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# Validation and Verification Report

## ACR685 Anew - Iron County Forestry Project

April 3, 2024

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# 1 INTRODUCTION

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Anew Climate LLC (Anew) contracted with Ruby Canyon Environmental, Inc. (RCE) to perform the validation and verification of the ACR685 Anew - Iron County Forestry Project (Project) for the reporting period of September 28, 2021 – September 27, 2022 and a crediting period of September 28, 2021 – September 27, 2041 under the American Carbon Registry (ACR) program. RCE was acquired by TÜV SÜD America, Inc. (TÜV SÜD) in 2023. RCE will be used throughout this report. Anew acts as the project developer for the landowner and project proponent, Iron County (Iron). 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 Project Plan “Anew - Iron County Forestry Project” dated January 2, 2024. 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);
- The following elements of the GHG 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;
  - 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.
- 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 the verification are to evaluate:

- The emission 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 156,517 acres of both upland and lowland vegetative cover types in northern Wisconsin. The Project is located in Iron County. Nearby population centers are small but include Hurley, Montreal, and Anderson.

The primary forest types found on the property are Aspen, Pine, Swamp Conifer, Swamp Hardwoods, and Northern Hardwoods. Northern Wisconsin is known to contain premier game species populations such as ruffed grouse, snowshoe hare, woodcock, and White-tailed deer. Much of the property originated after the big cutover period, and over time mid to late successional timber types, like northern hardwood have begun to replace early successional aspen and birch. The Project area has been actively managed for both timber and maximizing public benefits. Management decisions of the forest focus on sustainable, natural forest growth and non-commercial forest maintenance for essential activities and forest health. The Project ensures long-term sustainable management of the forests, which could otherwise undergo significant commercial timber harvesting.

## 1.3 RESPONSIBLE PARTY

### Project Proponent

Iron County  
607 3rd Ave. N Suite 2  
Hurley, WI 545341  
Eric J. Peterson, Iron County Forestry Administrator  
715-561-2697

### Project Developer

Anew Climate LLC  
2825 E. Cottonwood Parkway, Ste 400  
Cottonwood Heights, UT 84121  
Josh Strauss, Vice President  
949-233-1501

## 1.4 VALIDATION AND VERIFICATION TEAM

Lead Validator and Verifier: Zach Eyler  
Professional Forester: Christian Eggleton, FRST  
Forest Carbon Project Manager: Tim Facemire, FRST  
Forestry Analysts: Andrew Russo, FRST, Anna Woodall, FRST, Thomas Christopher, FRST  
Internal Reviewer: Bonny Crews

## 1.5 VALIDATION AND VERIFICATION CRITERIA

### 1.5.1 Validation and Verification Standards, Guidelines, and Tools

- Anew - Iron County Forestry Project GHG Plan (January 2, 2024)
  - Verification only
- 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

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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 October 9, 2022 to identify any potential conflict of interest with the Project or Project Developer. The COI form was approved by ACR on October 12, 2022.
- RCE and Anew held a validation/verification kick-off meeting on October 17, 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 31 to November 3, 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:
    - Tim Facemire
    - Andrew Russo
    - Anna Woodall
- During the site visit, the Verification team met with the following individuals:
  - Anew
    - Jason Heffner
  - Steigerwaldt Land Services
    - Mike Raichel
    - Kate Handberg
    - Nate Handberg
- 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, GHG management and monitoring systems and eligibility documentation.
- RCE conducted interviews and had conversations with Project personnel during the verification. Personnel interviewed include:
  - Jason Heffner – Anew
  - Mingfei Xiong – Anew
- RCE submitted requests for corrective actions, 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

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### 3.1 PROJECT BOUNDARY AND ACTIVITIES

The Project is located on 156,517 acres across northern Wisconsin. 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 28, 2021 – September 27, 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 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 <sub>2</sub>	Major carbon pool for project activity
Below-ground biomass	CO <sub>2</sub>	Major carbon pool for project activity
Standing dead wood	CO <sub>2</sub>	Major carbon pool in unmanaged stands for the project activity
Harvest wood products	CO <sub>2</sub>	Major carbon pool for project activity
Market Effects	CO <sub>2</sub>	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 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 28, 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 28, 2021 – September 27, 2041.
- **Real:** RCE confirmed that the GHG reductions follow the ACR methodology and are verifiable.
- **Emission or Removal Origin:** RCE confirmed that Iron County 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 (Iron), 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 16% 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 public forestland.
- Iron controls the timber rights on the forestland and can legally harvest.
- The Project will have harvesting.
- The Project is not on tribal lands.
- The Project is 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.
- Iron 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 geographic region for the Project includes northern Wisconsin. Throughout the geographic region, industrial forestland is heavily cut, often through clear-cutting and high-grading, and is managed to maximize net present value (NPV) of the forestland investment. The Project is a public county forestland ownership. Without the Project the property would have been likely managed for timber production and would resemble typical industrial forestlands in the region. 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, Iron loses the ability to monetize timber harvests 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 reduced harvesting and 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 and FRST confirmed that the Project correctly applied the ACR Tool for Risk Analysis and Buffer Determination to account for permanence. A total risk score of 16% was confirmed.

RCE and FRST also confirmed that the Project committed to a 40-year agreement with ACR by signing the AFOLU Carbon Project Reversal Risk Mitigation Agreement. Through this agreement and the ACR Tool the Project adequately addressed potential causes of unintentional reversals.

### 3.6 PROGRAMMATIC DEVELOPMENT APPROACH

RCE confirmed that the Project is utilizing a Programmatic Development Approach (PDA). The Project currently only has one “site” but expects to potentially add additional area to the Project in the future. RCE confirmed that the Project has completed the required PDA Project Design Document and included it as an addendum to the GHG Plan.

### 3.7 LEAKAGE

RCE and FRST confirmed that the Project correctly accounted for leakage. The Project demonstrated that that there is no activity-shifting leakage since there is an entity-wide management certification that covers all entity owned lands. The Project also correctly accounted for market leakage per the Methodology – since wood products decreased by greater than 25%, the market leakage is 40%.

### 3.8 ENVIRONMENTAL AND COMMUNITY IMPACTS

The 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.

### 3.9 LOCAL STAKEHOLDER CONSULTATION

A stakeholder consultation occurred since the Project is held on public lands. No comments were generated.

### 3.10 MONITORING PLAN

The 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 Iron implemented the monitoring plan as stated in the Project Plan during Project activities.

### 3.11 BASELINE SCENARIO

The Project's baseline scenario represents aggressive industrial harvests with stricter parameters than recommended state practices, targeted to maximize net present value at a 4% discount rate for public 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, shelterwood removal, single tree selection, and clearcut.

Anew utilized the USDA's Forest Vegetation Simulator (FVS) Lake States variant to model harvests and yields. Growth was calibrated using tree cores taken on or near plots, which were used to assign site index values calculated from site index curves and associated equations from Carmean et al 1989. Averaged species site index values supplemented tree core data where cores did not produce a valid sample, and soil data was also incorporated with no species data available. FRST reviewed all data and calculations related to site index 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.

### 3.12 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 five forested strata. The Verification Team confirmed that stocking and vegetation comprising a particular stratum were consistent with descriptions in inventory data and the Project Plan. FRST randomized the plot order and measured at least one plot in every stratum during the site visit.

The current inventory contains 307 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 11.78 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 1-4.99 inches.

Given this sample design and Project size, the Verification Team was required to achieve a minimum of 16 plots within the project to successfully verify inventory stocking levels. The Project did indeed pass a paired t-test with the 16 minimum plots.

## 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.

### **3.13 PROJECT DATA AND GHG EMISSIONS REDUCTIONS AND/OR REMOVALS ASSERTION**

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

#### **3.13.1 Baseline Emissions**

RCE and FRST confirmed that the baseline emissions were correctly calculated. See more detail in Section 3.11.

#### **3.13.2 Project Emissions**

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

#### **3.13.3 Emissions Reductions**

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

RCE and FRST assessed quantitative uncertainty of the emission reduction calculations and the methodologies and applicable data sets and sources. RCE and FRST confirmed that the Project has appropriate measures in place to address uncertainty and that the sampling error associated with the mean of the estimated emission reductions/removals was less than +/-10%. RCE and FRST also confirmed that all defaults, projections, and other data used were correct and consistent with expectations.

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

## **4 VALIDATION AND VERIFICATION RESULTS**

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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 ACR685 Anew - Iron County 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 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 28, 2021 – September 27, 2022 can be considered in conformance with the:

- 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
- 
- 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 Emission Reduction Tons (ERTs).

**Table 2. Total ERTs**

Vintage	Removal ERTs (mtCO <sub>2</sub> e)	Other ERTs (mtCO <sub>2</sub> e)	Total GHG Reductions and Removals (mtCO <sub>2</sub> e)		Risk Buffer (mtCO <sub>2</sub> e)	Final ERTs (mtCO <sub>2</sub> e)
2021	86,327	26,944	113,271		18,123	95,148
2022	245,351	76,578	321,929		51,509	270,420
<b>Total</b>	<b>331,678</b>	<b>103,522</b>	<b>435,200</b>		<b>69,632</b>	<b>365,568</b>

Note: Totals might not sum due to rounding.

**Lead Validator and Verifier Signature**



**Internal Reviewer Signature**



## APPENDIX A—DOCUMENTS REVIEWED

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1. 4 Seasons Logging Inv 16752\_compressed
2. Ashland Mat Inv 16866\_compressed
3. Bay Logging Inv 16913\_compressed
4. Bell Timber Inv 16914\_compressed
5. Billed Stumpage by sale 9.28.21 thru 9.27.22
6. Corullo FP Inv 16414\_compressed
7. Dalbeck Logging Inv 16755\_compressed
8. DRAFT\_IronCounty\_GHGPlan\_series
9. FSC Certification Certificate
10. Futurewood Corp Inv 16870\_compressed
11. Henning Logging Inv 16777\_compressed
12. ICF 15 Year Comprehensive Land Use Plan FINAL
13. Iron County - CFL Reports\_52A
14. Iron County Check Cruise Table Updates\_final\_V2
15. IronCo\_HarvestSample
16. IronCounty\_100Yr\_calcs\_series
17. IronCounty\_ACR\_GHGPlan\_06\_01\_23 Series
18. IronCounty\_ACR\_GHGPlan\_1\_2\_2024
19. IronCounty\_Boundary\_9\_28\_2022.shp
20. IronCounty\_CarbonPlot\_Methodology\_10\_13\_22
21. IronCounty\_CCA\_series
22. IronCounty\_CCP\_series
23. IronCounty\_CCSC\_SH\_series
24. IronCounty\_FVS\_Plots\_03\_03\_2023
25. IronCounty\_GROW
26. IronCounty\_growthScheduleCalcs\_05\_08\_2023
27. IronCounty\_IndTreeGrowls
28. IronCounty\_INVENTORYIs.db
29. IronCounty\_PDA\_PDD\_03\_17\_23
30. IronCounty\_PDA\_PDD\_11\_22\_23
31. IronCounty\_Plots\_9\_28\_22.shp
32. IronCounty\_Regeneration\_Calcs
33. IronCounty\_RP\_ERT\_HWP\_series
34. IronCounty\_RP1\_Harvest.shp series
35. IronCounty\_RP1\_HarvPlotDate\_10\_07\_22
36. IronCounty\_RP1\_MonitoringReport\_06\_01\_23 Series
37. IronCounty\_SHW50\_series
38. IronCounty\_SiteIndex\_Calcs\_series
39. IronCounty\_SMZ\_9\_28\_22.shp
40. IronCounty\_Start\_RP\_CO2\_series

41. IronCounty\_Start\_SV\_CO2\_series
42. IronCounty\_Strata\_9\_28\_2022.shp
43. IronCounty\_STS50BA10\_series
44. Iron County - ACR Monitoring Report.1\_3\_24\_signed
45. Kangas Logging Inv 16484\_compressed
46. Peters Logging Inv 16651\_compressed
47. Sappi NA Inv 16625\_compressed
48. SFI Certification Certificate 2019-24
49. Stella-Jones Inv 16732\_compressed
50. Tank, William Inv 16648\_compressed
51. TimberMartNorth\_Vol 28 No 1
52. Woody Bros Inv 16910\_compressed
53. wss\_SSA\_WI051\_soildb\_WI\_2003\_[2021-09-09]

## APPENDIX B—LIST OF FINDINGS

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Includes Corrective Action Requests, Non-Material Findings, Additional Documentation Requests, and Clarification Requests, as necessary.

Corrective Action Request, Non-Material Finding, Additional Documentation Request, or Clarification Request ID#	Finding	Client response	RCE response	Open or Closed
<b>CAR 1</b>				
<b>NM 1</b>	In 'IronCounty_RP_ERT_HWP_03_14_2023.xlsx' on the 'Actual_RP1_HWP_Step_1' tab, for Sawtimber entries bark ratio is being incorporated. MBF Scribner Short log is a volume measurement that already excludes bark, no bark ratio correction is needed.	Thank you the formulas in columns J and L have been updated to remove the bark ratio correction.	Thank you this item may be closed.	Closed
<b>NM 2</b>	Please incorporate the appropriate bark ratio correction for pulpwood per Miles and Smith 2009 equations 7, 8, and 9 in the calculation of bark ratio on 'Actual_RP1_HWP_Step_1' of 'IronCounty_RP_ERT_HWP_03_14_2023.xlsx'.	Column I heading has been updated to accurately reflect the 1-adjusted bark ratio correction factor by which pulpwood is multiplied.	Thank you this item may be closed.	Closed
<b>ADR 1</b>	Please provide the soils database used in the Site Index quantification.	The soils database .zip file has been uploaded to the Supporting Docs folder in the shared verification folder.	Thank you for the provided files, this item may be closed.	Closed
<b>ADR 2</b>	Please provide evidence of the QA/QC procedures being implemented, including the field procedures of a 10% check cruise of the inventory as outlined on page 29 of IronCounty_ACR_GHGPlan_03_23_23.pdf.	The check cruise data sheet has been provided in the Supporting Docs folder.	Thank you for the provided file, this item may be closed.	Closed
<b>ADR 3</b>	Please Provide Project 100 Year Harvest Volumes on the "Harvest Revenue" tab of "IronCounty_100Yr_calcs_03_14_2023.xlsx".	These calculations are done in response to the issue that inventory data is degrown to the start date and some of the RP1 harvesting was completed prior to the inventory, which leads to start date stocking lower than actual levels because the stocks removed in RP1 harvests were not accounted for. The solution to this is to estimate the RP1 harvest removal volume that occurred before the inventory and add this value back to the starting stocks. To do this we first estimate the stem CO2e for trees using the whole tree CO2e based on whether species was softwood or hardwood (column AF), then we calculate whole tree to bole ratio (column AG), which is then used to get an average Total/Stem CO2e ratio for all trees greater than 5" DBH (column AH). The value in column AH is then used in the WashburnCounty_RP_ERT_HWP_03_17_23.xlsx workbook on the 'Actual_RP1_HWP_Step_1' tab (cell Q13) where it is multiplied by the before inventory harvest removal CO2 (cell S8) and divided by the project acreage to determine the per acre removals not accounted for by the inventory, which is then added to the Total Live CO2e (tons/acre) for 2021 found on the 'Baseline_Project_40YR_CO2e' tab (cells B3 and B27). The specific species mix that was harvested prior to inventory is unknown, so the whole tree/bole ratio is determined using generic hardwood/softwood calculation which leads to a conservative estimate of the unaccounted for volume.	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



ADR 4	Please Provide Project Cash Flow, Harvesting Only and Project Annual Cash Flow, with Carbon (20 Years) on the "Financials" tab of "IronCounty_100Yr_calcs_03_14_2023.xlsx".	See above	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
ADR 5	Please provide soil geodata used for Site Index calcs.	The soils database .zip file, which includes the soils shapefile, has been uploaded to the supportingDocs folder in the shared verification folder.	Thank you for the provided files, this item may be closed.	Closed
ADR 6	Please provide harvest inspection sheets if possible.	The harvest check data sheet has been provided in the Supporting Docs folder. Plot #152 was checked and none of the plot trees were cut. The county forester confirmed Plot #282 that intersected with the harvest boundary was harvested before inventory and there was no additional harvest activity on these plots after their establishment.	Thank you for the provided file, this item may be closed.	Closed
CR 1	In 'IronCounty_Start_RP_CO2_09_30_2022' on the 'InvDate' tab, what is the reference for the values in the Monthly tree growth Schedule column?	The temperature data and formulas used to derive the growth schedule is now included in the supportingDocs folder	Thank you this item may be closed.	Closed
CR 2	There appear to be an area of the property (NE region) that appears to have neglected removing a significant network of landings and roads. See tab CR 2 for a screenshot.	These forested opening are generally smaller than 2.5 acres which is below our minimum mapping unit. Therefore they were not removed from the project. Additionally, the roads in this area are non-permanent and the areas identified as landings are wildlife openings/gap cuts created by the county. We have treated both features similar to harvest units, and it is intended they will naturally regenerate and reforest over time.	Thank you this item may be closed.	Closed
CR 3	Is this project enrolled in any other environmental asset program for non-carbon benefits?	The landowner confirmed the property is not enrolled in any other environmental asset program.	Thank you this item may be closed.	Closed
CR 4	In the intersection of the 'IronCounty_RP1_Harvest_10_14_22' and 'IronCounty_SMZ_9_28_22' shapefiles, there are 57.009 acres of overlap. Please clarify how logging operations were managed to meet BMPs.	The SMZ layer was designed to conservatively cover more ground than may be necessary for the on-the-ground conditions. It therefore may not reflect on-the-ground conditions found for individual harvests. The landowner has confirmed their harvest boundaries encompass some SMZ areas, but all buffer requirements are met as evidenced by their ongoing forest certification and Wisconsin's Best Management Practices for Water Quality are followed.	Thank you this item may be closed.	Closed
CR 5	Per the TreeData tab of 'IronCounty_Start_RP_CO2_03_14_2023.xlsx' there is one plot that have trees recorded as logged: 152. There are 2 other plots, 149 & 276, that intersect the "IronCounty_RP1_Harvest_10_14_22.shp", were these plots revisited after harvest?	149 and 276 are the FID in the plot shapefile, which their corresponding Plot ID should be plot 152 and plot 282. Plot #152 was checked and none of the plot trees were cut. We have corrected in the worksheet that trees in Plot 152 were mislabeled as harvested. The county forester confirmed that Plot #282 intersected with the harvest boundary but was harvested before inventory and there was no additional harvest activity on these plots after their establishment.	Thank you this item may be closed.	Closed

CR 6	In "IronCounty_RP1_Harvest_10_14_22.shp" sale number 2847 does not show up in the sale numbers provided in 'Billed Stumpage by sale 9.28.21 thru 9.27.22.xlsx'. Please confirm that it took place in RP1.	The landowner has checked and confirmed the first scale date for this sale was 9/29/22, thus the sale volume and harvest area is not within the RP1 time period. The harvest shapefile was updated to exclude sale 2847.	Thank you this item may be closed.	Closed
CR 7	In "IronCounty_100Yr_calcs_03_14_2023.xlsx" on the 'Stumpage_Price' tab, some timber prices such as generic maple, white ash, and soft (red) maple sawtimber prices do not match the provided TimberMartNorth_Vol 28 No 1.pdf data. Please clarify. See tab CR7 for details.	Thank you, the red maple price was using the mixed hardwood price by mistake and has now been updated to use the soft maple price for the WI-3 zone. The white ash price is correct however and uses the white ash price found in the 3rd row from the bottom. The generic maple or maple unspecified does not have a price listed for the WI-3 zone or WI overall, so for sliver maple the mixed hdwd price was used.	Thank you this item may be closed.	Closed
CR 8	Please clarify the choice of Site Index coefficients from the Great Lakes paper (NC088) and the Eastern US paper (NC128) for balsam fir, quaking aspen, white spruce, and black cherry.	<p>The original sources for the coefficients used for the requested species can be found below and were sourced from the Carmean et al. (1989) NC128 paper and has now been added to the supportingDocs folder. The NC128 paper is referenced in the FVS-LS variant overview where it states "Users should always use that site index curves from Carmean and others (1989) to estimate site index". From this NC128 paper coefficients were chosen based on the proximity of the sample plots to the project location. While there is significant overlap between NC088 and NC128, based on the variant overview it would be inappropriate to source coefficients from NC088.</p> <p>Balsam Fir: Carmean, Willard H.; Hahn, Jerold T. 1981. Revised site index curves for balsam fir and white spruce in the Lake States.</p> <p>quaking aspen: Carmean, Willard H. 1978. "Site Index curves for northern hardwoods in northern Wisconsin and Upper Michigan.</p> <p>white spruce: Gevorkiantz, S.R. 1957. Site index curves for white spruce in the Lake States</p> <p>black cherry: Carmean, Willard H. 1978. "Site Index curves for northern hardwoods in northern Wisconsin and Upper Michigan.</p>	Thank you this item may be closed.	Closed