20230919 RosettaInventorySOP120123.pdf	

		absent or limited in the PP's Inventory SOP. They were also provided for the PP to consider for future modifications of the Inventory SOP.	
		This issue has now been Opened, pending revisions. This issue will be closed when the revisions to the 12/1 Inventory SOP regarding items 1 & 2 have been removed (original SOP descriptions put back in). As item 3 is a clarification rather than an inventory specification, verifiers are fine to retain that update.	
		<u>March 8, 2024 Findings</u> Verifiers find that Section 1.5 of the Inventory SOP has removed the information about broken and recovered leader height measurements (1.5-3) and slope correction (1.5-5) which aligns with the original Inventory SOP used by cruisers. Section 1.5-7(b) of the inventory SOP retains the non-merchantable species as a clarification rather than a modification which is as expected. This issue is closed.	<i>RosettaInventorySOP030124.pdf</i>
PP Response			
Date	PP Comment		Additional evidence submitted for review by PP
1-Dec-23	<ol style="list-style-type: none"> 1. Project Proponent has added description on the process for accounting for slope correction when assessing limiting distance of borderline trees where slopes exceed 20% in Section 1.5 of the Inventory SOP inventory cruise specifications based on the description listed in Sections 14.21 and 35.22 of the USFS Timber Cruising Handbook. 2. Project Proponent has added specifications to Section 1.5 of the Inventory SOP related to measuring heights to account for trees where tops were broken and a new recovered leader is present based on FIA specifications. 3. Project Proponent has added list of non-merchantable species not to be measured or recorded to Section 1.5 of the Inventory SOP. 		<i>RosettaInventorySOP120123.pdf</i>
1-Mar-24	PP has removed the Inventory SOP revisions regarding items 1 & 2 of the previous IL response and now reflects the original SOP cruise specification descriptions. An updated version of the Inventory SOP has been provided.		<i>RosettaInventorySOP030124.pdf</i>

Verifier Issue	Issue ID:	23-28	Status: Closed	Checked by: EM/BS	Date Identified	11-Nov-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR IFM v2 (4.2.4, 5.3.1)		New information request. <i>May impact materiality or conformance.</i>	During the model review call the method for calculating harvested wood product volume and carbon was discussed. It was indicated that the volumes are calculated through a merchandising code. While verifiers understand that the code is proprietary, please provide the product specifications and the method of calculating volume for harvested wood products. Verifiers need to confirm that the flow from the FVS treelists to the two Yield files used in Woodstock and have not been able to replicate the values in the yields.		<i>YieldsHarvest.yld</i> <i>YieldsStanding.yld</i>	

			<p><u>December 11, 2023 Findings</u></p> <p>Verifiers have reviewed the MerchExplainer document and are able to follow the process for the example provided. It is the verifiers understanding that the product merchandiser produces cubic foot volume which is then converted to volume by weight using proprietary conversion factors that vary by several factors. While verifiers have reviewed the example provided for the single species, the detail required to reach reasonable assurance in this process is unclear. Verifiers have reached out to ACR to review their expectation in regards to the review of these calculations.</p>	<p><i>MerchExplainer.pdf</i></p>
			<p><u>February 14, 2024 Findings</u></p> <p>Verifiers reviewed the MerchExplainer document. We understand the PP’s product merchandising process produces cubic foot volume which is then converted to weight using proprietary density conversion factors that vary by species, size, age, and geography. Verifiers have reviewed the example provided for a given condition (single species loblolly pine plantation 21 years old, 150 tree list, various DBH and heights, site index, no thin Rx in year 2043) and have confirmed it aligns with PP’s described process.</p> <p>The detail required to reach reasonable assurance in this process, however, is not possible as the PP’s supporting calculations are proprietary and have not been provided (i.e., not able to verify final results back to their source data/calculations). Further, for the verification process to continue, additional information would also be needed to verify other baseline harvest scenarios and stand/species conditions if this internal PP process for merchandising is acceptable to ACR.</p> <p>Moreover, while verifiers understand the PP’s internal merchandising process is based on years of experience and refinements over time to improve estimates, verifiers are unclear if the method complies with the requirements for determining the amount of carbon in harvested wood delivered to the mill (Section 4.2.4 Step 1). Some noted questions are below:</p> <ul style="list-style-type: none"> • Section 4.2.4 Step 1. I.A states that baseline harvested wood quantities and species are derived from the growth model. Verifiers note that as the cutlist from FVS is used, this requirement may be met, however it is unclear whether the protocol intends that the volume from the growth and yield model should be used or if there is flexibility in the volume equations used. Currently, proprietary taper equations are used to calculate cubic volume. • Section 4.2.4 Step 1.II indicates that volume should be converted to weight using table 5-3a of the USFS Wood Handbook. Currently, internally derived density factors based on tree size, age, geographic location (i.e. 53.57 (lbs/ft3) average used for Loblolly Pine) In addition, a weight adjustment by “species 	<p><i>PP provided document:</i> <i>MerchExplainer.pdf</i> <i>Weyerhaeuser Harvested Wood Products</i></p> <p><i>VB provided document:</i> <i>ACR878_Rosetta_IFM_SAA_Background-Findings_IL_18 and 28_12Jan2024_revised</i></p> <p><i>ACR guidance 2/8/2024- email:</i> <i>ACR878_Rosetta_IFM_ACR_guidance_A. Taylor_IL_items_18_28_8Feb2024</i></p> <p><i>ACR878_Rosetta_IFM_ACR_guidance_A. Taylor_IL_items_28_13Feb2024</i></p>

		<p>and geographic location dependent” reconciliation factor is noted to have been used.</p> <p>Verifiers understanding is the PP needs to comply with the process and steps outlined in Section 4.2.4 in estimating baseline product proportions and to provide the associated supporting documents so that verifiers can confirm the process and steps were consistently, correctly, and accurately calculated.</p> <p>A meeting occurred on January 5, 2024 with ACR, VB and PP to discuss, clarify, and understand the requirements of the IFM Methodology as well as the PP calculations & proprietary needs and the VB concerns & needs to verify the baseline HWP results. In advance of the meeting both the PP and VB provided background documents (noted). On February 8, 2024, ACR provided the following guidance:</p> <p><i>“If I remember correctly, this issue is two-fold. The first issue was Bill felt he had insufficient information to trace the calculation of green weight tons for each species and tree in the inventory. WY is welcome to take precautions regarding the confidentiality of this information, but we want to confirm that S&A’s request is reasonable and generally within the purview of verification services.</i></p> <p><i>The second issue regards whether the methodology was properly applied. Upon reading WY’s recent materials, it seems to me that it was. It’s okay that NPV calculations take a slightly different route from green weight than HWP carbon accounting. Following the document, all steps appear to have been properly implemented, but I would be interested to know if S&A had any further specific concerns on the approach here.”</i></p> <p>On February 13, 2024, verifiers requested further clarification and confirmation on the next steps, specifically:</p> <p><i>“Our interpretation is that ACR approves of the use of Weyerhaeuser-derived taper equations, densities and green weight adjustments to produce the HWP for the baseline. Given that these taper equations, densities and green weight adjustments are proprietary and based on internal data that verifiers do not have equivalent independent data to validate, verifiers do not intend to scrutinize the validity of the taper equations, densities and green weight adjustments. Rather, we intend to request a subset of calculations for treatments/years to ensure that the process of moving from the FVS cutlist to the final HWP values is consistent and accurate to address this issue. Is our understanding of ACR’s guidance accurate and is this approach acceptable?”</i></p> <p>ACR replied on February 13, 2024 (see- email):</p>	
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		<p><i>“ You mention “Weyerhaeuser-derived taper equations, densities and green weight adjustments to produce the HWP for the baseline”, but we expect the same equations and steps to be used for both baseline AND with-project HWP calculations. Can you confirm that’s happening?</i></p> <p><i>Assuming that’s true, then yes, WY’s method to provide green weight tons is okay, since it seemed like all the steps in the methodology have still been correctly applied. S&A can perform some simple checks to make sure their proprietary method is coming close to what’s expected from other methods (the answers shouldn’t be wildly different), but there is no expectation that you fully vet their internally developed equations. Ensuring their consistent and correct application is also an important piece, so I’m glad you’re already thinking about that.</i></p> <p><i>It does seem like we need a record of their proprietary method, to ensure consistency throughout the project term. If they don’t want to share these details publicly, they should briefly describe them in their GHG Project Plan and then create a separate write-up with actual details, to be referenced throughout the project life, which is named as a GHG Project Plan Appendix, provided under separate cover and not maintained on the ACR Registry.”</i></p> <p>On February 13, 2024, verifiers confirmed the PP utilizes the same equations and steps for both baseline and with-project HWP calculations and long term projections. Based on these past discussions and noted ACR guidance, for next steps verifiers will request the following to help resolve this issue:</p> <p>(1) A subset of calculations for treatments/years to ensure that the process of moving from the FVS cutlist to the final HWP values is consistent and accurate (To complete VB’s data checks - verify process & calculations/values).</p> <p>(2) Documentation of the PP’s proprietary method to determine modeled HWP values. Assuming the PP is not sharing the method publicly, documentation will include (a) a brief description of the method in the GHG Project Plan and (b) a separate write-up with actual details, to be referenced throughout the project life, which is named as a GHG Project Plan Appendix. The Appendix is provided under separate cover and not maintained on the ACR Registry – see latest GHG Project Plan template. (To ensure consistency throughout the project term,).</p>	
		<p>February 15, 2024 Findings</p> <p>Based on the 2/14/24 findings, verifiers request the following:</p> <p>(1) To review and verify the process of moving from the FVS cutlist to the final HWP values is consistent and accurate, please provide a subset of calculations utilized to process the FVS cutlist for the following treatments & years:</p>	

		<table><tr><th>CaseID</th><th>StandID</th><th>Year</th></tr><tr><td>2263e9da-f11b-4c10-a1e0-bc89c6d9c448</td><td>H_BA<90</td><td>2052</td></tr><tr><td>169ffa29-3494-4af8-a36d-bba2ef1dedaf</td><td>P_Age=6to10</td><td>2037</td></tr><tr><td>9f29ded8-e512-4609-96ec-378483605859</td><td>H_BA<90</td><td>2027</td></tr><tr><td>a63bbaed-7e58-4daf-85e4-5babf6ef05a0</td><td>P_Age=11to13_TPA520</td><td>2032</td></tr><tr><td>ecef4b9a-6593-45ba-85bb-ae769d765662</td><td>H_BA<90</td><td>2039</td></tr><tr><td>6d85994e-569a-40cf-b3f4-4083d00159d2</td><td>H_BA>110</td><td>2043</td></tr><tr><td>8695519a-56b6-4915-9085-5780f3b583af</td><td>H_BA=90to110</td><td>2034</td></tr><tr><td>a33fc32e-a9da-480d-92c5-04a6ae1c1d32</td><td>H_BA<90</td><td>2047</td></tr></table> <p>(2) To ensure consistency throughout the project term, please provide documentation of the PP’s proprietary method to determine modeled HWP values. Assuming the PP is not sharing the method publicly, documentation will include:</p> <p>(a) a brief description of the method to be incorporated in the GHG Project Plan; and</p> <p>(b) a separate write-up with actual details, to be referenced throughout the project life, which is named as a GHG Project Plan Appendix. The Appendix is provided under separate cover and not maintained on the ACR Registry – see latest GHG Project Plan template.</p>	CaseID	StandID	Year	2263e9da-f11b-4c10-a1e0-bc89c6d9c448	H_BA<90	2052	169ffa29-3494-4af8-a36d-bba2ef1dedaf	P_Age=6to10	2037	9f29ded8-e512-4609-96ec-378483605859	H_BA<90	2027	a63bbaed-7e58-4daf-85e4-5babf6ef05a0	P_Age=11to13_TPA520	2032	ecef4b9a-6593-45ba-85bb-ae769d765662	H_BA<90	2039	6d85994e-569a-40cf-b3f4-4083d00159d2	H_BA>110	2043	8695519a-56b6-4915-9085-5780f3b583af	H_BA=90to110	2034	a33fc32e-a9da-480d-92c5-04a6ae1c1d32	H_BA<90	2047	
CaseID	StandID	Year																												
2263e9da-f11b-4c10-a1e0-bc89c6d9c448	H_BA<90	2052																												
169ffa29-3494-4af8-a36d-bba2ef1dedaf	P_Age=6to10	2037																												
9f29ded8-e512-4609-96ec-378483605859	H_BA<90	2027																												
a63bbaed-7e58-4daf-85e4-5babf6ef05a0	P_Age=11to13_TPA520	2032																												
ecef4b9a-6593-45ba-85bb-ae769d765662	H_BA<90	2039																												
6d85994e-569a-40cf-b3f4-4083d00159d2	H_BA>110	2043																												
8695519a-56b6-4915-9085-5780f3b583af	H_BA=90to110	2034																												
a33fc32e-a9da-480d-92c5-04a6ae1c1d32	H_BA<90	2047																												
		<p><u>March 13, 2024 Findings</u></p> <p>Verifiers have reviewed the provided responses and the note following:</p> <p>(1) Verifiers have reviewed the “RosettaTreeSubsetMerchDemo.xlsx”, all requested cutlists were included and verifiers confirmed the flow of calculations from the cutlist to the values used for harvested wood products in the yields. This portion of the issue is considered closed.</p> <p>(2) While verifiers agree that the flow and process of calculating harvested wood products is well documented, verifiers are unclear where the actual numerical conversions are provided. For example, the calculation on the “5MerchedLog Weight” tab in the “RosettaTreeSubsetMerchDemo.xlsx” workbook indicates the weight conversion is based on Weyerhaeuser’s density function. While the process is clear, the actual numerical value used for density do not appear to be recorded anywhere. To ensure consistency across the crediting period, the numerical values used for each species should be maintained and would need to be verifiable. Please clarify whether the numerical details for species-specific conversions such as:</p>	<p><i>RosettaTreeSubsetMerchDemo.xlsx</i></p> <p><i>Weyerhaeuser Harvested Wood Products.pdf</i></p> <p><i>MerchExplainer.pdf</i></p>																											

		merchantability standards, volume equations, density conversions and cull rates are stored/recorded so they can be checked for calculation consistency during subsequent verifications.	
		<p><u>April 17, 2024 Findings</u></p> <p>(2) Verifiers conducted a conference call with the PP on March 25, 2024 to further discuss how consistency of the numerical details for species-specific conversions will be tracked/stored/maintained during the crediting period and how these can be checked for subsequent verifications. Verifiers understand the numerical details within the merchandizing code are recorded and stored as redundant copies on the PP's internal servers (library version history is stored). As these files can be tracked, verifiers are reasonably assured the files related to the merchandizing process could be verified, if needed, to ensure consistency during the long term monitoring period. As such, this issue item and this issue is now closed.</p>	
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
1-Dec-23	Project Proponent has provided the file MerchExplainer.pdf in Appendix H to detail the methods of calculating volume for harvested wood products.	MerchExplainer.pdf	
1-Mar-24	<ol style="list-style-type: none"> PP has provided RosettaTreeSubsetMerchDemo.xlsx which demonstrates the merchandizing process as it applies to translating FVS cutlist data into merchantable, green weight product classifications that correspond to Step 1 of Section 4.2.4 of the IFM V2.0 methodology. The process documentation of what merchandizing aspects in Step 1 are unique to PP and which follow standard ACR protocols are documented in Weyerhaeuser Harvested Wood Products.pdf as was provided to ACR and the VVB on 1/18/24 in response to ACR's request when seeking a ruling on the topic. Weyerhaeuser Harvested Wood Products.pdf has been provided in Appendix H. <p>A) A description of this method has been incorporated into Section E1 of the GHG plan where HWP calculation methods are documented.</p> <p>B) Between the information provided in MerchExplainer.pdf, Weyerhaeuser Harvested Wood Products.pdf, and the step by step detail provided in each tab of RosettaTreeSubsetMerchDemo.xlsx, the proprietary method of converting FVS data into green tons of merchantable timber product classes for the purposes of HWP calculation within the methodology guidelines is well-documented and available to be referenced throughout the life of the project during subsequent verification activities.</p> 	<p>RosettaTreeSubsetMerchDemo.xlsx</p> <p>Weyerhaeuser Harvested Wood Products.pdf</p> <p>MerchExplainer.pdf</p>	
27-Mar-24	<ol style="list-style-type: none"> As discussed between PP and VVB on 3/25, the numerical details contained within the merchandizing code have been recorded and stored as redundant copies in multiple locations on the PP's internal servers. The merchandizing code server itself also maintains a library version history if the merchandizing system were to be updated in the future. This will enable calculation consistency to be verifiable in subsequent verifications, if necessary. 		

Verifier Issue	Issue ID:	23-29	Status:	Closed	Checked by:	EM	Date Identified	11-Nov-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description					Comments
ACR IFM v2 (4.2.4, 5.3.1)		New information request. May impact materiality or conformance.	Verifiers are requesting the method and/or code used to process the FVS standing carbon values into the yield curves used for Woodstock. In particular, verifiers are clarifying how defect was applied to the yields.					YieldsHarvest.yld YieldsStanding.yld
			<u>December 11, 2023 Findings</u> Verifiers have reviewed the carbon_yield_explainer.pdf and the associated files and are satisfied with the detail provided. This issue is considered closed.					carbon_yield_explainer.zip (includes carbon_yield_explainer.pdf and carbon_yield_explainer.rmd)
PP Response								
Date	PP Comment						Additional evidence submitted for review by PP	
1-Dec-23	Project Proponent has provided the file carbon_yield_explainer.pdf and carbon_yield_explainer.rmd in Appendix H to enable verifiers to reproduce how FVS standing carbon values are processed into the yield curves used for Woodstock.						carbon_yield_explainer.zip (includes carbon_yield_explainer.pdf and carbon_yield_explainer.rmd)	

Verifier Issue	Issue ID:	23-30	Status: Closed	Checked by: SB	Date Identified	7-Mar-24
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
		Clarification. <i>No impact on materiality or conformance</i>	Table 2. In Stratification SOP should be updated with the last file names used in the project. Verifiers noted that between 11162023 and 12012023 submissions the internal roads layer changed to include more of the external roads.		RosettaStratificationSOP03012024	
			<u>March 29, 2024 Findings</u> The PP has revised the StratificationSOP to include requested updated references for the project’s spatial data. Verifiers acknowledge the spatial data file names have been updated for internal roads, utility lines and hydrology. This issue is now closed.		RosettaStratificationSOP03212024.pdf Rosetta_WYInternal_Roads_Updated12182023.shp Rosetta_UtilityLines_Updated11162023.shp Rosetta_HydrologyLine_Updated11162023.shp	
PP Response						
Date	PP Comment				Additional evidence submitted for review by PP	

27-Mar-24	Table 2 of the Stratification SOP has been updated to use the correct file names and dates for the shapefiles referenced.	RosettaStratificationSOP03212024.pdf
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Verifier Issue	Issue ID:	23-31	Status: Closed	Checked by: SB/EM	Date Identified	7-Mar-24
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR IFM 2.0 4.2.2, 5.6		Non conformance. May impact materiality or conformance.	ACR IFM 2.0 Section 5.6 Equation 20 indicates that $eP, TREE, t$ is the “percentage uncertainty expressed as 90% confidence interval of the mean of the carbon stock in above and belowground live trees (in metric tons CO ₂) for the most recent inventory used to estimate stocking at the end of year t .” Since these no tally plots are part of the most recent inventory, they should be included in this calculation. Please update as appropriate.		RosettaYieldAdjustmentDroppedPlots.pdf	
			<p>April 15, 2024 Findings</p> <p>The PP has updated the noted project documents to include the three dropped plots within the inventory in calculating the 90% confidence interval of the mean of the carbon stock (error) and in estimating the project’s uncertainty percentage (Eq 20). Verifiers concur with the PP’s estimate for uncertainty and that the submitted project documents were consistently and accurately revised to reflect the updated uncertainty percentage.</p> <p>Verifiers acknowledge <i>RosettaYieldAdjustmentDroppedPlots.pdf</i> has been removed from Appendix F as it is no longer relevant. Verifiers appreciate the completeness in updating all the affected project documents to reflect the updated uncertainty percentage.</p> <p>The revised uncertainty now complies with the IFM Methodology (eq 20), as such this issue is closed.</p>		<p><i>PlotCarbonInit_20240321_SOP_calcs.xlsx</i> <i>RosettaStratificationSOP03212024.pdf</i> <i>Rosetta Ex Ante Offset Projection 032124.xlsx</i> <i>Rosetta ERT Actuals Monitoring Report 032124.xlsx</i> <i>Rosetta GHG Plan 03212024.pdf</i> <i>CruiseDataProcessingForCarbonInventoryRosetta20240321.Rmd</i> <i>CruiseDataProcessingForCarbonInventoryRosetta20240321.pdf</i> <i>PlotCarbonRosetta20240321.xlsx</i> <i>RosettaInventorySOP03212024.pdf</i> <i>Plot_Move_Explainer_03212024.xlsx</i></p>	

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
27-Mar-24	The process for accounting for the three dropped plots considered to be zero carbon has been updated from the initial method that occurred after degrowth and cull to the new method which incorporates them at the time of inventory to accurately reflect the error/confidence interval value impact of including these plots. As such, <i>RosettaYieldAdjustmentDroppedPlots.pdf</i> has been removed from Appendix F as this method is no longer relevant. The three no tally plots were added to the document “ <i>PlotCarbonInit_20240321_SOP_calcs.xlsx</i> ” so that they are included in the error/confidence interval calculation displayed in the stratification SOP (<i>RosettaStratificationSOP03212024.pdf</i>), Ex-ante offset projection (<i>Rosetta Ex Ante Offset Projection 032124.xlsx</i>), RP1 credit issuance calculation (<i>Rosetta ERT Actuals Monitoring Report 032124.xlsx</i>), and GHG plan (<i>Rosetta GHG Plan 03212024.pdf</i>) documents were also updated to reflect this updated uncertainty value.	<p><i>PlotCarbonInit_20240321_SOP_calcs.xlsx</i> <i>RosettaStratificationSOP03212024.pdf</i> <i>Rosetta Ex Ante Offset Projection 032124.xlsx</i> <i>Rosetta ERT Actuals Monitoring Report 032124.xlsx</i> <i>Rosetta GHG Plan 03212024.pdf</i> <i>CruiseDataProcessingForCarbonInventoryRosetta20240321.Rmd</i></p>

	<p>It was noted that these no-tally plots impacted initial and intermediate strata-level carbon estimates, though the final values remain the same as under the previous method. As a result, we ensured this impact of the no-tally plots was also reflected in table 4 of the document “CruiseDataProcessingForCarbonInventoryRosetta20240321.Rmd” and the resulting PDF “CruiseDataProcessingForCarbonInventoryRosetta20240321.pdf”. These changes were also reflected in tables 1, 2, and 5 of the Inventory SOP (see “RosettaInventorySOP03212024.pdf”). Lastly, the three no-tally plots were added to the document “PlotCarbonRosetta20240321.xlsx” and marked as included plots in the document “Plot_Move_Explainer_03212024.xlsx”.</p>	<p><i>CruiseDataProcessingForCarbonInventoryRosetta20240321.pdf</i> <i>PlotCarbonRosetta20240321.xlsx</i> <i>RosettaInventorySOP03212024.pdf</i> <i>Plot_Move_Explainer_03212024.xlsx</i></p>
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Appendix C: Project Team

Verification Team	Qualifications
Bill Stack	Bill Stack is a forester, natural resource manager, and ecosystem restoration specialist with 35 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. 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, Wallowa-Whitman National Forest.
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.
Alexa Kandarlis	Alexa Kandarlis has been with S&A since 2016 and brings experience in carbon auditing and climate change mitigation policy. She 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. Alexa has participated in verifications of carbon offset projects and corporate inventories under a variety of GHG programs,



Verification Team	Qualifications
	including the Air Resources Board, Climate Action Reserve, American Carbon Registry, Verified Carbon Standard/Climate Community & Biodiversity Standard/Sustainable Development Verified Impact Standard, and Carbon Disclosure Project. In addition to validation/verification, she 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. Alexa has field experience with Forestry (AFOLU), Ozone Depleting Substances, and Livestock project types. 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 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.

Verification Team	Qualifications
	He is an SAF Certified Forester and holds forester licenses in Maine, New Hampshire and Vermont.
David deRoulhac	David deRoulhac is an environmental consultant and contractor with over 20 years of experience in federal and private contracting. Over the last 12 years, he has worked for several conservation and research organizations collecting data on rivers, soils, forests and grasslands for private companies, non-profits, and various federal agencies. David has worked on several forest carbon offset site visits for ARB and ACR verifications as well as desk top verifications from Alaska to Arizona and Mississippi. He owns and manages Roan & Associates, a company that conducts forest vegetation collections and forest inventories for the USFS in most western states. David holds a Master's of Natural Resources and a NEPA graduate certificate. He brings a diverse skill set with expertise in biological data collection, environmental policy and project management.
Stacy Birch	Stacy Birch holds a B.S. in Ecology from Susquehanna University in Pennsylvania and a M.S. in Forest Resources from the University of Maine, Orono. Her master's thesis entitled "Stand dynamics and the Spatio-temporal patterns of natural disturbances in an Acadian Old-Growth Reserve" focused on dendroecological and geographic information systems processing. Stacy joins S&A with over a decade of experience in data manipulation and analytics on various platforms giving her diverse expertise using multiple coding languages including SQL, R, Visual Basic, and Python. Her primary responsibilities include maintaining S&A's carbon calculation tool; verifying forest inventory carbon calculations and statistics; and completing GIS analyses and aerial imagery assessments. Stacy also provides supporting data checks on harvested wood products, legal regulatory compliance, baseline constraint acres, and forest growth and yield modeling components. She has supported numerous American Carbon Registry and California Air Resources Board Improved Forest Management carbon offset validation/verification projects as a Technical Expert.

Appendix D: Version Tracking

Version	Date	Developed By	Version Notes
1.0	5/6/2024	Bill Stack	Draft Document
1.1	5/21/2024	Pablo Reed	Technical Reviewer comments
1.2	5/22/2024	Bill Stack	Updated document based on Technical Review comments
1.3	5/23/2021	Alexa Kandarlis	Internal Approval
1.4	5/24/2024	Bill Stack	Updated based on PP review comments
1.5	5/28/2024	Bill Stack	Finalized for submission
1.6	8/2/2024	Bill Stack	Revised based on ACR Review comments
1.7	8/22/2024	Bill Stack	Revised based on ACR Review comments
1.8	10/11/2024	Bill Stack	Revised based on ACR Review comments
1.9	11/6/2024	Alexa Kandarlis/Bill Stack	Revised based on ACR Review comments

Signature Page

S&A Carbon Lead Validator & Verifier	Bill Stack 
Name and Signature:	
S&A Carbon Technical Reviewer	Pablo Reed 
Name and Signature:	
Date:	11/6/2024