RUBY CANYON ENVIRONMENTAL

&

FIRST CORP

Validation and Verification Report

ACR687 Anew - Hartwood Forestry Project

December 5, 2023

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TABLE OF CONTENTS

1 INTRODUCTION

Anew Climate, LLC (Anew), formerly Bluesource LLC, contracted with Ruby Canyon Environmental, Inc. (RCE) to perform the validation and verification of the ACR687 Anew – Hartwood Forestry Project (Project) for the reporting period of September 30, 2021 – September 29, 2022 and a crediting period of September 30th, 2021 – September 29th, 2041 under the American Carbon Registry (ACR) program. Anew acts as the project developer for the landowner and project proponent The Hartwood Club, Inc. (The Hartwood Club). This report is documentation of validation and verification activities that RCE performed for the Project. For the validation, RCE reviewed the project information as described in the GHG Project Plan "Anew – Hartwood Forestry Project" dated December 1, 2023. For the verification, RCE ensured that the GHG assertion was materially correct, that the data provided to RCE was well documented, and that if Anew made any material errors, that these errors were corrected. RCE worked with Forest Resource Solutions and Technologies (FRST) to complete this validation and verification.

1.1 OBJECTIVES

The objectives of the validation are to evaluate:

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

The objectives of the verification are to evaluate:

- The emissions reductions and to ensure that the assertion is materially correct;
- The data provided to RCE can be documented and if errors or omissions are detected, they be corrected.

RCE retains all data and documents for seven years after the end of the project reporting period or for the duration required by ACR, whichever is longer.

1.2 PROJECT BACKGROUND

The Project is located on approximately 6,064 acres of Transition Hardwoods-White Pine forest in southern New York State. The area encompasses habitat for deer, bobcats, bears, eagles, turkeys and ruffed grouse. It is also home to the threatened timber rattlesnake. This property is owned by Hartwood Club, Inc. The Project ensures long-term sustainable management of the forests.

1.3 Responsible Party

Project Proponent

The Hartwood Club, Inc.
195 Baer Road
Forestburgh, New York, 12777
Jan Ritzel, President of The Harwood Club
(845)-856-1314

Project Developer

Anew Climate, LLC
2825 E Cottonwood Pkwy 400
Salt Lake City, UT 84121
Liz Lott, Vice President
949-233-1501

1.4 Validation and Verification Team

Lead Validator and Verifier: Zach Eyler
Biometrician: Andrea Eggleton, FRST
Professional Forester: Christian Eggleton, FRST
Forestry Analyst: Tim Facemire, FRST
Forestry Analyst: Andrew Russo, FRST
Internal Reviewer: Bonny Crews

1.5 Validation and Verification Criteria

1.5.1 Validation and Verification Standards, Guidelines, and Tools

- Anew – Hartwood Forestry Project GHG Plan (December 1, 2023)
- Anew - Hartwood Monitoring Report (November 30, 2023)
- ACR Standard, Version 7.0 (December, 2020)
- ACR Validation and Verification Standard Version 1.1 (May, 2018)
- Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non‐Federal U.S. Forestlands v.1.3, April 2018
- Errata and Clarifications - Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non‐Federal U.S. Forestlands v.1.3, September 30, 2021
- ACR Tool for Risk Analysis and Buffer Determination, v1.0
- ISO 14064-3:2006 “Greenhouse gases – Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions”

1.5.2 Level of Assurance

The verification was conducted to a reasonable level of assurance.

1.5.3 Materiality

The verification was conducted to ACR's required materiality threshold of +/-5% of the GHG project's emissions reductions or removal enhancements.

2 VALIDATION AND VERIFICATION PROCESS

As the first step in validation/verification activities, the Lead Validator/Verifier developed a Validation/Verification Plan to be followed throughout the validation and verification. The plan included the following activities:

- RCE completed a COI form on September 16, 2022 to identify any potential conflict of interest with the Project or Project Developer. The COI form was approved by ACR on September 20, 2022.
- RCE and Anew held a validation/verification kick-off meeting on October 6th, 2022. During the kick-off meeting RCE reviewed the validation/verification objectives and process, reviewed the schedule, and submitted an initial document request.
- RCE performed a strategic review and risk assessment of the received data and support documents to understand the scope and areas of potential risk in the GHG emissions reductions.
- RCE developed a risk-based sampling plan based upon the strategic review and risk assessment. The validation/verification plan and sampling plan were used throughout the process and were revised as needed based upon additional risk assessments.
- The validation/verification team conducted the site visit to the Project to verify the inventory quality and forest management practices from October 26-28, 2022. During the site visit the Verification Team performed key personnel interviews, conducted sequential sampling of inventory plots, conducted reconnaissance of the Project area boundary, observed elements of natural forest management, and observed harvest locations (if applicable) during and preceding the reporting period.
    - The site visit was attended by the following verification team personnel:
        - FRST:
            - Andrew Russo
            - Noam Knopf-Boyer
    - During the site visit, the Verification team met with the following individuals:
        - Anew
            - Megan Finlay
            - Ian Hash
        - Landmark
            - Bob Butcher
            - Troy Radcliff
- RCE performed a risk-based desktop review of the submitted validation/verification documents. The desktop review included an assessment of the GHG calculation methods and inputs, source

data completeness, data management system and monitoring systems and eligibility documentation.

- RCE conducted interviews and had conversations with Project personnel during the verification. Personnel interviewed include:
  - Ian Hash – Anew
  - Megan Finlay – Anew
- RCE submitted requests for corrective actions, non-material findings, additional documentation, and clarifications as necessary to Anew throughout the validation/verification.
- RCE's internal reviewer conducted a review of the validation/verification sampling, report, and statement.
- RCE issued a final validation/verification report, verification statement, and List of Findings.
- RCE held an exit meeting with Anew.

3 VALIDATION AND VERIFICATION FINDINGS

3.1 PROJECT BOUNDARY AND ACTIVITIES

The Project entails improved forest management on approximately 6,064 acres of Transition Hardwoods-White Pine forest in southern New York State. GHG emission reductions for the Project are quantified by comparing actual onsite carbon stocks against modeled baseline onsite carbon stocks and baseline carbon in harvested wood products. The difference in these Project and baseline carbon stocks year over year is the basis for calculating the Project's primary goal of maintaining and enhancing forest GHG pools.

The Project's temporal boundary is the crediting period from September 30, 2021 – September 29, 2041.

3.2 GHG SOURCES SINKS, AND RESERVOIRS

Table 1 shows the GHG emission sources included in the project boundary based on the Methodology. RCE confirmed that the GHG Project Plan appropriately identifies the offset project boundary and includes all relevant SSRs.

Table 1. GHG Emissions Sources

Source	GHG	Description
Above-ground biomass	CO_2	Major carbon pool for project activity
Below-ground biomass	CO_2	Major carbon pool for project activity
Standing dead wood	CO_2	Major carbon pool in unmanaged stands for the project activity
Harvest wood products	CO_2	Major carbon pool for project activity
Market Effects	CO_2	Reductions in project outputs due to project activity may be compensated by other entities in the marketplace. Those emissions must be included in the quantification of project benefits.

3.3 ELIGIBILITY

3.3.1 ACR Eligibility

RCE confirmed the following ACR eligibility criteria listed in the ACR Standard, Version 7.0 by reviewing the project proponent's GHG Project Plan, Monitoring Report, and calculations as well as other supporting documentation described throughout this report (a full list of documents reviewed is in Appendix A).

- Start Date: The project start date is September 30, 2021.
- Minimum Project Term: The minimum project term is 40 years.
- Crediting Period: The crediting period is 20 years as specified by the Methodology, September 30, 2021 – September 29, 4041.
- Real: RCE confirmed that the GHG reductions follow the ACR methodology and are verifiable.
- Emission or Removal Origin: RCE confirmed that The Hartwood Club owns and has control over or documented effective control over the GHG sources/sinks from which the emissions reductions or removals originate.
- Offset Title: RCE confirmed that all Project lands are owned directly by the Project Proponent (The Hartwood Club), which holds full legal title.
- Additional: RCE confirmed that the project is additional as described in Section 3.4.
- Regulatory Compliance: RCE confirmed that the Project was in compliance with all applicable regulations.
- Permanent: RCE confirmed that the Project correctly applied the ACR Tool for Risk Analysis and Buffer Determination to account for permanence. A total risk score of 18% was confirmed.
- Net of Leakage: RCE confirmed that the Project correctly accounted for leakage per the Methodology.
- Independently Validated and Verified: RCE is a third-party validation and verification body that the project proponent has contracted to validate and verify the Project.
- Environmental and Community Assessments: RCE reviewed project impacts as described in section 3.6 of this report.

3.3.2 Methodology Eligibility

RCE reviewed the Project against the ACR Methodology eligibility and applicability conditions and confirmed the following:

- The Project is located on non-federally owned private forestland.
- The Hartwood Club controls the timber rights on the forestland and can legally harvest.
- The Project property and all associated harvest activity falls under the Hartwood Hunt Club Forest Management Plan which has been approved by ACR.
- The Project is not on tribal lands.
- The Project is not on public non-federal lands.
- The Project does not use non-native species where adequately stocked native stands were converted for forestry or other land uses after 1997.
- The Project has not drained or flooded wetlands on or after the project start date.
- The Hartwood Club owns all lands and timber rights on the Project area.

- The Project's stocking levels will increase well above the baseline conditions for the duration of the Project and by the end of the Crediting Period.

3.4 ADDITIONALITY

The Project meets the requirements for the demonstration of additionality specified by the ACR Standard and the Methodology.

3.4.1 Regulatory Surplus Test

RCE confirmed that there are no existing laws, regulations, statutes, legal rulings, or other regulatory frameworks in effect as of the start date that requires the Project activity and the associated GHG emissions reductions; thus, the Project passes the regulatory surplus test.

3.4.2 Common Practice Test

The Project area is similar to surrounding private forestland that is regularly harvested as it reaches viable diameter thresholds and has a history of some timber harvesting.

The project's geographic region for timber production extends to the Southeast, Northeast and Southwest of the project area, as well as into Canada. Throughout this private forestland is heavily cut, often through shelterwood, single tree selection and clear-cutting, and is managed to maximize NPV of the asset. Wood products including hardwood sawtimber and softwood pulpwood are distributed to mills throughout this region and demand is strong and steady.

Without the carbon project commitment, the baseline harvest levels could also readily be realized due to increasing pressure in the area to convert forestland to residential development and agricultural lands. With Project implementation the forestland carbon stocks will exceed the common practice found in the region.

3.4.3 Implementation Barriers Test

The Project chose to assess the financial barriers test per the ACR Standard and Methodology. RCE confirmed that carbon funding is reasonably expected to incentivize the Project's implementation. Due to the Project being implemented, The Hartwood Club loses the ability to monetize timber harvests at rate similar to business-as-usual practices during the life of the Project. Anew provided a financial assessment comparison of NPV between the baseline scenario with harvesting and the project scenario with a lower amount of harvesting but including revenue from carbon credits. The baseline scenario NPV was significantly greater demonstrating that carbon funding is integral to the project activity.

3.5 PERMANENCE

RCE confirmed that the Project correctly applied the ACR Tool for Risk Analysis and Buffer Determination to account for permanence. A total risk score of 18% was confirmed.

3.6 ENVIRONMENTAL AND COMMUNITY IMPACTS

The GHG Project Plan includes a summary of the Project activity's net positive environmental and community impacts. The Project will provide habitat protection for wildlife, plant species, and trees, water

quality protection and protection from soil erosion and degradation among other benefits. The Project is not expected to cause any negative environmental impacts.

3.7 Local Stakeholder Consultation

No formal stakeholder consultation occurred since the Project is held on private lands.

3.8 Monitoring Plan

The GHG Project Plan includes a Monitoring Plan that identifies all monitored data and parameters. RCE confirmed that the monitoring parameters and approaches conform to the methods required by the Methodology. The plan includes all relevant data parameters and appropriately identifies units of measurements, data sources, methodologies, uncertainty, monitoring frequency and procedures, and QA/QC procedures. After discussions with Anew and reviews of project documents, RCE determined that the Monitoring Plan accurately reflects how Project data is monitored and recorded and there are no deviations relevant to the Project activity against the requirements of the Methodology. Anew and The Hartwood Club implemented the monitoring plan as stated in the GHG Project Plan during Project activities.

3.9 Baseline Scenario

The Project's baseline scenario represents an aggressive harvest regime, targeted to maximize net present value at a 5% discount rate for non-industrial private lands. The baseline scenario applies harvesting across the Project area as allowed by the Methodology to maximize NPV.

The Project's baseline model simulates a range of harvest types and rotation lengths based on legal requirements and simulated growth within each stratum. The objective of modeling was to determine possible timber harvests in the project area over 100-years within the framework of legal and reasonable harvest constraints.

Stands were modeled for several different prescriptions, including no-harvest, clearcut, single tree selection, commercial thinning, and shelterwood removal, with restrictions on rotation ages and minimum harvest volumes.

Anew utilized the USDA's Forest Vegetation Simulator (FVS) Northeastern variant to model harvests and yields. Growth models were calibrated using site index values calculated from plot-gathered tree cores and their averages. RCE reviewed the Site Index calculations and confirmed that a reasonable species and site index for the region was assigned on an individual plot basis to appropriately calibrate growth. The process was confirmed to be consistently and systematically applied to each plot.

RCE reviewed the resulting baseline outputs to ensure that they reflected the modeling objectives and the legal additionality requirements, such as the New York Forest Tax Law Program. The model grows trees and volumes at a reasonable rate compared to regional averages.

3.10 On-site Inventory Verification Check

In preparation for and during the site visits, the Verification Team reviewed evidence necessary to verify Project inventory estimates.

The Project inventory consists of a single stratum which FRST sampled using a random sampling method.

The current inventory contains 149 permanent, fixed-radius plots. At each plot location, trees were measured in two nested plots: a larger 1/15th acre plot with radius of 30.4 feet, and a smaller 1/100th acre plot with radius of 11.8 feet. The larger plot measured all trees greater than or equal to 5 inches DBH while the smaller, nested plot measured all living trees between 1-4.9 inches.

Given this sample design and Project size, the Verification Team was required to achieve a minimum of 8 successful plots within the project to successfully verify inventory stocking levels. The Verification Team successfully verified site data after measuring a total of 8 site plots. The Project passed the t-test during the site visit.

Project Area

During the site visit, the Verification Team conducted boundary-line reconnaissance by visiting Project boundary edge lines and points, plotting edge points with GPS receivers, and determining whether there were discrepancies with the digital Project boundary files provided by Anew and the physical boundary witnessed on-site. This was done to determine the risk that Project area inaccuracies could contribute to a material misstatement in Project emission reductions. To the extent feasible, the Verification Team confirmed that the Project area boundary was appropriate and accurate.

3.11 Project Data and GHG Emissions Reduction Assertion

RCE reviewed the GHG Project Plan and Project data and calculations to ensure that appropriate equations were used in calculating baseline emissions, project emissions, and net emissions reductions.

3.11.1 Baseline Emissions

RCE and FRST confirmed that the baseline emissions were correctly calculated. See more details in section 3.9.

3.11.2 Project Emissions

RCE and FRST confirmed that the project emissions were correctly calculated.

3.11.3 Emissions Reductions

RCE verified that Anew calculated emission reductions according to relevant Methodology equations and that the methods are included in the GHG Project Plan.

RCE recalculated emission reductions for the first reporting period according to the equations defined in the Methodology and the GHG Project Plan and found the Project assertion to be free of material misstatement.

RCE and FRST also recalculated and confirmed the uncertainty assessment for the Project. The uncertainty calculation is the compiled square roots of the summed errors of the strata using a 90% confidence interval. RCE and FRST confirmed that the live, dead, and total uncertainty for the reporting period onsite carbon stocks was accurate.

4 VALIDATION AND VERIFICATION RESULTS

RCE developed a combined List of Findings for both the validation and verification. The List of Findings noted all corrective action requests (CARs), non-material findings (NMs), additional documentation requests (ADRs), and clarification requests (CRs). Anew appropriately responded to all items in the List of Findings. The List of Findings is provided as Appendix B.

5 VALIDATION AND VERIFICATION CONCLUSION

RCE conducted a risk-based validation and verification of the Anew – Hartwood Forestry Project that included a strategic review of the project data, documentation, and emission reduction calculations. The objective of the validation activities was to assess the project design, baseline scenario, and monitoring plan and to ensure compliance of the GHG Project Plan to the assessment criteria defined in Section 1.5.1. The objective of the verification activities was to conduct an independent assessment of the Project's initial reporting period and resulting ex-post GHG emission reductions.

Based on the review and the historical evidence collected, RCE concludes to a reasonable level of assurance that the Project's GHG assertion is free of material misstatement. The emission reductions resulting from the reporting period September 30, 2021 – September 29, 2022 can be considered in conformance with the:

- ACR Standard, Version 7.0 (December 2020)
- ACR Validation and Verification Standard Version 1.1 (May 31, 2018)
- Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non‐Federal U.S. Forestlands v.1.3, April 2018
- Errata and Clarifications - Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non‐Federal U.S. Forestlands v.1.3, September 30, 2021
- ACR Tool for Risk Analysis and Buffer Determination, v1.0
- ISO 14064-3:2006 "Greenhouse gases – Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions"

Table 2 provides a summary of the emissions reductions.

Table 2. Total ERTs

Vintage	Removal ERTs ($mtCO_2e$)	Other ERTs ($mtCO_2e$)	Total GHG Reductions and Removals ($mtCO_2e$)		Risk Buffer ($mtCO_2e$)	Final ERTs ($mtCO_2e$)
2021	2,284	8,230	10,514		1,893	8,621
2022	6,682	24,067	30,749		5,535	25,214
Total	8,966	32,297	41,263		7,428	33,835

Note: Totals might not sum due to rounding.

Lead Validator and Verifier

Zach Eyler

Internal Reviewer

Bonny Crews

APPENDIX A—DOCUMENTS REVIEWED

1. Hartwood_100Yr_calcs_12_13_2022_series
2. Hartwood_Regeneration_Calcs
3. Hartwood_RP_ERT_HWP_2_20_2023_series
4. Hartwood_SiteIndex_Calcs_08_10_2022_series
5. Hartwood_SiteVisit_RP_CO2_12_13_2022_series
6. Hartwood_Start_RP_CO2_02_20_2023_series
7. FVS output Hartwood_CCWS_series
8. FVS output Hartwood_Grow_series
9. FVS output Hartwood_SHW50_series
10. FVS output Hartwood_SHW60_series
11. FVS output Hartwood_STS_series
12. Hartwood_IndTreeGrowne_series
13. Hartwood_FVS_Plots_12_13_2022
14. Hartwood Club- Report on Timber Marketing St #2d
15. Hartwood Club St # 2c & 25 Harvest 2022
16. Re_ Hartwood Forest Carbon Project - Check Harvested plots
17. Harvest_RP1_01_01_23 shapefile
18. Hartwood_Voluntary_CarbonPlot_Methodology_03_25_22
19. AuditPlots
20. Deeds 2017-911 through 2017-941
21. Hartwood Club - Forest Management Plan 48-94 updated 2020
22. Hartwood Club 48-02 Forest Management Plan except map
23. Hartwood Club 48-094 Certificate of Approval- DEC 2019
24. Hartwood Club Forest Management Plan 48-054
25. Hartwood Club Forest Management Plan
26. Hartwood Forest management map
27. RE_ ACR 687 Hartwood Sustainable Forest Project - FMP Approval _ACRApproved
28. ForestTaxLawCommitment-ContinuedForestCropProductction
29. NY State Forestry Voluntary BMPs
30. Hartwood_GHGPlan_03_31_23_series
31. Hartwood_GHGPlan_10_31_23
32. Hartwood_GHGPlan_11_22_23
33. Hartwood_GHGPlan_12_1_23
34. Draft_Hartwood_MonitoringReport_03_30_23_series
35. Hartwood_MonitoringReport_signed
36. Hartwood_SiteIndex_Calcs_08_10_2022
37. Hartwood_Boundary_09_07_22 shapefile
38. Hartwood_Plots_09_15_22 shapefile
39. Hartwood_RMZ_9_15_22 shapefile
40. Hartwood_Strata_09_15_22 shapefile
41. Errata and Clarifications for ACR IFM Methodology v1.3_9.30.21
42. FW_ Request for clarification on using cumulative HWP in Year T and deltaC baseline formulas

43. Hartwood_DownloadedSoilSiteIndex_08_10_22
44. Hartwood_growthScheduleCalcs_05_09_2023
45. CARBON DEVELOPMENT AND MARKETING AGREEMENT_Executed_Redacted

APPENDIX B—LIST OF FINDINGS

Includes Corrective Action Requests (CAR), Non-Material Findings (NMs), Additional Documentation Requests (ADR), and Clarification Requests (CR), as necessary.

Corrective Action Request, Non-Material Finding, Additional Documentation Request, or Clarification Request ID#	Finding	Section of Protocol/ Methodology/ Program Document	Project Developer Response and Date	RCE response and Date	Additional Project Developer Response and Date	Additional RCE Response and Date	Additional Project Developer Response and Date	Additional RCE Response and Date	Open or Closed
CAR 1	In the ACR_IFM_ERT_Calcs tab of the Hartwood_RP_ERT_HWP_2_20_2023 workbook the calculation for year T in cell M18 is set as zero, rather than being dynamically calculated. Please correct this.	C3	ACR has previously provided guidance on calculating year T. The guidance allows for flexibility in the calculation and allows for manual entry insead of dynamically. The guidance has been provided in the supporting documents folder of the verifcaiton folder.	Thank you for providing this guidance from ACR. This item may be closed.					Closed
NM 1									
ADR 1	Please provide shapefiles covering the RP 1 harvests and any harvest inspections that may exist for the RP 1 harvests.	A1	A shapefile was digitized based off the maps in the harvest reports and has been updated in the spatial folder of the verification folder. Although inventory took place after harvest, the plots were checked on 9/15/22 and no additional trees were removed from plot. Confirmation of the plot checks has also been updated in the harvest folder of the verification folder.	Thank you for providing this shapefile and concurring evidence, it has been confirmed. This item may be closed.					Closed
ADR 2	Please provide a letter from a NY licensed forester providing oversight of carbon stocking reports specifically.	7	This is not required in the ACR standard.	Apologies, the licensing is not a requirement of ACR voluntary projects. This item may be closed.					Closed
ADR 3	Please provide evidence to how the 5% check cruise process from section 1.6 of the inventory methodology was implemented in the field.	F1	The 5% check described in section 1.6 Data Processing and Storage is required when inventory is recorded on paper and transcribed digitally. The inventory was recorded on tablets and therefore this check was not required.	Apologies, the intended requested data is evidence of the field QA/QC procedures as stated in section 2.10.1, 'At least 10% of the plots are checked by a different forester than cruised the plot.' Please provide the evidence/attestation/clarification of this check cruise.	An excel document that demonstrates the inventory audit has been included in the "PlotAudit" folder of the verification folder.	Thank you for providing this document. This is sufficient to close the item.			Closed
ADR 4	As there is active harvesting on property, please provide the appropriate certification as laid out in the applicability section of the GHG Plan B.2 and detailed in section A.2 of IFM 1.3, 'Private…ownerships subject to commercial timber harvesting…must be certified by FSC, SFI, or ATFS or become certified within one year of the project Start Date.'	A.2	The property and all associated harvest activity falls under the Hartwood Hunt Club Forest Management Plan which has been approved by ACR. This adheres to the Improved Forest Management V1.3-Errata & Clarification document, which has been provided in the "SupportingDocuments" folder of the verification folder. The erratum for A.2 Applicability Conditions July 27, 2020 describes that Adherence to a long-term forest management plan or program incorporating all their forested landholdings, prescribing the principals of sustained yield and natural forest management (plan and program criteria subject to ACR approval) satisfies the applicability conditions.	Thank you for providing this document. This is sufficient to close the item.					Closed
ADR 5	Please provide the specific database used to calculate the Site Index - Representative Value in column H of the PlotSoilMU tab of the EmpireRiverlands_SiteIndex_Calcs_11_15_2022 document.	C3. 3.1	The database with name "Hartwood_DownloadedSoilSiteIndex_08_10_22.csv" has been added to the verification folder in the Site Index folder. "Site index - Representative Value" or column H in the PlotSoilMU tab are determined by averaging the site indices by Mapunit key/MUSYM and by species within the SSURGO database (https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx).	Thank you for providing this document. This item may be closed.					Closed
ADR 6	Please provide an equivalent 'Project 100 Year Harvest Volume' table as seen in the 'HarvestRevenue' tab of the 'Hartwood_100Yr_calcs_12_13_2022' document. Related, please provide equivalent Project Cash Flow tables as seen in the 'Financials' tab of the same document.	B4	The current information provided sufficiently demonstrates a financial implementation barrier, as part of the three-prong additionality test in section B4 of the protocol. From the protocol, " When applying the financial implementation barrier test, Project Proponents should include solid quantitative evidence such as NPV and Internal Rate of Return (IRR) calculations". This NPV calculation can be found in the Hartwood_RP_ERT_HWP_05_09_2023.xlsx workbook on the 'Financial_Barriers_Test' tab. Furthermore, the modeled project scenario only constitutes a reasonable estimate of the project scenario used to calculate ERT offset projections. The actual project scenario harvest and associated ERTs will be updated and calculated on an annual basis.	Thank you for this explanation. After review of the provided documentation, independent confirmation of values, and internal discussion, it has been determined that the provided level of analysis meets both the financial barriers test and guidance from ACR. This item may be closed.					Closed
CR 1	In the Hartwood_GHGPlan_12_22_22.pdf document, the FVS prescriptions in table E1-7 list the prescriptions as being applied to SW, MIX and HW, however the project only has one strata named ALL. Please clarify.	5.C	The prescriptions are applied to FVS groups. The GHG plan has been updated to clarify that the prescriptions are applied to FVS groups. Description of each FVS group is presented in the "*Baseline Stratification*" subsection of section E "Quantification".	Thank you for providing this correction across the applicable sections of the GHG Plan, this has been confirmed. This item may be closed.					Closed
CR 2	In cell S4 & S3 of the GHG_Plan_Tables tab of the Hartwood_RP_ERT_HWP_12_19_2022 workbook, the value is calculated based on the 20 year average, rather than by referencing the actual values calculated in the ACR_IRM_ERT_Calcs tabs. Please clarify.	5.c	This issue has been resolved. Cells V3 & V4 (previously S3 & S4) now reference the actual values from ACR_IFM_ERT_Calcs tab. The GHG plan has been updated accordingly.	Thank you correcting this issue, it has been confirmed in both the excel and GHG Plan. This item may be closed.					Closed
CR 3	Table A3.1 in the Hartwood_GHGPlan_12_22_22.pdf document states that the forest management plan has been approved by the American Carbon Registry, however the provided documents seem to only show approval by the New York State Department of Environmental Conservation. Please clarify or provide documents showing it has also been approved by the American Carbon Registry.	4.A	An email providing FMP approval from ACR has been added to the verification folder.	Thank you for providing this email, it has been reviewed and confirmed. This item may be closed.					Closed
CR 4	The Draft_Hartwood_MonitoringReport_10_22_22 document states that there are known to be threatened timber rattlesnakes on site. Does this create any restrictions or limitations that impact harvest opportunities?	A.4.2	Harvest is restricted in the den area during the active season from April 1st to October 31st. Harvest is permitted during the rest of the year.	Upon review of the 'Hartwood Club Forest Management Plan' the provided map on page 46 and the RP1 logging areas do not overlap which confirms the OPO response. In relation to Project model harvesting, has this temporal restriction been considered/incorporated into that acre allocation per prescription?	The temporal restriction was considered but not incorporated into acre allocation or prescription. We assumed harvest would occur outside of these dates in the model as the model conducts harvests on a cycle and not broken out by months.	Thank you for clarifying this. This item may be closed.			Closed

CR 5	Is the project enrolled in any other environmental asset programs for non carbon benefits?	6.1	The majority of the property is enrolled in the Forest Tax Law 480-a.	Per the provided Forest Tax Law 480-a document, there are yearly commercial harvesting requirements on separate tracts within the property. How has this been incorporated into the Baseline/Project model, and these details have not been explicitly incorporated into the GHG Plan.	The harvest plans outlined in the FMP were considered in the baseline but was not used to set harvest limits, as it is not a requirement. The historical and short-term future harvest plans were considered in the project scenario when developing the harvest scenario during the project lifetime. Section C2 of the GHG plan has been updated and discusses this.	Thank you for clarifying this and making this addition to the GHG plan. This item may be closed.			Closed
CR 6	In Section VI (1) of the Draft_Hartwood_MonitoringReport_10_22_22 document, the estimated total stock in live and dead trees is listed as is 989,810, which does not match the values given elsewhere in the document. Please clarify.	S.C	This value represents the baseline scenario of the total stock in live and dead trees and HWP. The values discussed elsewhere in the document represent the project scenario stocking and HWP.	In Section VI (1) of 'Draft_Hartwood_MonitoringReport_02_22_23' the statement reads, 'Baseline Emissions...Estimated total stock in live and dead trees in November 2021, grown from the inventory data, is 990,506 t CO2 (=Live Tree CO2 baseline + standing dead CO2 baseline + HWP baseline).' This number correlates to the baseline RP1 end date which is not in 2021, nor the month of November. Is this value supposed to correlate to the Initial baseline value (Sept. 2021), or do the associated dates listed need to be modified to match EORP1? Please clarify.	The sentence has been updated to reflect the end date of RP1 which is of September 2022.	Thank you for making this change. This item may be closed.			Closed
CR 7	How was the value of 230 green tons of Other Hardwood pulp calculated from the values in the 'Hartwood Club-Report on Timber Marketing St #2d' and 'Hartwood Club St # 2c & 25 Harvest 2022' documents?	S.C	Upon review, the incorrect values were transcribed from the harvest reports. This has been updated. The harvest reports record a grand total of 238 tons of pulpwood in stand # 2c & 25 and records a grand total of 104 tons of pulpwood in stand # 2d (pg 6 of each document).	Thank you for making this correction, it has been confirmed. This item may be closed.					Closed
CR 8	Per equation 7 in the Miles 2009 paper (https://www.nrs.fs.usda.gov/pubs/rn/rn_nrs38.pdf) when the gross volume of wood is used, the bark ratio should used be used with a different formula, rather than as a flat multiplier. Why is the bark ratio being used as a flat multiplier when gross volume of harvest wood is being used?	S.C	When describing equation 7, the Miles 2009 paper states "If only gross volume of wood **and bark** is available, separate estimates of bark and wood volume may be useful". We agree we have wood volume information, but we don't have bark volume estimate. Hence, the formula we are currently using seems appropriate.	Apologies for the confusion. In 'Hartwood_RP_ERT_HWP_2_20_2023' on the 'Actual_RP1_HWP_Step_1' tab the units for Sawtimber are captured in MBF (Scribner Long Log). MBF is volume quantified after bark has been removed, therefor there is no reason to include a bark correction at all in the Sawtimber inputs. The two pulp outputs are Green Tons, and unless there was a debarker on the landing which stripped bark from the pulpwood logs, Green Tons includes bark. A combination of equations 7, 8, and 9 from the Miles 2009 paper is the prescribed and accepted method for bark correction as mentioned in the initial description of this clarification request. Please correct the Green Tons HWP calculation.	Our equation has bark ratio correction. You can find the correction in cells I11 and I12 (Bark ratio), where the bark percentage of 15.2% (from Table 3 or 4) is deducted to give 0.85 (rounded from 0.848) or 84.8%.	In relation to pulpwood. Please see the screenshot of equation 9 to the right of this item. This screenshot is from the Miles & Smith paper green weight bark ratio correction. Please correct column I. In relation to bark ratio & saw timber as previously stated. Harvested saw log biomass does not incorporate a bark ratio correction as MBF Scribner Long Log is a volumetric measurement that does not incorporate bark. The equation used in columns J & L include column I, bark ratio. This is incorrect.	Thanks for the clarification. Yes, we agree that saw timber should not have bark ratio multiplied in the equation. We have removed bark ratio multiplication from HW and SW sawtimber biomass calculations. Regarding pulpwood biomass calculations, we have now included the correction in the bark ratio. The column I of Actual_RP1_HWP_Step_1 has been updated accordingly. You can also find that information in column E of Miles_Smith_MC_BR tab of ERT workbook.	Thank you for making these changes. This item may be closed.	Closed
CR 9	How was the uncertainty value in cell D2 of the ACR_IFM_ERT_Calcs tab of the Hartwood_RP_ERT_HWP_2_20_2023 workbook calculated?	S.C	The value in cell D2 is calculated by the total Live CO2 at the inventory date, as directed by ACR. The 4 tabs associated with the inventory date calculations can be found at the right side of the Hartwood_Start_RP_CO2 workbook.	Thank you for confirming this. This item may be closed.					Closed
CR 10	How were the prices in the Stumpage_Prices tab of the Hartwood_100Yr_calcs_12_13_2022 determined?	S.C	The stumpage prices were based off of the Winter 2022 Stumpage Price Report. This report has been uploaded to the verification folder in the Regional_Forestry_Documents subfolder.	Thank you for providing this document. This item may be closed.					Closed
CR 11	On page 8 of the Draft_Hartwood_MonitoringReport_04_25_23, why does the live tCO2e per acre for the Start of Reporting Period not match the corresponding total calculated on the Baseline_Project_40YR_CO2e tab of the Hartwood_RP_ERT_HWP_4_24_2023 workbook?	S.C	The monitoring report reflects the Live CO2e values reported in the State_StartDate tab of the Hartwood_Start_RP_CO2_02_20_2023 workbook. HWP were added to the start date carbon stocks to account for the missing carbon that would have contributed to the actual start date carbon stocks in the Baseline_Project_40YR_CO2e tab of the Hartwood_RP_ERT_HWP_4_24_2023 workbook. The values do not match because of the addition of the HWP. (Reference email from Megan Finlay February 23, 2023).	This explanation is sufficient to close the item.					Closed
CR 12	In 'Hartwood_SiteVisit_RP_CO2_12_13_2022' on the 'InvDate' tab, what is the reference for the values in the Monthly tree growth Schedule column?	C3. 3.1	The temperature data and formulas used to derive the growth schedule is now included in the SupportingDocs folder. Please check 'Hartwood_growthScheduleCalcs_05_09_2023.xlsx' file.	Thank you for providing this documentation. This item may be closed.					Closed