



VALIDATION/VERIFICATION REPORT

ACR VALIDATION/VERIFICATION OF ANEW – QUINTE FORESTRY PROJECT
(ACR680)

REPORTING PERIOD 1

Date: 1/12/2024
Version 2.1

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Project Name	Anew – Quinte Forestry Project
Project ID	ACR680
Reporting Period	6/22/2020 – 6/21/2021
Client	Anew Carbon Development, LLC
Date of Issue	1/12/2024
Prepared By	S&A Carbon, LLC
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Summary

The Anew – Quinte Forestry Project is located on 10,074 hectares of mixed hardwood forests in Hastings, Frontenac, Prince Edward, and Lennox & Addington counties in Southern Ontario. The land enrolled under this carbon project is comprised of Quinte Conservation owned properties. The general project region is sparsely populated with most activity occurring seasonally in conjunction with outdoor recreation and tourism activities, as well as active forest management and operations. The overall mission of Quinte Conservation is to preserve and protect watershed health.

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

This report presents the results of the project's validation and initial verification to the American Carbon Registry (ACR) Standards. Its purpose is to systematically assess and report the project's conformance with the ACR standard requirements corresponding to the first reporting period from 6/22/2020 – 6/21/2021. The evaluation involved: document analysis, interviews with interested parties, relevant actors, as well as observations and measurements made directly in the field, while considering a representative sample of the project activities and sites. Validation activities included forest inventory checks, interviews with project managers, contractors, and other relevant stakeholders. The context of the surrounding landscape conditions under the baseline and project scenarios was also assessed. The scope of the verification included the ACR verification of the project's initial monitoring period to determine the project's conformance with the ACR Standard (v7.0), the applied ACR IFM Methodology (Improved Forest Management on Canadian Forestlands, v1.0, September 2021), 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 2/28-3/3/2022 near Belleville, Ontario. 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 3 rounds of an Issues Log produced by S&A to which the project proponents were required to respond, and for which 13 Clarification requests, 5 Non-Conformances, 5 New Information Requests, and 1 observation were identified. Verifiers confirmed in an email to the project proponents dated 12/7/2023 that all remaining issues were satisfied in the responses provided in the Issues Log.

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

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

S&A Carbon is thus able to issue a positive validation opinion of the project's design as outlined in the GHG Plan dated 12/28/2023 and the projected *ex-ante* GHG emission reductions of 997,524 tCO₂e over the first 20-year crediting period. S&A Carbon is also able to issue a positive verification opinion for the 188,676 tCO₂e of verified emissions reductions, as reported in the Monitoring Report dated 12/29/2023. The verification assessment covered the monitoring period from 6/22/2020 – 6/21/2021 and verified that calculated emission reductions were achieved during the monitoring period with a reasonable level of assurance. The overall risk rating was 17.11%. Therefore, the total number of credits to be deposited in the buffer account for the initial monitoring period is 32,288 tCO₂e and the total ERTs to be issued are 156,388 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
ERTs	Emission Reduction Tons
GHG	Greenhouse Gas
HWP	Harvested Wood Products
IFM	Improved Forest Management
MR	Monitoring Report
MP	Monitoring Period
NRCS	USDA Natural Resource Conservation Service
PD	Project Developer
PP	Project Participant
RMZ	Riparian Management Zone
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 Quinte Conservation Authority to verify the emission reductions generated by the Anew – Quinte Forestry Project (the project). The validation/verification process is required by the American Carbon Registry's Improved Forest Management (IFM) on Canadian Forestlands, v1.0, September 2021. S&A validation/verification activities began on 2/11/2022. This report presents the findings from the validation/verification of the project's greenhouse gas (GHG) emission reductions/enhancements.

The Offset Project Registry (OPR) for this project is the American Carbon Registry (ACR), listed as ACR680.

1.1 Project Participants

Role	Organization Name	Main Contact Information and Person
Project Proponent (PP)	Quinte Conservation Authority	Tim Trustham, Conservation Forester RR#2, 2061 Old Hwy #2, Belleville, ON K8N 4Z2 TTrustham@quinteconservation.ca
Offset Developer & Technical Consultant	Anew Carbon Development, LLC	Merrick McKinley, Director 840 7 Ave SW #1605, Calgary, AB T2P 3G2 403.262.3026 mmckinley@anewclimate.com
Contractor – Forest Inventory	Williams & Associates Forestry Consulting, Ltd.	Peter Williams, Owner 5369 Wellington Road 27 RR1 Rockwood, ON N0B 2K0 (519) 856 1286

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

1.2 Description of Project

The project activity is improved forest management, with Quinte Conservation's Forest management practices representing an improvement in the carbon storage and conservation value over higher return management regimes of other landowners in the region, which are characterized by various harvest treatments. Management decisions of the forest focus on sustainable commercial harvesting, natural forest growth, and maintenance harvests for essential activities, recreation, wildlife habitat and forest health. The project ensures long-term sustainable management of the forests, which could otherwise undergo commercial timber harvesting.

By committing to maintaining forest carbon stocks, the project will provide significant climate benefits through carbon sequestration. The aim of this project is to ensure long-term continuance of all environmental benefits provided by the preservation and protection of overall watershed health within the forestland. The baseline reflects Quinte Conservation's management for watershed health by restricting harvesting activities within 30 – 90 meters (slope dependent) of all waterbodies and watercourses to leaving at least 60% canopy cover.

Date Description	Date
Project Start Date	6/22/2020
Crediting Period	6/22/2020 – 6/21/2040
Reporting Period 1	6/22/2020 – 6/21/2021

Validation/Verification Start Date	2/11/2022
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1.3 Validation/Verification Objectives

This is the Project's ACR validation and initial verification. This will be a combined project validation and full initial verification, including a site visit to assess the Project's conformance with the ACR criteria outlined below, corresponding to the first reporting period from 6/22/2020 – 6/21/2021.

The objectives of validation are to evaluate:

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

The objectives of verification are to evaluate the following:

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

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

- That the reported emissions reductions and/or removal enhancements are real;
- Degree of confidence in and completeness of the GHG assertion;
- That project implementation is consistent with the GHG Project Plan;
- Eligibility for registration on ACR; and
- Sources and magnitude of potential errors, omissions, and misrepresentations, including:
 - Inherent risk of material misstatement; and
 - Risk that the existing controls of the GHG project will not prevent or detect a material misstatement.

1.4 Validation/Verification Scope and Criteria

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

- Project boundary and procedures for establishing the project boundary;
- Physical infrastructure, activities, technologies, and processes of the project;
- GHGs, sources, and sinks within the project boundary;
- Temporal boundary;
- Description of and justification for the baseline scenario;
- Demonstration of additionality;

- Methodologies, algorithms, and calculations that will be used to generate estimates of emissions and emission reductions/removal enhancements;
- Process information, source identification/counts, and operational details;
- Data management systems;
- QA/QC procedures;
- Processes for uncertainty assessments; and
- Project-specific conformance to ACR eligibility criteria.

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

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

The criteria for the offset verification services are:

- The American Carbon Registry Standard, v7.0, December 2020
- The ACR Validation and Verification Standard, v1.1, May 2018
- The Improved Forest Management (IFM) on Canadian Forestlands, v1.0, September 2021
- Errata and Clarifications for the Improved Forest Management (IFM) on Canadian Forestlands, v1.0, December 2023
- ACR Tool for Risk Analysis and Buffer Determination v2.0*
- ISO Standards 14064-2 and 14064-3, 2006

**PP submitted a deviation request to ACR dated March 8, 2023, regarding the use of the default value under the social/political risk category for Canada. PP received guidance from ACR on June 18, 2023, to use the Risk Tool v2.0.*

1.5 Materiality & Level of Assurance

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

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

1.6 Audit Team

Role	Name
Lead Validator/Verifier (from 2/11/2022 – 5/12/2023)	Pablo Reed
Lead Validator/Verifier (took over on 5/12/2023)	Eduardo Paixão
Technical Reviewer	Kyle Silon
Biometrician	Elizabeth McGarrigle
Verification Support	Bill Stack
Site Visit Team	Bill Stack (RPF), Eduardo Paixão (RPF) & Alexa Kandarís
Project Manager/Internal Approver	Alexa Kandarís

2 Audit Process and Methodology

S&A's audit included the following activities:

2.1 Desk Review

A document request and kickoff call agenda list were sent to the PP on 2/10/2022. A kickoff conference call was held on 2/11/2022, signaling the start of validation/verification services. The project team and verifiers discussed initial findings from a desk review of submitted documents, targeting aspects of the project and supporting information that might affect the evaluation. Meeting minutes were prepared following the kickoff meeting.

The draft GHG Plan was provided 2/11/2022. The verifiers reviewed this document and assessed the eligibility criteria required to design, measure, and monitor the project to the requirements of the ACR Standards and IFM Methodology. Verifiers confirmed that the ACR eligibility requirements were met. The Validation/Verification Plan was completed and sent to the PP.

A draft Sampling Plan was prepared based on information available from the PP. The Sampling Plan evaluates the credibility and rigor of the verification methodology items. A risk evaluation was conducted assessing the Inventory Methodology Verification Items of the ACR Standard. Finally, the plan outlined a sampling scheme, based on the risk assessment and document reviews, to evaluate the projects monitoring system's compliance with the ACR Standard. The final Sampling Plan summarizes the results of the sampling and the data checks performed on the sampled data.

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

2.2 Site Visit

A site visit was conducted by Bill Stack (RPF), Eduardo Paixão (RPF) & Alexa Kandarís from 2/28/2022 through 3/3/2022. An opening meeting was conducted on 2/28/2022. Attendees of the site visit were as follows:

Attendees	Company	Role	Attend Opening Meeting	Attend Field Sampling	Attend Closing Meeting
Eduardo Paixão	S&A Carbon	S&A Site Visit Team, and lead validator/verifier	X	X	X
Bill Stack	S&A Carbon	S&A Site Visit Team	X	X	X
Alexa Kandarís	S&A Carbon	S&A Site Visit Team	X	X	X
Merrick McKinley	Anew	Project Developer	X	X	X
Thomas Baglole	Anew	Project Developer	X	X	X
Jason Heffner	Anew	Project Developer	X	X	X
Martin Baker	Anew	Project Developer	X	X	X
Sarah Grubb	Williams and Associates	Forester inventory cruise	X	X	
Jaime Jacques	Williams and Associates	Forester inventory cruise	X	X	
Tim Trustham	Quinte conservation	Conservation forester		X	

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

During the site visit, verification team activities included the measurement of 10 randomly selected forest inventory plots across the project area. Following plot data collection, the verifiers ran their verification data through the t-test. The analysis showed that the project's inventory was verifiable at a confidence interval of 90% (i.e., the means were the same, $p=0.20$). 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 remotely via conference call on 3/11/2022. Attendees are described in the table above. Other topics also discussed included preparation of the Issues Log, scheduling of the baseline model review call, and proposed validation/verification schedule; and reflections and learnings from the site visit.

2.3 Quantitative Review (only required for verification)

The data and information supporting the PP's GHG assertion for this Project is based on historical records (forest inventory data) and future projections (modeled tree growth). For instance, PP used the regionally calibrated FVS variant to 'degrow' the inventory from the plot-specific inventory date to the project start date (June 22, 2020), because the plots were inventoried after the project start date.

To verify this assertion, S&A conducted various quantitative analyses of the project and baseline carbon stocks, covering the relevant carbon pools quantified by the PP, and the inputs used in the calculation of the projected ex-ante emission reductions over the first 20-year crediting period as well as the actual ex-post emission reductions for this initial reporting period (6/22/2020 – 6/21/2021). The audit team implemented a detailed review of all aspects of the carbon stock modeling, including the stratification process, forest inventory design and specifications, measurement techniques used by the PP's inventory crew, review of the species in the inventory and the correct assignment of volume and biomass equations, and checks to confirm that modeled growth used to project carbon stocks forward have been calculated and applied correctly. The modeling methods were assessed to ensure an approved model was used, that it was appropriately calibrated for the region, and inventory data flow through the modeling system was reviewed.

The reported ex-post emission reductions were confirmed by tracking all components of the PP's emission reduction calculation workbooks. This included checks that the entries for initial carbon stocks, confidence deduction, baseline stocks, baseline and 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 tree list was independently recalculated by the verifiers to estimate the project's carbon stocks and the results were compared to the PP's reported values. This recalculation process includes a complete quantitative check of the PP's inventory data on a plot-by-plot level to verify PP's project stock calculations were done accurately and completely to comply with the ACR Standard. Uncertainty and associated deductions were also independently calculated by the verifier.

For projects where plot sampling is required during a verification, ACR provided guidance stating VVBs shall resample a minimum of 5% of the project's plots. For sampling to pass verification, all strata need to be represented in the sample selection and statistical agreement must be attained between the verifier's and project's plot carbon values using a t-test at 90% confidence interval. This minimum sampling intensity was considered in the selection of sample plots to be measured by the verifiers along with allocation of sample plots among individual project strata based on risk.

All trees within the selected sample plots were re-measured by the verifiers including tree diameters (DBH) & limiting distances (i.e., trees in/out of the plot), tree height, 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 were confirmed by reviewing their resumes on LinkedIn and/or during interviews with Project Participants throughout the validation/verification process.

Date	Name	Title
Throughout Verification	Merrick McKinley	Anew, Project Developer
2/28/2022-9/19/2022	Thomas Baglole	(Formerly) Anew, Project Developer
Throughout Verification	Jason Heffner	Anew, Project Developer
Throughout Verification	Celine Theriault	Anew, Project Developer
Throughout Verification	Joshua Clark	Anew, Project Developer
2/28/2022 – 3/3/2022	Sarah Grubb	Williams and Associates, Inventory cruise team
2/28/2022 – 3/3/2022	Jaime Jacques	Williams and Associates, Inventory cruise team
2/28/2022 – 3/3/2022	Tim Trustham	Quinte Conservation, Conservation Forester
06/28/2023	Tammy Smith	Quinte Conservation, Corporate Services Manager
05/03/2023	James Hallworth	Preferred by Nature, Local forester
05/04/2023	Jeremy Williams	ArborVitae Consulting Services Ltd, Local forester

2.5 Findings

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

2.6 Audit Schedule

The following table summarizes the key audit milestones:

Verification Activity	Proposed Date	Actual Date
Kick-off meeting	2/11/2022	2/11/2022
Site visit	2/28/2022 – 3/4/2022	2/28/2022 – 3/3/2022
PP provides outstanding documentation	4/15/2022	7/8/2022
S&A Carbon submits issues log v1.0	4/29/2022	12/9/2022
TC response to issues	5/13/2022	3/13/2023
S&A Carbon submits issues log v2.0	5/27/2022	5/25/2023
TC response to issues	6/10/2022	6/30/2023
S&A Carbon submits issues log v2.1	--	8/22/2023
TC response to issues	--	10/5/2023
S&A Carbon submits issues log v2.2	--	11/22/2023
TC response to issues	--	11/22/2023

S&A Carbon submits issues log v3.0	--	12/4/2023
TC response to issues	--	12/4/2023
S&A Carbon closes out issues log	6/24/2022	12/7/2023
S&A Carbon submits validation/verification report for Technical Review	7/1/2022	12/11/2023
S&A Carbon submits validation/verification report for TC review/approval	7/8/2022	12/15/2023
Closing Call; S&A Carbon submits final validation/verification documents to ACR	7/13/2023	12/15/2023

2.7 Validation Activities

The validation and concurrent verification were performed through a combination of document review, interviews and communications with relevant personnel, as well as on-site inspections. The site visit to the project was conducted from 2/28/2022 through 3/3/2022 near Belleville, Ontario. 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 three rounds of an Issues Log produced by S&A, for which 13 Clarification requests, 5 Non-Conformances, 5 New Information Requests, and 1 observation were identified. Verifiers confirmed in an email to the project proponents dated 12/7/2023 that all issues were resolved in the Issues Log.

2.8 Eligibility Requirements

The verifiers assessed the project against the eligibility criteria of the ACR Standard as well as the applicability conditions applied to the ACR IFM methodology by the project and determined the project to be eligible, and applicable to the ACR methodology. The project applied an ACR approved methodology, The Improved Forest Management (IFM) on Canadian Forestlands, v1.0, September 2021. The project was found to meet the eligibility requirements of the ACR Standards in terms of its start date, minimum project term, crediting period length, land eligibility & title/ownership, adherence to natural forest management requirements and the permanence of the generated GHG emission reductions. It was also found to meet the applicability conditions of this methodology in terms of land ownership type, legality of harvesting activities, types of project activities and natural forest management criteria.

The reporting period length for RP1 (6/22/2020-6/21/2021) is less than two years and meets the eligibility requirement. The project start date is after 11/1/1997 and is therefore considered an eligible project. The project start date of 6/22/2020 coincides with the signing of a confidential contract between Quinte Conservation and Bluesource (now dba Anew). The start date is also the same date as the beginning of the first crediting period. 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.

However, the project validation against the ACR standards took longer than 3 years of the project start date. VVB contacted ACR on August 11, 2023, about this issue and received ACR guidance to make this an issue in the Issues Log, and ACR would interact with PP directly about it. This is described in IL v1.3 #22-24.

The project is an IFM project type, and historically consisted of forest cover through the project start date an initiation. 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 and March 2022 site visit observations, verifiers are reasonably assured the project area is covered by greater than 10% forestland. The verifiers are also reasonably assured that the project area is located on privately owned lands within Ontario based on aerial imagery assessments, tax maps and land titles retrieved from the Ontario land registry. The Quinte Community Forest Project is located on 10,074 hectares of mixed hardwood forests in Hastings, Frontenac, Prince Edward, and Lennox & Addington counties in Southern Ontario. The land enrolled under this carbon project is comprised of Quinte Conservation owned properties. The Moira River Conservation Authority and the Napanee Region Conservation Authority were both established in 1947. These organizations amalgamated in 1996 and formed Quinte Conservation. Thus, some of the tax notices still show Napanee Region and Moira River Conservations as landowners. Verifiers reviewed documentation demonstrating that those organizations merged to form Quinte and that all assets of the dissolved authorities become assets of Quinte. The current project activities do involve commercial harvesting.

The project area's forest is composed mainly of native species. Some sporadic non-natives trees were observed during field visits and in the tree list (e.g., willow spp., alder spp., serviceberries, etc.). These species have been introduced to Canada during European colonization and they have become already naturalized to the landscape. Thus, the native stands have not been converted for the introduction of these species. Thus, the eligibility requirement is met.

More than 60% of the basal area of the project area is composed of 7 species: red maple, eastern white pine, sugar maple, northern white-cedar, northern red oak, silver maple, and white ash. However, the review of the tree list before field visits revealed 93 trees with questionable tree or shrubs characteristics. Overall, the verifiers acknowledge that this issue does not represent a significant impact on the project since it represents only 93 of 7,124 trees (0.01% of the tree list). After review of the literature (Farrar 1995, *Trees in Canada*; and Rouleau and Raymond, 1990 *flore forestière*), verifiers confirmed that some of these species have indeed potential to attain the minimum dimensions required by the standard. However, PP removed from the project calculations alder spp., chokecherry, and willows spp. because of the difficulty to demonstrate they will be indeed shrubs or trees. This is described in detail in finding #22-10.

While wetlands exist on the project area, consisting of muskegs and riparian areas, the project activities do not involve any draining or flooding of wetland areas. Most of the project area is made up of variable topography ranging in elevations from 73 m to 267 m.

In accordance with the ACR IFM Methodology, the PP's risk assessment for Reporting Period 1 first used the *ACR Tool for Risk Analysis and Buffer Determination* (v1.0). However, after the issuance of the finding #22-16, PP submitted a deviation request to ACR dated March 8, 2023, regarding the use of the default value under the social/political risk category for Canada. PP received guidance from ACR on June 18, 2023, to use the Risk Tool v2.0. PP determined to have a risk rating of 17.11% using the Risk Tool v2.0. 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, 17.11% 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 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	PP risk results	VVB Check
Financial risk	Y	Default	5.75%	5.75%
Social and Political risk	Y	WGI used for Canada	1.51%	1.51%
Illegal logging and conversion risk	Y	Most recent ILAT used for Canada	0.10%	0.10%
Wildfire risk	Y	Use of the low fire risk justified using provincial data	5.00%	5.00%
Biotic risk	Y	Default value (8%) is reduced by half because the project includes the standing dead wood pool.	4.00%	4.00%
Hydrologic risk	Y	Default value applied. The project area represents less than 60% of wetlands	0.00%	0.00%
Other Natural Disaster risk	Y	Default	2.00%	2.00%
Conservation commitment adjustment	Y	Default	0.00%	0.00%
Buffer-insured area adjustment	Y	Default	0.00%	0.00%
Diversified risk adjustment	Y	Default	0.00%	0.00%
Total Risk Rating (equation 1)			17.11%	17.11%

2.9 Additionality

To demonstrate the GHG emission reductions from the project are additional and considered to be above and beyond the "business as usual" scenario, it must pass the ACR three-prong additionality test to prove that it (1) currently exceeds current effective and enforced laws and regulations; (2) exceeds common practice in the relevant industry sector and geographic region; and (3) faces a financial implementation barrier. . The project was found to be additional with the project activities above and beyond the business-as-usual scenario for privately owned commercially managed forest lands in southern Ontario.

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

There are no legal obligations or required management constraints within riparian areas on private lands in Ontario. The province has empowered municipalities to protect woodlands and regulate tree cutting in private forests. All levels of municipalities can pass and enforce by-laws under the Municipal Act (2001), but it is not mandatory. In that case where there are no municipality forest conservation by-laws, private landowners have the right to make decisions with respect to managing their forests. The Anew – Quinte Forestry Project is located in Hastings, Frontenac, Prince Edward, and Lennox & Addington counties which does not have municipality tree-by-laws. However, PP has used a conservative approach by using the BMPs found in the “Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales” authored by the Ontario Ministry of Natural Resources. The verifiers agree with the PP approach using the guide as a reference document for forest management in private lands. Verifiers confirmed through interviews with local foresters that these are typically the best management practices applied in third-party private lands certified in the region. Further, the verifiers concur with the PP regarding other applicable National, Provincial, and local laws that were considered and incorporated into the baseline modeling (see Section E1 of the GHG Plan).

The description of applicable laws and regulations in the GHG Plan was found to consider all applicable laws and regulations in both the project and baseline activities. Applicable legal constraints were found to be adequately incorporated into the modeled baseline harvest scenario, and the verifiers are reasonably assured all applicable laws and regulations have been considered in addressing the Regulatory Surplus Test. Lastly, while Binding International Agreements are described in the GHG Plan, none are considered to impact the baseline scenario or the project activities.

Common Practice: As described in Section C.2, the central region of Southern Ontario where Quinte is located had an average harvest to land base area ratio of 52%, with woodlots in this region having the highest Land Expectation Value in Southern Ontario. It is common practice for forestland owners to implement silvicultural practices such as clearcut, shelterwood, and single tree selection harvests. However, since Quinte is a watershed conservation authority, it’s common practice for them to preserve and protect the overall health of the watershed. Thus, verifiers assessed and requested PP to provide sufficient evidence that the proposed project activities (limited harvesting) are not a common practice management in similar landowners (see finding #22-13 in the IL).

PP provided forest management plans for the surrounding region and similar ownership (conservation authorities and county forests) in south/central Ontario to demonstrate that the assumptions used in the baseline are coherent with practices in that region and that the project scenario is not common practice. The baseline implements a conservative harvest regime surrounding all waterbodies and watercourses to mimic what Quinte Conservation does when implementing their commercial harvests. Quinte Conservation’s mission to preserve and protect overall health of the watershed is modeled into the baseline. Over 12% of the project area is within a designated riparian management zone, and this area has been constrained to only implement single tree selection harvest prescriptions that are low-impact harvest regimes.

Sufficient evidence has demonstrated that as the proposed project activities harvest below the annual growth of the forest and limits harvesting to less than 2% of the project area per year, it is additional to what’s common practice as other forest landowners of similar ownership type harvest greater than 2% of their forested land base per year.

For instance, the review of forest management plans for similar ownerships in the region revealed that on a weighted average (productive area vs annual harvesting rate), annual harvest rates are around 4.14% of the productive area in forest managed by conservation authorities. The average harvest rate modeled in the baseline of the Quinte project is 2.17%/year of the productive forest (project area) over the next 40 years.

Section B.5 and E.1 of the GHG Plan offers a reasonable definition of the baseline harvest scenario, which the PP asserts is the common practice harvesting regime in the region for similar types of landowners and forest types. Specific baseline silvicultural harvest prescriptions are described in Section E.1 of the GHG Plan and the baseline modeling workbooks.

Verifiers confirmed common practice through discussions with the PP, regional consulting foresters, and through the verification team's professional work experiences in the region; internet searches pertaining to common silvicultural practices in southern Ontario; and site visit observations. The verifiers are reasonably assured that the project and its associated project activities exceed common practice in this region of southern Ontario for similar ownerships.

Financial Test: The PP demonstrated 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 on within the project area.

The verifiers were provided with a Net Present Value (NPV) financial analysis for both the baseline and with project scenarios that accounts for all costs and revenues from these scenarios. In this analysis, the PP used a 4% discount rate, which was based on Non-Governmental Conservation or Natural Resources Organization ownership. As Conservation Authorities are either charitable or nonprofit organizations it complies with the specifications in the IFM Methodology (section 3, Table 1). Required inputs for the project NPV calculation were based on the 2021 timber inventory, growth and yield under a range of silvicultural treatments, stumpage prices for wood products, other management costs, and carrying costs. Verifiers found these inputs to be reasonable, appropriate, accurate and well supported.

The project activity is expected to generate an NPV of \$ \$1,559,991 CAD which is substantially lower than the NPV maximization scenario of the baseline model (\$\$13,811,115 CAD). The verifiers performed some sensitivity analysis on the baseline and project NPV calculations. Net baseline timber revenue can decrease by 50% and net project carbon offset revenue can increase by 50% and the resulting NPVs show that the baseline scenario, and associated revenue from timber harvesting, is still more financially viable/attractive than with project scenario. 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 v2.0* as described in section 2.8 above. 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. Verifiers independently calculated risks for each category and concur with the PP's total risk rating of 17.11%.

In total, 17.11% of the gross emission reductions will be deposited into the ACR pooled buffer account. This deduction is made to the calculated gross ERT calculations generated by the project to determine the total tradeable balance of ERTs generated by the project over the initial reporting period.

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

2.11 Baseline

As mentioned previously in section 2.9, it is common practice for forestland owners to implement silvicultural practices such as clearcut, shelterwood, and single tree selection. Verifiers confirmed common silvicultural practices in the region through discussions with the PP (e.g., 11/16/2022 model review call) and regional consulting foresters; through the verification team's professional work experiences in the region; internet searches pertaining to common silvicultural practices in southern Ontario; and site visit observations within and near the project area.

However, since Quinte is a watershed conservation authority, PP utilize a more conservative baseline management regime as compared to common practice in private lands. Since the overall mission of Quinte Conservation is to protect watershed health, the baseline has been constrained to an uneven-aged silvicultural prescription that minimizes watershed disturbance within the riparian management zones (RMZs). Over 12% of the project area is within a designated riparian management zone, and this area has been constrained to only implement single tree selection harvest prescriptions that are low-impact harvest regimes.

Further, a conservative approach was also used when delimiting riparian management zones. All waterbodies and watercourses were treated as HPS ponds and streams (the most conservative approach). A single tree selection prescription was applied within all the Areas of Concern (AOCs) to meet and surpass all the BMP's described on Ontario's stand and site scales guide. The model is constrained to only single tree selection (STS) harvests with the RMZs. RMZs are not eligible for harvest until a stand reaches >28 m²/ha in basal area and >135 m³/ha in merchantable timber. Once STS is applied, a residual basal area of 18 m²/ha must be retained. Since the project is constrained to the capabilities of desktop modeling, it is assumed that basal area simulates the parameters surrounding canopy closure and residual forest. STS prescriptions reduce basal area to 64% (18 m²/ha / 28 m²/ha)

of a stand's original stocking. The modeling assumes that all harvests with RMZs will maintain at least 64% canopy closure which meets the requirements of retaining $\geq 60\%$ canopy closure surrounding HPS and MPS streams (High or Moderate Potential Sensitivity to forest management operations). It also satisfies the harvest requirements surrounding lakes and ponds as 100% of the RMZ is retained as forest according to the quantifiable definition of residual forest of having $\geq 50\%$ canopy closure.

The baseline (and project) on-site carbon stocks found on the project area were determined through a forest inventory implemented on the project area in the spring of 2021. The inventory design employed a sample of 198 fixed-radius plots installed on a systematic grid across the project area. After the inventory was completed, the project area was stratified into three strata: Hardwood (H), Mixedwood (M), and Softwood (S). PP conducted a remote sensing analysis to identify strata types within the project area using the collected plot network classified to each strata (H/M/S) as the model training dataset. PP specified a random forest model to classify forest types inside the project area using satellite imagery from the ESA Sentinel-2 and USGS Landsat-8 satellites. PP used ten Sentinel-2 bands (all bands with 10m and 20m resolution) from three different seasons (Summer 2021, Spring 2021, and Fall 2020), five biophysical indicators derived from Sentinel-2 (Leaf Area Index, Leaf Water Content, Leaf Chlorophyll Content, Fraction of Absorbed Photosynthetically Active Radiation, and Fractional Vegetation Cover) from Summer 2021, and three spectral indicators (brightness, greenness, and wetness) generated from the Tasseled Cap transformation from Summer 2021 Landsat-8 imagery as input data in the model. The verifiers found the project's stratification methods to be reasonable and the inventory methodology to follow standard industry practices. This stratification process was discussed more fully in the project documents as well as the Issues Log (items #22-3).

PP used the Ontario variant of the Forest Vegetation Simulator (FVS) to project carbon stocks and timber revenues under the range of harvest scenarios considered in the baseline. PP selected the FVS-ON variant of the FVS growth and yield model, which encompasses the growing conditions found in the Province of Ontario. Then, PP used the regionally calibrated FVS variant to 'degrow' the inventory from the plot-specific inventory date to the project start date (6/22/2020), because the plots were inventoried after the project start date. PP first initialized FVS with the original inventory measured on the plot's inventory date and projected the model forward with no harvest to estimate tree-level annual growth rates. PP ran a single 10-year FVS projection cycle, the default cycle length for the FVS-ON variant. PP then computed height and diameter growth for each tree over this 10-year interval and divided by 10 to estimate annual growth. Using a monthly growth schedule, PP determined the fraction of annual growth that had occurred between the project start date and the inventory date and multiplied annual growth for each tree by this fraction. Finally, PP subtracted this estimated height and diameter growth for each tree from the observations recorded in the original inventory. PP used this growth adjusted inventory to determine tCO₂e stocks on the project start date. PP similarly estimated tCO₂e stocks on the project reporting period end date (6/21/2021) by 'growing' the inventory from the plot-specific inventory date to the Reporting Period Date. PP added estimated height and diameter growth according to the months that had elapsed between the inventory and the project reporting period end date. Volume yields were output for 100-year projections from FVS-ON, with annual yields interpolated between 10-year cycle outputs. The first period (2020 – 2024) values are divided by 5, periods 2 through 9 (2025 – 2034, 2035 – 2044, etc.) are divided by 10, and then period 10 is divided by 5 once again (2115 – 2129) in order to group amounts per decade, splitting the first and last decade.

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 FVS model requires an individual species code and site index for each forest plot simulated. These estimates were calculated using tree cores. One dominant or co-dominant tree with a DBH of less than 80 cm within the overstory plot was selected as a site index tree for each plot. Site Index was calculated from tree cores taken in the field and processed by Carson Integrated. The available outputs following the processing of the tree cores included tree species, DBH, Height, Pith Date (calendar year), DBH Age (years). From these outputs, the Site Index was calculated using species-specific site index curves.

Baseline carbon in long-term storage in wood products was calculated based on projected harvest volume removals from the FVS model. Harvest volumes were broken out into the categories of softwood sawlog, softwood pulp, hardwood pulp and hardwood sawlog by referencing the merchantability standards in FVS. Harvest volumes were converted to biomass by applying species-specific specific gravity values references in the USFS Handbook and Miles and Smith 2009. Biomass values were then converted to units of tCO₂e using appropriate conversion factors. Carbon transferred into wood products was estimated by applying mill default efficiency values as described in the ACR IFM methodology. The long-term storage in wood products calculation was discussed more fully in the provided supported documentation as well as the Issues Log (items #22-14 and 22-19).

Carbon in wood products was then summed across the established wood categories and distributed to various end-wood product classes referenced from the ACR IFM methodology. Carbon in long-term storage was then summed for in-use wood products and wood products in landfills to produce annual total tCO₂e stored in in-use and landfill by applying the appropriate 100-year storage factors taken from the ACR IFM Methodology. Emissions due to burning logging slash are conservatively assumed in the baseline to be zero. Verifier checks of the baseline carbon storage in harvested wood confirmed the accuracy of the PP's calculations in accordance with the ACR IFM Methodology.

2.12 Leakage

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

As described in the GHG Plan, quantification of leakage is limited to market leakage. PP enrolls all of their forested landholdings, owned and under management control, within the ACR carbon project. As shown on Quinte conservation's website, the PP own approximately 13,020.7 hectares of land, from that, 10,073.72 hectares are forestland and are included in the project area. Further, all Quinte's forestlands are third-party certified managed lands (group Forest Stewardship Certificate NC-FM/COC-000232), thus, there is no activity shifting leakage.

Quantification of leakage of the project is therefore limited to market leakage. Market leakage was determined by quantifying the merchantable carbon removal in both the baseline and with-project scenarios. Carbon in long-term storage in in-use wood products and landfills was used to assess relative amounts of total wood products produced in the baseline and project. Some commercial timber harvesting is projected to occur in the implementation of the project. The decrease in wood

production relative to the baseline was calculated to determine the applicable market leakage discount factor in accordance with the methodology. Since the project activities decrease total HWP produced by the project relative to the baseline by 25% or more over the crediting period, the leakage deduction is 40%. This leakage deduction was found to be correctly determined and correctly applied in the supporting ERT calculation workbook.

2.13 Monitoring Requirements

Section D of the GHG Plan outlines the project's monitoring plan. All appropriate data and parameters to be monitored over the life of the project are outlined including details on the unit of measurement for the data/parameter, a description of the parameter, the data source used, the measurement methodology, monitoring frequency, values applied, procedural and QA/QC references, the purpose of the data and the calculation method. The monitoring plan also indicates that each reporting period, the PP will sign and submit to ACR the required attestations confirming: the continuation of the project activities; that ownership of the project area remains clear and uncontested; and a disclosure of any negative environmental or community impacts and plans to mitigate, if applicable (Validation & Verification Standard, 6E). These attestations have been included in the signed Monitoring Report for this initial reporting period.

Project monitoring is generally focused on the project's on-site carbon stocks through updates to the project's forest inventory data. A full re-inventory of the project area is to take place at least once every 5-years after the first inventory to allow for calibration of the growth model and improve the project's carbon sequestration estimates. In addition, affected portions of the project area will be updated periodically in response to natural disturbance events of significant forest management activities. If impacts from such events are significant, the affected areas will be re-inventoried and adjusted to reflect current on-site carbon stocks. For those years in-between when an updated inventory is carried out, on-site carbon stocks will be monitored through forest growth and yield modeling. Beyond forest inventory updates, the PP will continually monitor the general health and condition of the forest through the course of regular forest management activities including road maintenance, harvesting, ecological restoration projects, or boundary maintenance.

QA/QC procedures have been established as part of the monitoring plan and are outlined in section D1 of the GHG Plan and page 10 of the SOP (Anew – Quinte Forestry Project Inventory Methodology). Both forest and desk-based QA/QC procedures are established. At least 10% of the forest inventory plots will be checked by a different cruiser than the individual who measured the plot. The plot check cruise consists of full plot measurements to identify any issues or significant discrepancies. The SOP provides the measurement type, tolerance, and audit result (e.g., error pts or plot failure) that the inventory contractor applied to assess cruiser performance, issues, and inventory implications. If the same cruiser fails more than one plot during the check cruise, all plots completed by that cruiser since the last acceptable check must be revisited and measured again. The stated desk QA/QC procedures also focus on ensuring that all collected data is appropriately managed and maintained, and that all subsequent calculations of the data that are incorporated into the ERT issuance are correct.

The verifiers were provided with the Check Cruise batch workbooks detailing the plots and trees checked and comments on the errors identified (e.g., DBH, Height, species ID, status, In/Out). The workbook also includes the original plot/tree data for the check cruised plots. In total, about 10% of the forest inventory plots were check cruised. Incorrect species ID were the most common error

identified during the check cruising (e.g., green ash vs white ash). Of the 20 plots re-visited as part of the QA/QC process, 10 had some request for corrective action. Verifiers confirmed there were not a significant number of errors identified during the check cruise nor was any systematic bias or error found with any cruiser.

While the verifiers did uncover some minor issues during the site visit sampling such as differences in DBH and needed SOP clarifications (e.g., inventory specifications for limiting distance trees and missing biomass percentages in the bole). As these were relatively minor and the requested detail incorporated into the revised SOP has been provided, the verifiers found no reason to further question the implementation or effectiveness of the established QA/QC mechanisms.

2.14 Community and Environmental Impacts

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

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

Section C.1 of the GHG Plan covers the Regulatory Surplus Test and outlines the applicable laws and regulations. The laws and regulations outlined in Section C1 of the GHG plan were found to comprehensively identify the applicable laws that could affect the project. The verifiers' assessment of these laws determined that none of them impact the project activities, and require the PP to implement the project activities, thereby demonstrating regulatory surplus. The description of applicable laws and regulations in the GHG Plan was found to consider all of applicable laws and regulations in both the project and baseline activities.

The Anew – Quinte Forestry Project comprises the Quinte Conservation property located in Hastings, Frontenac, Prince Edward, and Lennox & Addington counties in Southern Ontario. Quinte Conservation is a non-federal and non-provincial public forestland owner. Stakeholder consultation was conducted in advance of the project by the Project Proponent. Quinte Conservation Authority has an executive board made up of representative municipal councilors. Under the Conservation Authorities Act as well as the Information Requirements Regulation under the Act, consultation with the public is required. Board members, contact info, meeting schedules, minutes and agendas, memorandums, agreements, by-laws, annual auditor's reports, and any other document prepared by the authority are publicly available on Quinte Conservation's webpage. Board meetings are held the third Thursday of each month. Meetings are open to the public and start at 3:30 pm. Further, PP provided a document dated June 10, 2020, which summarizes the meetings held since 2016 and how the Lands committee was formed to discuss the subjects regarding the carbon offset project.

The GHG Plan indicates that the project is not a community-based project. However, community and environmental impacts are monitored on an ongoing basis as required in the *Conservation Authorities Act*. Further to this, the PP must maintain standards and practices that meet the requirements of FSC certification. This involves record-keeping and on-going monitoring that is audited by Preferred by Nature (third-party certification body for the FSC certification).

As noted in the Quinte conservation's webpage: *"Our services are focused on protecting people and property from the dangers of natural hazards. One of our main roles is to provide flood forecasting and low water information to municipalities and residents within our jurisdiction. Our natural boundaries include the drainage basins of the Moira, Napanee, and Salmon Rivers and all of Prince Edward County. Our core programs and services include flood and low water forecasting and warning, dam operations, permits, planning and regulations, and drinking water source protection. Through these core programs and services, we make sure that the region's natural resources are being protected, restored, and maintained and that we are contributing to a healthy environment that meets the physical, emotional, and economic needs of residents and municipal leaders within our watershed."* How these goals and objectives are achieved are described in their annual reports also available on Quinte's webpage.

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 adaption; 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 Quinte Conservation management staff or hired contractors, which includes monitoring the general health and condition of the forest through the course of normal management activities including roads, recreation, wildlife, timber harvesting, and wildfire resiliency practices (silviculture, maintaining roads). Verifiers find these monitoring methods are deemed sufficient to meet the requirements of the ACR Standard (Chap 8). The GHG Plan (F1) also includes a description on how the positive impacts contribute to the SDGs as required.

2.15 Stakeholder Comments

The Project Proponent is a private forestland owner and adheres to their respective internally agreed upon practices of project consultation and notification on associated decision making affected by the project activity. Quinte Conservation Authority has an executive board made up of representative municipal councilors. Under the *Conservation Authorities Act* as well as the *Information Requirements Regulation* under the Act, consultation with the public is required. All documents prepared by the authority are publicly available on Quinte Conservation's webpage. Board meetings are held the third Thursday of each month. Meetings are open to the public and start at 3:30 pm. The verifiers agree with this determination considering the project ownership and decision-making management system.

2.16 Programmatic Development Approach

As for the project Start Date there is only one site/cohort with one landowner in the project. GIS shapefile of the initial site's project area was provided for validation. This shapefile gives unique identification and delineation of the specific extent of the project. This cohort is included in this combined validation/verification. Verifiers reviewed the GHG plan which covers all the requirements for this cohort. No additional sites are planned at this time, but future sites are anticipated to be in the same programmatic boundaries (geographic, temporal, and GHG assessment boundary), to be of similar forest types, and subject to similar management/silviculture.

The baseline scenarios are anticipated to apply similar silvicultural assumptions, and the monitoring plan will remain consistent for the entire PDA. Quinte Conservation Authority will likely be the Project Proponent involved in the process of inclusion of new sites unless the project is sold to an alternate entity. Anew Carbon Development, LLC may be the Offset Developer involved in coordination of project implementation, modeling, etc., although the Project Proponent may opt to utilize an alternate Offset Developer.

Any additional sites will go through a rigorous internal review process to ensure that no site has been or will be registered on ACR as part of another project. All sites will also be assessed in verification to confirm that no site has been or will be registered on ACR as part of another project. All records and documentation for additional sites and cohorts will be made available to the VVB at the time of validation. The site-specific implementation dates will be updated at the entrance of each new cohort in future reporting periods.

The verifiers were provided with a single consolidate PDA project design document which is an addendum to the GHG plan. The PDA Project Design Document outlines the unique attributes of the site enrolled at project listing. 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 6.F.

2.17 Validation Conclusion

During the validation assessment the verifiers identified 13 Clarification requests, 5 Non-Conformances, 5 New Information Requests, and 1 observation. All audit findings were responded to and addressed to the satisfaction of the verifiers. Once all identified issues were adequately resolved, S&A Carbon drafted this final combined validation & verification report. After reviewing the final GHG Plan (12/11/2023) and all supporting documentation, the verifiers concluded with a reasonable level of assurance that the project is in conformance with the applicable criteria and requirements of the ACR Standards listed in Section 1.4. The findings in this report represent the final determinations of the project's conformance with the standard criteria included in the scope of this validation audit. S&A Carbon is thus able to issue a positive validation opinion of the project's design as outlined in the final GHG Plan and the projected *ex-ante* GHG emission reductions of 997,524 tCO₂e over the first 20-year crediting period.

3 Verification Activities

3.1 Project Implementation Status

As previously described in this report, the project's initial verification took place concurrently with the project's validation. The verifiers determined the project activities were implemented over the initial reporting period corresponding to the dates 6/22/2020 to 6/21/2021 in accordance with the project design established in the GHG Plan. The PP submitted a completed copy of the Monitoring Report that provides the information required in the ACR monitoring report template. The verifiers are reasonably assured there were no changes to the landowner, project area or inventory over the reporting period, and estimates of the current on-site carbon stocks based on the inventory data are provided. There was commercial harvesting over the initial reporting period with reported carbon stored long term in harvested wood products along with supporting harvest information. No project deviations occurred during the initial reporting period.

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

Project level live carbon stocks value was derived by inputting the inventory tree list into FVS and calculating the total projects stocks of the inventory tree list using the Canadian National Biomass equations (as required by the ACR IFM methodology). Verifiers concur with this approach as this process ensures consistency among the reported project stock and baseline stock values, the latter of which is also derived by using the inventory tree list to grow and harvest the baseline stocks for each period in FVS.

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

3.2 Data-Checks & Materiality

A summary of selected data checks for 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	Discrepancy tCO ₂ e	Impact on misstatement/ conformance
	Checks performed				
Rank 1 Sum of Project stocks; end of RP (CP,TREE,t, CP,DEAD,t)	2021 Inventory, volume and biomass equations, calculation methods	3,388,797	3,386,885	1,911.90	Impact on Materiality
Rank 2 Sum of Project stocks; beginning of RP (CP,TREE,t, CP,DEAD,t)	2021 Inventory, volume and biomass estimates, grown modeling results, grown tree list. Model appropriateness and use. Data systems.	3,306,274	3,306,274	0	No impact on Materiality
	Checks of accumulations and correct transfer to Monitoring Report				
Rank 3 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.	2,273,229	2,273,229	0	No impact on Materiality
	Checks of accumulations and correct transfer to Monitoring Report.				
Rank 4 Emissions Reduction at t (before buffer deduction) (CACR,t)	Monitoring Report	188,676	188,676	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 5 Market Leakage Discount Factor (LK)	Monitoring Report, supporting documents.	125,784 (40%)	125,784 (40%)	0	No impact on Materiality
Rank 6 Buffer Credits and Risk Rating (TBt)	Monitoring Report, calculation workbooks, supporting worksheets	32,288 (17.11%)	32,288 (17.11%)	0	No impact on Materiality

	Checks that all PP entries are correct. Check risk rating and calculations have been calculated correctly.				
Rank 7 Baseline Harvested Wood Products (CBSL,HWP,t)	Monitoring Report, supporting worksheets	14,073	14073	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 8 HWP Project (CP,HWP,t)	Monitoring Report, supporting worksheets	1,175	1175	0	No impact on Materiality
	On-site observations, GIS review, interviews with the PP. Checks of mill receipts and HWP storage calculations. Correct use of appropriate mill efficiencies, product classes and long-term storage factors.				
Rank 9 Total Uncertainty (UNct)	Monitoring Report supporting worksheets	0 (<10%)	0 (<10%)	0	No impact on Materiality
	Use PP data for 2021 inventory stocks; checks the calculation of total uncertainty was done correctly.				
Comment: Below 10% threshold, so total uncertainty is zero.					

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

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

$$\text{Percent error} = \frac{[188,676 - 187,631]}{187,631} \times 100 = 0.56\%$$

Project ERTs – Verifier ERTs (tCO ₂ e)	Verifier ERTs (w/o buffer deductions) (tCO ₂ e)	Calculated Materiality %
1,045	187,631	0.56%

The materiality check was carried out according to ACR guidance using the equation above. The verifiers independently calculated the reporting period ERTs using their internal calculation of total project level stocks. The verifiers calculation of ERTs was the same as the PP's calculation using their quantified parameter values. The Materiality Calculation shows that the project is overreporting by approximately 0.56%. Therefore, the project is less than the 5.0% materiality threshold.

3.3 Verification Conclusion

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

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

S&A has verified the PP's GHG assertion of **188,676 tCO₂e** for the Reporting Period of 6/22/2020 to 6/21/2021. S&A also verified removals and other ERTs, which is summarized in the table below for the Reporting Period of 6/22/2020 to 6/21/2021. Removals are calculated based on equation 24 within the *ACR Errata and Clarifications v1.3* (April 2022). They are defined as *“The mass of GHGs removed from the atmosphere over a specific period relative to an approved baseline. In the context of this methodology, removals are carbon stock changes resulting in sequestration attributable to the with-project scenario”*.

Vintage Year	Total ERTs (tCO ₂ e)	Total ERTs to Buffer Pool (tCO ₂ e)	ERTs Net (tCO ₂ e)	Removals (tCO ₂ e)	Other ERTs (tCO ₂ e)
2020	99,766	17,073	82,693	26,554	73,212
2021	88,910	15,215	73,695	23,664	65,246
Total for RP1	188,676	32,288	156,388	50,218	138,458

Appendix A: Reference List

Project Participant Documents

Document Description		Filename
Listing Form		Quinte_ListingForm_Signed.pdf
GHG Plan		Quinte_GHGPlan.pdf
Monitoring Report		Quinte_MonitoringReport.pdf
Calculation Workbooks	ERT Calculations	Quinte_RP_ERT_HWP_12_04_2023.xlsx
	Beginning of RP	Quinte_Start_RP_CO2_10_04_2023.xlsx
	Risk Tool	Quinte_Conservation_ACR_RiskTool_2.0_06_16_23.xlsx
	Tree-level	Quinte_TreeLevel_Calcs_CC_2020_10_3_2023.xlsx
	Regeneration	Quinte_Regeneration_Calcs.xlsx
	Common Practice	Quinte_CommonPractice_06_18_23.xlsx
	Site Index	Quinte_SiteIndex_Wcores_12_20_21.xlsx
	Site Visit CO2e	Quinte_Start_SV_CO2_03_01_2022.xlsx
Ownership	Communication	Quinte_OwnershipResponse_07_25_23.pdf
	Tax Documents	MBV0203101 .zip MSM0201103.zip MSM0201104.zip MSM0201105.zip MSR0102104.zip MTW0902201.zip MTW1102201.zip MTW1101102.zip MTW1102203.zip MTW1102204.zip MTW1305101.zip MTW1403101.zip MTW1403103.zip MTW1403104.zip NCF0202101.zip NCF0604101.zip NCF0604106.zip

		NCF0604108.zip NCF0604112.zip NCF0604116.zip NCF0604118.zip NCF0604119.zip NCF0703101.zip NCF0805109.zip NCF0805110.zip NCF0805112.zip NCF0805169.zip
	Landholdings	Quinte_LandholdingsWithPINS_01_27_21.xlsx
Baseline Modeling	Calculation Workbooks	Quinte_100Yr_calcs_11_21_2023.xlsx Quinte_TimberPrices_04_20_22.xlsx Quinte_DetailedCalcs_FVSPivot_baseharv_plot4.xlsx Volume_Analysis_MortalityAssessment.xlsx Quinte_Plots_Decline_FixMort.txt
	IndTreeGrow	IndTreeGrow.zip
	Outputs	FVS_Output.zip
	R Code	Rcode.zip
	Reference Docs	Quinte_ManagementCosts_06_30_23.pdf Change in Baseline Carbon Stock for year t.pdf FVS-ON_MortalityAdjustmentExplanation.pdf Pineau_Stumpage.pdf Freymond landonwer share.pdf stumpage_matrix_-_2022-23.xlsx
Inventory	Methodology	Quinte_CarbonPlot_Methodology_03_13_23.pdf
	QA/QC	Quinte Plot Check Summary_01_24_23.pdf Quinte Desk Check Summary_01_24_23.pdf
	Witness Trees	Quinte_WitnessTreeData_02_24_22.xlsx
Harvesting	Raw Data	Quinte_HarvestData_06_28_23.xlsx
	Mill Slips	MillSlips.zip
Spatial	Project Area Boundary	Quinte_Boundary_01_23_22.shp
	Ownership	Quinte_Landholding.shp
	Stratification	Quinte_invStrata_01_23_22.shp

	Plots	Quinte_Plots_01_23_22.shp
	Plot Grid	Quinte_Plots_Grid_01_23_22.shp
	Harvesting	Quinte_Harvest_RP1_01_23_22.shp
	RMZ	Quinte_RMZ_02_03_2023.shp
	Hydrology	Quinte_Waterbody_Clip_01_30_2023.shp Quinte_Watercourse_Clip_01_30_2023.shp
Common Practice		GanaraskaConservationAuthority.pdf GreyCounty.pdf GreySableConservationAuthority.pdf SaultSteMarieConservationAuthority.pdf SouthNationConservationAuthority.pdf
Forest Management Plan		PEC.Forest Management Plan.1998.pdf MU140_2021_FMP_TXT_AnPack.pdf
Certification		Agreement w. EOMF for FSC Certification.pdf
ACR Documents		Quinte_ACR_PDA_PDD_03_13_23.pdf Quinte_Deviation_Request_03_08_23.pdf Quinte_Deviation_Request2_09_26_23.pdf
Carbon Development & Marketing Agreement		2020_0604_CDMA_Quinte - Fully EXECUTED_Redacted.pdf
Reference Documents		Miles_Smith_rn_nrs38.pdf Li(2003)BelowgroundBiomass Equations.pdf FFEguide.pdf

Verifier Documents

Document Description	Filename
Project Specific COI Form	ACR680-RP1_COI.docx
Validation/Verification Plan	ACR680-RP1_Validation-Verification Plan_v1.5-20231215.pdf
Sampling Plan	ACR680-RP1_Sampling Plan_v1.7-20231215.pdf
Data Check Log	ACR680_DataCheckLog_20231215
Issues Log	ACR680_IssuesLog_v3.0.docx
Site Visit t-Test	Quinte_T-Test_Worksheet_2March2022.xlsx

Appendix B: Issues Log

Verifier Issue	Issue ID:	22-1	Status: Closed	Checked by:	EP	Date Identified	29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments	
ACR Standard, v7.0, 6B; IFM Methodology on Canadian Forestlands v1.0, 2.2	Section A, A.4 and Section A, A.6.2	New information request. <i>May impact conformance; no materiality</i>	Figure A-6 suggests that all area owned by Quinte conservation is included in the Quinte Community Forest Project. However, during field work, interviews revealed that some additional properties were recently purchased. Are these properties already included in the GHG plan? Also, recreation is also described as another product/service in the GHG plan. Any new infrastructure is planned to take place in the properties (roads, trails, buildings, etc.) that could impact expected level of activity?			Quinte_GHGPlan_06_16_22	
ACR Standard, v7.0, 6B; IFM Methodology on Canadian Forestlands v1.0, 2.2			<u>April 14, 2023 Findings</u> PP provided further clarification about the land ownership. Further, verifiers conducted interviews and searched on the internet any news about other developments in the Quinte’s ownership. The verifiers have not found any evidence of any other land recently purchased by Quinte which is not included in the project. This issue is now closed.			Quinte_GHGPlan_03_10_23.pdf Quinte_LandholdingsWithPINS_01_27_21.xlsx reviewed on the Ontario Land Registry	
PP Response							
Date	PP Comment					Additional evidence submitted for review by PP	
10-Mar-23	The forest manager has confirmed that no additional properties have been purchased since the project start date. All forested ownership is included in the GHG plan. The forest manager has also confirmed that there are no plans for new infrastructure on the property.						

Verifier Issue	Issue ID:	22-2	Status: Closed	Checked by:	EP	Date Identified	29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments	
ACR Standard, v7.0, 6.B and 8.A	GHG plan sections F1 and F2	Clarification. <i>May impact materiality or conformance.</i>	Section F1 reads: "...Stakeholder consultation was conducted in advance of the project by the Project Proponent...". Then, section F2 reads:			Quinte_GHGPlan_06_16_22	

		<p>"N/A. The Project Proponent, Quinte Conservation, is a non-federal and non-provincial public lands owner, and adhered to their internally agreed upon practices of project consultation and notification on associated decision making..."</p> <p>Please clarify if stakeholder consultation was realized prior to the project start date.</p> <p>Also, the verifiers request clarifications on the PP's statement in Section F2:</p> <p>".... and adhered to their internally agreed upon practices of project consultation and notification on associated decision making. Quinte Conservation, the Project Proponent, will provide references to the publicly available documentation for the project."</p> <p>What does "internally agreed upon practices" and "associated decision-making mean"? Is there an internal Board of Directors that makes these management decisions? What are the "references" the PP is referring to? Are these the management plans or something else?</p> <p>Please review and add further descriptions to Section F as appropriate to clarify these questions.</p>	
<p>ACR Standard, v7.0, 6.B and 8.A</p>		<p><u>April 14, 2023 Findings</u></p> <p>PP provided further clarification about the stakeholder consultation.</p> <p>Verifiers confirmed through review of the Conservation Ontario webpage that Quinte conservation is one of the 36 Ontario Conservation Authorities. Quinte Conservation Authority is a public sector organization established by local municipalities under the Conservation Authorities Act, to develop and deliver watershed-based resource management programs on behalf of the province.</p> <p>The 18 municipalities located in the Quinte watershed appoint representatives who serve on the Board of Directors to oversee the programs of the Authority. Board members, contact info, meeting schedules, minutes and agendas, memorandums, agreements, by-laws, annual auditor's reports and any other document prepared by Quinte conservation authority are publicly available on Quinte Conservation's webpage. Board meetings are held the third Thursday of each month. Meetings are open to the public and start at 3:30 pm.</p> <p>Further, the document "<i>History of Carbon Offset agreement review.June10.2020.pdf</i>" summarizes the meetings held since 2016 and how the Lands committee was formed in order to discuss the subjects regarding the carbon offset project.</p>	<p><i>Quinte_GHGPlan_03_10_23.pdf</i></p> <p><i>History of Carbon Offset agreement review.June10.2020.pdf</i></p> <p>Conservation Ontario webpage</p> <p>Quinte Conservation Board of Directors</p> <p>Quinte conservation board meetings calendar</p>

		Updated GHG plan received and reviewed. The section F1 and F2 now describe the structure of Quinte Conservation and how consultation process is done.	
		This issue is now closed.	

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
10-Mar-23	Stakeholder consultation occurred prior to the project start date. Proof of this can now be found in the supporting documents folder. Both Section F1. and F2. of the GHG plan have been updated. "Internally agreed upon practices" and "associated decision making" refer to methods through which Quinte Conservation fulfills obligations for consultation according to the <i>Conservation Authorities Act</i> and associated regulations under the act. There is an executive board for Quinte Conservation. "References" refers to material that is posted publicly and provided in response to questions received during consultation, these are not in reference to the management plans. Further details have been provided in Section F of the GHG Plan.	History of Carbon Offset agreement review.June10.2020.pdf Quinte_GHGPlan_03_10_23.pdf

Verifier Issue	Issue ID:	22-3	Status: Closed	Checked by: EP	Date Identified	29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
IFM Methodology on Canadian Forestlands v1.0, 3.3.1.1	Inventory Specifications	New information request. <i>May impact materiality or conformance.</i>	Please provide the spatial data for the entire grid that was used to allocate the inventory plots.		Quinte_CarbonPlot_Methodology_01_27_22 Quinte_Plots_01_23_22	
IFM Methodology on Canadian Forestlands v1.0, 3.3.1.1			April 17, 2023 Findings PP provided the entire grid used to allocate the inventory plots. Verifiers confirmed that the grid size, the placement, and the configuration agree with the PP forestry inventory methodology (A 703 x 715-meter fishnet grid overlaid within the property boundaries). Quinte conservation project contains several small properties fragmented in the landscape. The fishnet grid did cover all the parcels included in the project. Even though not all the parcels contain plots, verifiers reviewed fishnet grid and did not find any bias in the distribution of the plots. Further, the combined sampling error (live and dead stocks) is 6.21% at the 90% confidence level. As such, the inventory results, based on the PP's stratification scheme, meet the ACR precision requirements. This issue is now closed.		Quinte_Plots_Grid_01_23_22.shp Quinte_Plots_01_23_22 Quinte_CarbonPlot_Methodology_03_13_23	

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
10-Mar-23	A shapefile of the entire grid used to allocate the inventory plots has now been added to the verification folder.	Quinte_Plots_Grid_01_23_22.shp

Verifier Issue	Issue ID:	22-4	Status: Closed	Checked by: EP	Date Identified	29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments
ACR Standard, v7.0, Sections 4.A.1 and IFM Methodology on Canadian Forestlands v1.0, 2.4	GHG Plan Section B2, C.1, and E	Non conformance. <i>No materiality impact</i>	<p>Verifiers find the GHG Plan lacks clarity and supporting descriptive details on the Regulatory Surplus Test to comply with the noted sections of the ACR Standards and ACR's GHG Plan template's specifications.</p> <p>Please address the following items:</p> <ol style="list-style-type: none"> 1. In Section E1, verifiers request additional descriptive details on baseline constraints that were incorporated into the baseline model. While Section C1 provides the relevant laws, regulations, and other regulatory frameworks that could affect the project activity, verifiers are trying to ascertain which law/regulation/regulatory framework were utilized to determine the constraints and what public spatial data set was used. For instance, in developing the baseline model, the BS has identified baseline constraints (GHG plan, section E), which are incorporated in the Quinte_RMZ_01_28_22 spatial data. Verifiers are unclear on the process used to delineate the constrained areas and request a description of this process be added to the appropriate regulation. Specifically, the description should include how the stream classification was determined for the streams/rivers within the project area and how the associated stream buffer was delineated within GIS. 2. Forest management plan and GHG plan did not give details if the properties included in the project area have any adapted management activities based on the conservation easements. Please clarify if any conservation easement is implemented within the project area and how they can constraint the baseline and the project. 3. According to Species Registry of Canada, the region where the project is located contains the critical habitat for five threatened or endangered species: Spotted turtle (<i>Clemmys guttata</i>), blanding's turtle (<i>Emydoidea blandingii</i>), Western Chorus Frog (<i>Pseudacris triseriata</i>), Pale-bellied Frost Lichen (<i>Physconia subpallida</i>), Toothcup (<i>Rotala ramosior</i>), and White Lady's Slipper (<i>Cypripedium candidum</i>). No publicly available data could be found to the level of the property boundaries to confirm the habitats of those species. Please confirm if any of those species have been recently observed in the project area and possible constraints that should apply. 			<p>Quinte_GHGPlan_06_16_22</p> <p>Quinte_RMZ_01_28_22</p>

			<p>Further, GHG plan and related documents did not suggest that endangered species at the provincial level has been taken in consideration when evaluating the constraints within the property boundaries (Endangered Species Act, 2007 and Fish and Wildlife Conservation Act, 1997). Please review and update as needed.</p> <ol style="list-style-type: none"> GHG plan states that the property is FSC certified, however, GHG plan section C1 and forest management plan do not mention any impact that the High Conservation Value Forests (HCVFs) may have within the project area that may constrain harvesting baseline scenario (e.g., old-growth forests). Please clarify. Are there any oversight institutions that review compliance or monitoring of the environmental and community impacts within the project area? Please add the needed descriptions to the GHG Plan to clarify. 	
<p>ACR Standard, v7.0, Sections 4.A.1 and IFM Methodology on Canadian Forestlands v1.0, 2.4</p>			<p><u>April 17, 2023 Findings</u></p> <ol style="list-style-type: none"> In Section C1, verifiers confirmed additional descriptive details. PP added to the list two other regulations: Endangered Species Act (2007) and Fish and Wildlife Conservation Act (1997). None of the listed regulations require the forest carbon project activity. Further, section E1, Baseline Constraints, provides how the relevant laws, regulations, and other regulatory frameworks could affect the project activity. <ol style="list-style-type: none"> Verifiers agree with PP clarification about legal obligations on private lands in Ontario. The province has empowered municipalities to protect woodlands and regulate tree cutting in private forests (Yung, 2018 and Kim 2020). All levels of municipalities can pass and enforce by-laws under the Municipal Act (2001), but it is not mandatory. In that case, where there are no municipality forest conservation by-laws, private landowners have the rights to make decisions with respect to managing their forests. The Anew – Quinte Forestry Project is in Hastings, Frontenac, Prince Edward, and Lennox & Addington counties which does not have municipality tree-by-laws and there is no legal obligation requiring the project. PP provided further clarification. There are no conservation easements within the project boundaries. Verifiers also did not find any evidence of conservation easements internet research in different databases (e.g., Ontario heritage trust, Ontario land trust alliance, Hasting Prince Edward Land Trust, and land conservancy kfla). PP provided further clarification. Further in Section C1, verifiers confirmed additional descriptive details. PP added to the list two other regulations: 	<p><i>stand-amp-site-guide.pdf</i></p> <p><i>Quinte_Watercourse_Clip_01_30_2023.shp</i></p> <p><i>Quinte_Waterbody_Clip_01_30_2023.shp</i></p> <p><i>Quinte_DEM_10_7_21.tif</i></p> <p><i>Quinte_GHGPlan_03_10_23.pdf</i></p> <p><i>Quinte_RMZ_02_03_2023.shp</i></p>

		<p>Endangered Species Act (2007) and Fish and Wildlife Conservation Act (1997). Verifiers reviewed area of distribution of species at risk available at the recovery strategies webpage of the government of Canada. For some species, like the blandings turtle, there is a broad range area of distribution, however, the verifiers did not find any specific evidence through documentation review and during the field visits that should signals of species at risk within the project boundaries. VVB accepts and agrees with PP statement.</p> <p>21.</p> <p>4. Verifier accepted PP clarification for the regulatory test.</p> <p>22.</p> <p>5. Further information has been added to GHG Plan Section F1. Community and environmental impacts are monitored on an ongoing basis as required in the Conservation Authorities Act. Further to this, the PP maintains its FSC certification. Environmental and community impacts are monitored during internal and external audits through group FSC Certification.</p> <p>23.</p> <p>This issue is now closed.</p>	
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
10-Mar-23	<p>1. Description added to GHG Plan section E, Baseline Constraints. The law/regulation/regulatory frameworks in section C1 do not affect the baseline or project modeling. However, BMPs were retrieved from “Forest Management Guide for Conserving Biodiversity at the Stand and Scales” and was utilized for determining the baseline constraints. These are not legal constraints but simply best management practices. The process used to delineate the constrained areas has now been outlined in the GHG plan. The hydro layer used for depicting the watercourses and waterbodies have now been provided in the verification folder, along with the digital elevation model.</p> <p>24.</p> <p>2. The properties included in the project area do not have any conservation easements. As such, no adaptive management activities are implemented and do not constrain the baseline or the project.</p> <p>25.</p> <p>3. The forest manager confirmed that none of the five threatened or endangered species (Spotted turtle, blandings turtle, Western Chorus Frog, Pale-bellied Frost Lichen, Toothcup, and White Lady’s Slipper) have been observed in the project area. As such, no constraints have been added to the project or baseline modeling. Section C1. Regulatory Surplus Test now includes Species at Risk Act (2002), Fisheries Act (1985), and Canada Wildlife Act (1985). Provincial and Local laws have been updated to include both the Endangered Species Act (2007), and the Fish and Wildlife Conservation Act (1997).</p> <p>26.</p>	<p><i>stand-amp-site-guide.pdf</i></p> <p><i>Quinte_Watercourse_Clip_01_30_2023.shp</i></p> <p><i>Quinte_Waterbody_Clip_01_30_2023.shp</i></p> <p><i>Quinte_DEM_10_7_21.tif</i></p> <p><i>Quinte_GHGPlan_03_10_23.pdf</i></p> <p><i>Quinte_RMZ_02_03_2023.shp</i></p>	

	<p>4. There are HCVFs within the project area, however they do not constrain the baseline scenario as Quinte Conservation has full rights to harvest in these areas.</p> <p>5. Environmental and community impacts are monitored during audits through group FSC Certification. Further information has been added to GHG Plan Section F1.</p>	
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Verifier Issue	Issue ID:	22-5	Status: Closed	Checked by: EP	Date Identified	29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments
ACR Standard, v7.0, Section E3. A.4.32.B.3 & 4.8 and IFM Methodology v1.3, D6 and D7	GHG Plan Section E3	New information request. <i>No materiality impact</i>	In Section E3, Leakage, while the table denotes the values utilized in the leakage calculation, verifiers request additional descriptive details on the ACR equations that were utilized in the calculation for leakage. The text should also note the leakage value that was calculated. Further, it is verifiers understanding that "Baseline_Project_40YR_CO2e" tab, section "Crediting period (20-year) Averages should present the same values described in the table E3-1. Please clarify.			Quinte_GHGPlan_06_16_22 Quinte_RP_ERT_HWP_06_16_2022
ACR Standard, v7.0, Section E3. A.4.32.B.3 & 4.8 and IFM Methodology v1.3, D6 and D7			<u>April 27, 2023 Findings</u> Further clarification provided and additional information has been added to GHG Plan Section E3. The calculated leakage value has also been noted in the text. This issue is now closed.			Quinte_GHGPlan_03_10_23.pdf Quinte_RP_ERT_HWP_03_08_2023
PP Response						
Date	PP Comment				Additional evidence submitted for review by PP	
10-Mar-23	A sample equation and additional descriptive details on the ACR equations that were utilized in the calculation for leakage have been added to the GHG Plan Section E3. The calculated leakage value has also been noted in the text. The “Baseline_Project_40YR_CO2e” tab, section “Crediting Period (20-Year) Averages shows the HWP harvested (which are calculated in the 100 year calcs workbook) as an average for the 20-year crediting period. Table E3-1. Takes the sum of all the harvested wood products in both the project and baseline over the 20-year crediting period and calculates the percent difference between the two. This is not the same as the 20-year average wood products. In order to see the HWP stored, follow the calculations through “Baseline_HWP_Step_1_2_3” and “Baseline_HWP_Step_4_5”. The outputs are summarized in the “GHG Plan Tables” tab, which matches Table E3.1 in the GHG plan.				Quinte_GHGPlan_03_10_23.pdf	

Verifier Issue	Issue ID:	22-6	Status: Closed	Checked by: EP	Date Identified	29-Aug-22
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ACR Standard ref	GHG Plan Section	Significance	Issue Description	Comments
IFM Methodology on Canadian Forestlands v1.0, 3.3.1.2.1	GHG plan tableau E1-3 and Monitoring Report; Section V (pg 4)	Clarification. <i>May impact materiality or conformance.</i>	ACR methodology for standing dead trees specifies 4 decay classes. The PP's inventory data utilized 5 decay classes and notes 4 decay classes are used in the Project Monitoring section of the MR (decay class) and GHG plan. Please review it and clarify.	<p>Quinte_GHGPlan_06_16_22</p> <p>Quinte_MonitoringReport_06_16_22</p> <p>Quinte_Start_SV_CO2_03_01_2022</p>
IFM Methodology on Canadian Forestlands v1.0, 3.3.1.2.1			<p><u>April 27, 2023 Findings</u></p> <p>Further clarification provided and additional information has been added to GHG Plan Section E1 and Table E1-2. Further, clarification was also added to the inventory data, on the tab "decayclass". The verifier understands the cross-walk between the 5-class field calls and ACR's 4 classes. The crosswalk applied to trees recorded as a decay class 5 to a decay class 4 of the ACR standard is considered acceptable. Justification for accepting the use of this cross walk is in part based on precedent from the verifier's previous experience of another ACR project that applied this same cross-walk for decay class 5 to a decay class 4. The response indicates that these only impacts decay class 5 trees recorded in the field, and it is noted there was only one tree recorded as a 5-decay class in the project's forest inventory. While the criteria for the field-recorded decay classes do not precisely align with ACR's class criteria, the classification scheme is considered to be reasonable. The application of the cross walk is not believed to have a material impact on the project's estimates of baseline and project level carbon stocking.</p> <p>Verifiers did not find any change to the monitoring report as highlighted in the PP's response. However, VVB concluded that changes to the GHG plan and forestry inventory file provide proper clarification about the methodology used. Monitoring report does corroborate with GHG Plan.</p> <p>This issue is therefore considered closed.</p>	<p>Quinte_GHGPlan_03_10_23.pdf</p> <p>Quinte_MonitoringReport_03_10_23</p> <p>Quinte_Start_RP_CO2_03_09_2023</p>
PP Response				
Date	PP Comment		Additional evidence submitted for review by PP	
10-Mar-23	There are 4 decay classes (see Section 3.3.1.2.1, Step 4 (page 34 of the protocol). We have 5 decay classes in the inventory methodology, which follow the Decay Class Descriptions in the ARB protocol. We crosswalked these 5 decay classes into the 4 decay classes of this ACR protocol, using the definitions outlined in the "DecayClass" tab of the CO2 calcs. Decay Class 5 of our inventory is mapped to Decay Class 4 of the protocol. Decay Classes 1-4 of the inventory are mapped to Decay Classes 1-4 of the protocol. The end result is that Decay Class 5 is merged with Decay Class 4, and both decay class 4 and 5 have an 80% sound % for decay. This is done for consistency across projects for our inventory crews to maintain standard field procedures when collecting data for both ARB and ACR projects. This has been		Quinte_GHGPlan_03_10_23.pdf	

	updated in the GHG Plan Section E, Table E1-2. The monitoring report has also been updated to clarify this difference.	
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Verifier Issue	Issue ID:	22-7	Status: Closed	Checked by: EP	Date Identified	29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments
ACR Standard, v7.0 (Chap 3, Table 2)	Section H, H.2	New information request. <i>Conformance Issue</i>	Table A3.1 of the GHG Plan states: “The project Start Date of June 22, 2020 coincides with the signing of the Carbon Marketing & Development Agreement between Quinte Conservation and Bluesource.” Verifiers request these agreements in order to validated & verify the project start date.			Quinte_GHGPlan_06_16_22
ACR Standard, v7.0 (Chap 3, Table 2)			<u>April 27, 2023 Findings</u> Carbon Marketing & Development Agreement between Quinte Conservation and Bluesource reviewed. Verifiers confirmed that the project Start Date of June 22, 2020 coincides with the signing of the Carbon Marketing & Development Agreement between Quinte Conservation and Bluesource (Anew). This issue is now closed.			2020 0604 CDMA Quinte – Fully EXECUTED_Redacted.pdf
PP Response						
Date	PP Comment			Additional evidence submitted for review by PP		
10-Mar-23	The Carbon Marketing & Development Agreement between Quinte Conservation and Bluesource has been added to the supporting documents folder.			2020 0604 CDMA Quinte – Fully EXECUTED_Redacted.pdf		

Verifier Issue	Issue ID:	22-8	Status: Closed	Checked by: EP	Date Identified	29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR Standard, v7.0, Section 2.B.6	GHG plan section D2 and Inventory Specifications	New information request. <i>May impact conformance; no materiality issue</i>	The field QA/QC process claims at least 10% of plots were visited in an audit of the inventory crews. The verifiers requested a list of the plots that were visited, dates of the visit, the individuals performing the audit, and the results of the check audit including any corrective actions taken. While the GHG plan and the inventory specifications outline a detailed QA/QC review process, the verifiers requested supporting documentation demonstrating the implementation of the QA/QC system, including the dates of review, individuals responsible for reviews, issues identified during reviews, and a summary of revisions/updates made as a result of the QA/QC reviews.		Quinte_GHGPlan_06_16_22 Quinte_CarbonPlot_Methodology_01_27_22	

ACR Standard, v7.0, Section 2.B.6		<p>April 27, 2023 Findings Verifiers received the field QA/QC process for 20 plots (10% of plots) visited in an audit of the inventory crews. The plots that were visited, dates of the visit, names of individuals who performed the audit, and results of the check audit, including any corrective actions taken were provided. Of the 20 plots re-visited as part of the QA/QC process, 10 had some request for corrective action. Verifiers confirmed that changes highlighted in the QA/QC checklist were properly applied to the inventory data.</p> <p>This issue is now closed.</p>	<p>Additional evidence submitted for review by PP</p> <p><i>Quinte Plot Check Summary_01_24_23.pdf</i></p> <p><i>Quinte Desk Check Summary_01_24_23.pdf</i></p> <p><i>Quinte_Start_RP_CO2_03_09_2023</i></p>
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PP Response

Date	PP Comment	Additional evidence submitted for review by PP
10-Mar-23	The plots that were visited, dates of the visit, initials of individuals who performed the audit, and results of the check audit, including any corrective actions taken have now been provided in the supporting documents folder. A summary of the desk audit has also been provided that demonstrates the implementation of the QA/QC system, includes dates of review, individuals responsible for reviews, issues identified during reviews, and a summary of revisions/updates made as a result of the QA/QC reviews.	<p><i>Quinte Plot Check Summary_01_24_23.pdf</i></p> <p><i>Quinte Desk Check Summary_01_24_23.pdf</i></p>

Verifier Issue	Issue ID:	22-9	Status: Closed	Checked by: EP	Date Identified	29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
IFM Methodology on Canadian Forestlands v1.0, 4.6	Section B.2	Clarification. Conformance Issue	Quinte conservation is FSC certified through a FSC FM certificate group (NC-FM/COC-000232). The FSC report states that the Quinte FSC certified area is 12,225 ha, however, landholding shapefile states 13,020 ha. Please provide evidence that the FSC certified area comprises all the polygons included in the project area.		<p><i>Quinte_GHGPlan_06_16_22</i></p> <p><i>Quinte_Landholding</i></p> <p><i>Quinte_LandholdingsWithPINS_01_27_21</i></p> <p><i>Quinte_Boundary_01_23_22</i></p> <p>FSC report available on: https://fsc.secure.force.com/servlet/servlet.FileDownload?file=00P4y00001jITxeEAE</p>	
IFM Methodology on Canadian			<p>April 28, 2023 Findings PP acknowledges and accepts PP clarification about the FSC area certified. The landholding shapefile is larger in area than the FSC certified area due to urban</p>		<p><i>Quinte_Boundary_01_23_22</i></p> <p><i>Quinte_Landholding</i></p>	

Forestlands v1.0, 4.6			infrastructure such as buildings and parking lots that are not included in the FSC certified area. The review of the land ownership layer overlapped with the project boundary layer corroborates to PP explanation about the differences in the FSC certified area.	
This issue is now closed.				

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
10-Mar-23	The landholding shapefile is larger in area than the FSC certified area due to urban infrastructure such as buildings and parking lots that are not included in the FSC certified area. The area of certification is larger than the project area as a result of non-forest removals such as roads and water features that were removed from the project area.	

Verifier Issue	Issue ID:	22-10	Status: Closed	Checked by: EP	Date Identified	29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
IFM Methodology on Canadian Forestlands v1.0, 1.2	GHG calculations	Non conformance.	The project activity doesn't involve any use of non-native species. However, some sporadic willow exotic species were observed during the field visit with potential to be shrubs instead of trees, the review of forest inventory data confirmed that those species are included in the project carbon calculations. Please review and update as needed.		<i>Quinte_Start_SV_CO2_03_01_2022</i> <i>Quinte_Start_RP_CO2_06_08_2022</i>	
IFM Methodology on Canadian Forestlands v1.0, 1.2			<u>April 28, 2023 Findings</u> Verifiers received further clarification about the willow spp. included in the project. However, the cited government source (Black willow ontario.ca) confirmed that <u>only black willow is a tree native to Ontario. According to the government webpage, it may be confused with many non-native willow species. Further, PP inventory data only identify the species to the genus level, not to the species.</u> The issue remains open.		<i>Quinte_Start_RP_CO2_03_09_2023</i> Black willow ontario.ca	
IFM Methodology on Canadian Forestlands v1.0, 1.2			<u>July 21, 2023 Findings</u> PP agreed that forest inventory crew only identified species to the genus level, thus impossible to confirm that the willow spp in the project area are indeed native or have potential to be shrubs. For conservativeness, PP removed willow spp. from project inventory data. The model has been rerun, all calcs are slightly impacted, including start date/RP1 CO2 calcs, 100 year calcs, and ERT calcs. This finding is now closed.		<i>Quinte_Start_RP_CO2_06_29_2023.xlsx</i> <i>Quinte_RP_ERT_HWP_06_29_2023.xlsx</i> <i>Quinte_100Yr_calcs_06_29_2023.xlsx</i>	

PP Response

Date	PP Comment	Additional evidence submitted for review by PP
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10-Mar-23	Willow is included in the inventory as it is well established and native to Ontario. It is a hybridized species, making it very difficult for identification in the field. All willow have been modeled assuming a general species type. Willow meets the protocol definition of a tree as it is capable of reaching 5m in height. Please see Black willow ontario.ca	
18-Jun-23	<p>Native Species are defined within the protocol as Trees Listed as native to Canada in Trees in Canada by John Laird Farrar (Fitzhenry & Whiteside, 1995). Trees must be defined as regionally native according to the range maps with the source above. Peachleaf Willow, Sandbar Willow, Bebb Willow, Pussy Willow, Balsam Willow, Shinning Willow, Black Willow, Meadow Willow, Heartleaf Willow, and Satiny Willow were all found to be native species within the project region.</p> <p>Willow however make up less than 1% of the species within the inventory, therefore 11 willow species records (all from Plot 12) have been removed. The model has been rerun, note that all calcs are slightly impacted, including start date/RP1 CO2 calcs, 100 year calcs, and ERT calcs.</p>	<p><i>Quinte_Start_RP_CO2_06_29_2023.xlsx</i> <i>Quinte_RP_ERT_HWP_06_29_2023.xlsx</i> <i>Quinte_100Yr_calcs_06_29_2023.xlsx</i></p>

Verifier Issue	Issue ID:	22-11	Status:	Closed	Checked by:	EP	Date Identified	29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description				Comments	
ACR Standard, v7.0, Sections 2.B.1, 3 (Table 2), and A.3.1	GHG plan, section A4	Clarification. <i>May impact materiality or conformance.</i>	<p>The verifiers checked the project boundary's spatial data provided against a variety of publicly available datasets to assess the accuracy of the asserted spatial boundaries of the project. Generally, good alignment was found, however, verifiers observed the following issues:</p> <ol style="list-style-type: none"> 1. GHG plan states on section A4: "Non-forested acres were removed from the project to a minimum mapping unit of 2.5 acres." However, ACR standard V7.0 reads on section A.3.1: "Land with at least 10% cover (or equivalent stocking) by live trees of any size, including land that formerly had such tree cover and that will be naturally or artificially regenerated. To qualify, the area must be at least 1 acre in size." The standard is clear about this minimum area requirement, why did PP choose to go for a minimum mapping unit of 2.5 acres instead? Please clarify. 2. GHG plan describes on section A4: "The canopy cover map (Figure A-3.) clearly shows that the project meets Canada's National Forest Inventory Ground Sampling Guidelines definition of forestland (at least 10% tree cover) as forest covers the majority of the project area.". The verifiers recognize that the image suggests that several forest fragments are in the project area. However, the project contains several small properties in an area dominated by farmland. Please provide further details about the methodology used to determine the 10% canopy cover on all the properties included in the project area. 				<p><i>Quinte_GHGPlan_06_16_22</i></p> <p><i>Quinte_Landholding</i></p> <p><i>Quinte_LandholdingsWithPINS_01_27_21</i></p> <p><i>Quinte_Boundary_01_23_22</i></p>	

			3. PP has not provided the deeds for the ownership area. Please provide all the relevant documents to confirm boundaries and ownership.	
ACR Standard, v7.0, Sections 2.B.1, 3 (Table 2), and A.3.1			<p><u>April 28, 2023 Findings</u></p> <p>1-2. PP provided further clarification about the minimum area included in the project.</p> <p>27.</p> <p>28. Further, GHG plan states on section A4. Location, page 55:</p> <p>29. “The canopy cover map (Figure A-3.) clearly shows that the project <u>meets Canada’s National Forest Inventory Ground Sampling Guidelines definition of forestland (at least 10% tree cover)</u> as forest covers the majority of the project area. Non-forested acres were removed from the project to a minimum mapping unit of 2.5 acres.”</p> <p>30.</p> <p>31. Verifiers reviewed land ownership, boundary, and strata layers. Some properties are small and only have a few trees within the polygons and in some cases, no trees at all. For instance:</p> <p>32. 347487.00 m E 4953800.00 m N (the polygon is clearly not a forest land through review of google earth image using street view).</p> <p>33. 331270.01 m E 4866903.61 m N (which appear to be the edge of a pond, not forest land).</p> <p>34.</p> <p>35. It is the verifiers understanding that because the property is divided up into many small parcels, each individual parcel should comply with the minimum area requirement and the 10% rule.</p> <p>36.</p> <p>a) Verifiers request further clarification about the methodology to consider the 10% threshold. For instance, was it done at the parcel level?</p> <p>b) There are 420 polygon entries in the landownership layer that resulted to the project boundaries. Please describe the process to evaluate the accuracy of the manual operation. Which was the process to check for inconsistencies?</p> <p>37.</p> <p>38. Further, the standard states that for projects outside of the United States, PP may use the Kyoto Protocol definition of forests with the relevant Designated National Authority (DNA). If the project is in a country that does not have a designated DNA</p>	

			<p>(which is the case for Canada), the PP may propose <u>another nationally approved forest definition</u>.</p> <p>39.</p> <p>40. PP used the Canadian forestry inventory methodology which is indeed an approved national definition (https://d1ied5g1xfp8x8.cloudfront.net/pdfs/29402.pdf). However, according to the national definition, land $\geq 10\%$ occupied (by crown cover) by tree species of any size and the land should be > 0.5 ha and > 20 m. The trees must be capable of reaching a mature height of 5 m.</p> <p>41.</p> <p>c) Since the standard is clear about the methodology to be used regarding forest definition and minimum area requirement, please clarify in the GHG Plan the rational used. Further, please demonstrated that the approach used generated more conservative values.</p> <p>3. The Ontario land registry charges for consultation of the documents which were not included in validation/verification proposal. VVB requires any other documentation to show proof of ownership (tax information, land titles, etc.). The document "Quinte_LandholdingsWithPINS_01_27_21.xlsx" contains 423 parcels. VVB require proof of the following 21 parcels (423=20,57 rounded up = 21).</p> <p>42.</p> <p>43. OBJECTIDPROPERTY_I</p> <p>44. 147 MTW1403103</p> <p>45. 145 MTW1403101</p> <p>46. 240 NCF0703101</p> <p>47. 255 NCF0604116</p> <p>48. 143 MTW0902201</p> <p>49. 244 NCF0604101</p> <p>50. 249 NCF0604106</p> <p>51. 369 MSM0201105</p> <p>52. 148 MTW1403104</p> <p>53. 185 MTW1305101</p> <p>54. 360 MSR0102104</p> <p>55. 252 NCF0604112</p> <p>56. 250 NCF0604108</p> <p>57. 282 NCF0805112</p> <p>58. 116 MTW1101102</p> <p>59. 45 MBV0203101</p> <p>60. 367 MSM0201103</p> <p>61. 279 NCF0805109</p>	
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			62. 133 MTW1102204 63. 132 MTW1102203 64. 237 NCF0202101 65.	
ACR Standard, v7.0, Sections 2.B.1, 3 (Table 2), and A.3.1			<p><u>July 17, 2023 Findings</u></p> <p>1-2. PP provided further clarification about the forest cover and minimum area included in the project.</p> <p>"Section A4. Location, page 55, of the GHG plan has been updated to the protocol's definition of forestland to say, "The canopy cover map (Figure A-3) clearly shows that the project meets the methodology's definition of forestland." Forest land is defined as land at least 10 percent stocked by trees of any size, or land formerly having such tree cover, and not currently developed for non-forest uses. Land proposed for inclusion in this project area meets the stocking requirement, in aggregate, over the entire area."</p> <p>Verifiers reviewed updated GHG Plan and confirmed that the approach is indeed in conformance with the "forestland" definition stated in the "ACR IFM Canada Methodology v1.0" on page 4 and section 2.1 of the methodology on page 15. ACR STD v7.0 suggests that an approved national forest definition should be used for projects outside the U.S., however ACR IFM Canada methodology v1.0 proposes already another definition which is not the approved national definition of forestland cover in Canada. The ACR STD v7.0 reads in the end of section A.3.1, item 1: "the Project Proponent may propose another nationally approved forest definition". PP removed wording suggesting the use of the Canadian approved definition to the ACR IFM Canada methodology v1.0. Verifiers understand that PP has used the definition proposed by the ACR IFM Canada methodology. Based on this definition, there is no minimum area requirement. Verifiers reviewed imagery and confirmed that with 22 properties the project already achieve the definition of forestland through being at least 10% stocked by trees of any size in the aggregate.</p> <p>The review of the land ownership layer overlapped with the project boundary layer overall confirmed the approach to remove non-forested lands. Field visits conducted during visit of plots sampled by the VVB also conform that only forested lands were included to the project. This finding is now closed.</p> <p>3. Verifiers sampled 21 properties for ownership. Verifiers reviewed tax bills demonstrating ownership of the properties and property max index. The project area lands are owned by Quinte Conservation. As such, the land is under private ownership. The Moira River Conservation Authority and the Napanee Region Conservation Authority were both established in 1947. These organizations</p>	<i>Quinte_GHGPlan_06_18_23.pdf</i> <i>Ownership File Folder</i>

		amalgamated in 1996 and formed Quinte Conservation. Thus, some of the tax notices show Napanee Region and Moira River Conservations as landowners. Verifiers reviewed documentation showing link between these organizations. This finding is now closed.	
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
10-Mar-23	<ol style="list-style-type: none"> 1. Areas that were at least 2.5 acres in size were kept in the project boundary, which satisfies the ACR requirement of being at least 1 acre. The methodology states that this unit was utilized due to minimum mapping unit delineation typically being based on underlying raster pixel size, however, as we did not employ a raster-based analysis, we believe a 1 hectare, 2.5-acre polygon unit to be appropriate. 66. 2. Areas devoid of trees (<10% canopy cover over 2.5 acres, assessed on the latest available imagery) were manually clipped from the project boundary, including farmland. Recently-cleared areas were retained if they showed evidence of tree regrowth. Some areas <2.5 acres were removed if they were obviously devoid of trees over an extended period of time (i.e. obvious wet areas spanning 5-10 years of imagery). Each individual parcel was examined via aerial imagery and a thorough delineation of non-forest land was completed. There is no farmland included in the project boundary. Figure A-3.1 is at a scale that makes farmland vs. forestland undetectable in the project area due to parcels being widely dispersed across the property. 67. 3. Quinte Conservation does not have deeds. PIN numbers found within Quinte_LandholdingsWithPINS_01_27_21.xlsx can be searched on the Ontario Land Registry Homepage - Ontario Land Registry Access (onland.ca) to confirm ownership. 68. 		
18-Jun-23	<p>1-2. Section A4. Location, page 55, of the GHG plan has been updated to the protocol's definition of forestland to say "The canopy cover map (Figure A-3) clearly shows that the project meets the methodology's definition of forestland." Forest land is defined as land at least 10 percent stocked by trees of any size, or land formerly having such tree cover, and not currently developed for non-forest uses. Land proposed for inclusion in this project area meet the stocking requirement, in aggregate, over the entire area.</p> <p>347487.00 m E 4953800.0 m N – street view was not utilized in our method of determining non-forest. The strip of grass between the forest and road is immaterial, less than 2.5 acres, and inconsistent with our methods of determining non-forest. From aerial view, there is a lot of canopy cover over this patch of earth.</p> <p>331270.02 m E 4866903.61 m N – this is the shoreline of a waterbody that was removed from the project area. The water levels increase and decrease annually, and there is canopy cover over the edge of the</p>	<p><i>Quinte_GHGPlan_06_18_23.pdf</i> <i>Ownership File Folder</i></p>	

water that dips slightly in and out of the project boundary. The amount of non-forest observed is less than 2.5 acres and immaterial.

Each individual small parcel does not need to comply with the minimum area requirement and the 10% rule. The methodology definition of forestland states that “Land proposed for inclusion in this project area shall meet the stocking requirement, in aggregate, over the entire area”.

a) The 10% threshold was determined by looking at the canopy tree cover across the entire project area, zooming in to each individual parcel, and removing all non-forestlands.

b) The process used to evaluate the accuracy of the manual operation of non-forest removal was to look at the canopy tree cover across the entire project area, zooming in to each individual parcel, and ensuring all non-forestland (less than 10% tree cover) was removed. The process to check for inconsistencies was to have a second forester manually review each individual parcel again and remove anything that was missed in the first project boundary edit. Any non-forested areas that were less than 2.5 acres in size were kept within the project boundary.

c) The GHG plan has been updated to remove reference to Canadian’s Forest Inventory Methodology as it is not required to be used. The project now uses the protocol’s definition of forestland to say “The canopy cover map (Figure A-3) clearly shows that the project meets the methodology’s definition of forestland.” Forest land is defined as land at least 10 percent stocked by trees of any size, or land formerly having such tree cover, and not currently developed for non-forest uses. Land proposed for inclusion in this project area meet the stocking requirement, in aggregate, over the entire area. Table A3.1. Project Eligibility Requirements has also been updated accordingly.

The approach used for considering non-forest areas larger than 2.5 acres to be removed from the project boundary is not comparable to considering land > 0.5 ha and > 20 m in size, and considering land that is at least 1-acre. The 2.5-acre minimum mapping unit we are referring to is in regard to the size of a non-forest area to be removed. The sample design is consistent with the current project boundary. A systematic random sample design of a 703 by 715 m grid was overlaid across the current project boundary. The current carbon stocking measured is consistent and representative of the current project boundary. All plots have an equal amount of chance in being sampled in dense forest vs. treeless patches. By removing additional lands that are less than 1-acre, you have the potential to remove low-stocked plots that are currently representative of the project boundary. Individual polygons that are less than 1-acre are created after a non-forest layer is created and then erased from the project boundary. Therefore, the project boundary that remains may include individual polygons that are less than 1-acre if for example there is a patch of forestland between a road and a gravel pit. The method we use is conservative as we’re including a minimum mapping unit of forestland that may not have 10% tree cover, however, the carbon stocks are representative of the current sample design for the project area. Therefore, there is always the chance that a non-stocked plot is captured within the sample design, which would reflect the carbon stocks for the project, in which case the stocking is not only representative, but also conservative.

Upon review of the inventory methodology, it was observed that the minimum mapping unit was 1-hectare instead of 2.5 acres. The GHG plan has been updated to align with the inventory methodology.

3. The PropertyDocs folder of the verification folder now contains both tax information and land titles retrieved from the Ontario land registry in order to show proof of ownership for the 21 parcels selected.

Verifier Issue	Issue ID:	22-12	Status: Closed	Checked by: EP	Date Identified 29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments
ACR Standard, v7.0, Section 6.B and 8A	Section F1 and D2	Non conformance. May impact OMM or conformance.	<p>Positive impacts that are expected to result from the implementation of the project activities are discussed in Section F1 of the GHG Plan. The PP asserts the project will have positive impacts on carbon sequestration, wildlife & plant habitat protection, soil and water protection. To meet the criteria within Chapter 8 of the ACR Standard of Section 8, verifiers have some questions and/or clarifications on how the process used to assess environmental and community impacts. Please clarify and/or revise as appropriate to comply with the noted ACR Standard's assessment. Specifically, these include the following:</p> <ul style="list-style-type: none"> (1) Did the PP consider other environmental impacts such as biodiversity, air quality, water quantity or wildfire risk? (2) Did the PP consider community impacts such as changes to employment or revenue for local communities? Verifiers find this section of the GHG Plan does not adequately address if community impacts were assessed. (3) The section F1 of the GHG Plan lacks detail on how risks and impacts will be monitored, how often and by whom. For instance, the impact assessment refers to the forest management plans as part of monitoring plan, however, forest management plan is a generic document and does not describe any monitoring activity. Further, the forest management plan does not cover the entire area being assessed. Also, the impact assessment refers to section D2 of the GHG plan when discussing about the monitoring plan. Section D2 does not describe either how or when monitoring activities will occur. 		Quinte_GHGPlan_06_16_22
ACR Standard, v7.0, Section 6.B and 8A			<p>April 28, 2023 Findings</p> <p>PP provided further clarification about the positive impacts. Positive impacts that are expected to result from the implementation of the project activities are discussed in Section F1 of the GHG Plan. Specifically, these include the following:</p>		Quinte_GHGPlan_03_10_23.pdf

			<ol style="list-style-type: none"> 1) Biodiversity, air quality, water quantity or wildfire risk are now addressed in the GHG plan. Verifiers agree with clarification provided. Since the private woodlots occupy small areas but lie near cities, their benefits to people are more direct: purifying air and water, maintaining wildlife habitat, supplying various forest products, and offering recreational sites (for instance, see NRCan, 2017). This issue is now closed. 2) Further description about community impacts such as changes to employment or revenue for local communities have been added to Section F1 of the GHG Plan. Revenues from the carbon project will positively impact the community through property maintenance, stewardship, and educational programs. This issue is now closed. 3) Monitoring activities are now addressed in the section F1. Monitoring occurs annually as required by FSC certification and reporting periods; however, some programs are weekly and biweekly monitored. This issue is now closed. 	
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OPO/APD Response

Date	PP Comment	Additional evidence submitted for review by PP
10-Mar-23	<p>1. Additional positive community impacts have been added to section F1. Including biodiversity, air quality, and water quantity. Further detail has been added to clarify monitoring plans. Wildfire risk is not a concern in this area and thus not included as an environmental impact of the project.</p> <p>2. Community impacts were considered throughout the project planning phase. Impacts were discussed at board meetings. Further description of this process has been added to Section F1 of the GHG Plan. Revenues from the carbon project will positively impact the community through property maintenance, stewardship, and educational programs.</p> <p>3. The project proponent will be monitoring as management is being implemented across the property on an ongoing basis. Officially, monitoring occurs annually as required by FSC certification and reporting periods, however some programs are weekly and biweekly. Further detail has been added to Section F1 of the GHG Plan.</p>	Quinte_GHGPlan_03_10_23.pdf

Verifier Issue	Issue ID:	22-13	Status: Closed	Checked by: EP	Date Identified	29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description	Comments		
ACR Standard, v7.0, Section 4.A.2; IFM Methodology on Canadian	Sections C2, B5, and E1.3	Non conformance.	GHG Plan lacks adequate detail on what was actually done to evaluate the common practice harvesting on lands similar to the project area. While a basic description of the asserted common practice harvesting is given, no detail is offered on how the PP went about determining the asserted common practice is indeed common for lands similar to the project area. The verifiers agree that most wood buyers are located in	Quinte_GHGPlan_06_16_22		

<p>Forestlands v1.0, 2.4, 4.6</p>		<p>the south of the province which increase demand. However, of particular importance is the scale of operations, which is much smaller in the South region and particularly fragmented to the project area.</p> <p>Secondly, while some of the industry giants like Domtar, Tembec and Georgia-Pacific have a presence in the region, small family-owned and operated sawmills dominate the sector. The ruggedness of the Shield terrain, the diversity of its forests and forest management, the large number of tourists and tourism values, and the difficulty in reversing the effects of past harvesting practices all present greater challenges than perhaps anywhere else in Ontario. The entire region has been cut once and much of it has been cut two or more times. The smaller scale of operations and the more complex management makes the Southern Region among the most expensive in the province to operate. Please clarify how these factors were used to determine the common practices in the baseline scenario.</p> <p>Also, Quinte Conservation property policy manual shows that more than half of the project area is not managed forest land (see https://www.quinteconservation.ca/en/watershed-management/resources/Documents/QC%20Property%20Policy%20Manual%20Map%20(Public%20Version).pdf). Please clarify how the project meets the "working forest" definition as described in the IFM ON CANADIAN FORESTLANDS Version 1.0 methodology.</p> <p>Quinte conservation website describes that:</p> <ul style="list-style-type: none"> - "We own over 30,000 acres of protected land for the purpose of ensuring preservation and protection of overall watershed health..." <p>GHG plan assumes on page 19 that "If the Bluesource – Quinte Community Forest Project was not implemented, a more aggressive harvest regime could be implemented in the project area." Additional supporting evidence of the rational used to justify a common forest management regime of "heavily managed forest land ownership" on the project area is needed.</p> <p>Verifiers request a summary be added to Section C2 describing the process the PP utilized in determining the proposed project activity exceeds the common practice of similar landowners managing similar forests in the region. If there are associated supporting documentations used for this process, please reference and/or provide.</p> <p>manage</p>	
<p>ACR Standard, v7.0, Section 4.A.2; IFM Methodology</p>		<p><u>April 28, 2023 Findings</u></p> <p>PP provided further clarification about the common practices in the region. A summary has been added to Section C2 describing the process used in determining</p>	<p><i>MU 140_2021_FMP_TXT_AnPack.pdf</i></p> <p><i>2020 MFC Capstone_Hyemin Kim.pdf</i></p>

<p>on Canadian Forestlands v1.0, 2.4, 4.6</p>		<p>the proposed project activity exceeds the common practice. Further, PP provided a forest management plan for a crown land in a neighbour county and a research paper assessing forest management in private lands in southern Ontario (master's degree thesis). VVB reviewed all original reference sources cited in the Project Proponent's documentation.</p> <p>The verifiers interviewed some stakeholders to gain a better understanding of common practice management and harvesting practices in the region. Through these interviews, overall support for the common practice baseline harvesting regime as described in the GHG Plan was communicated to the verifier and was consistent with the explanation given by PP. The verifiers also conducted internet searches for information pertaining to common silvicultural practices in Southern Ontario.</p> <p>VVB's internal search confirmed that the Government of Ontario created the Managed Forest Tax Incentive Program (MFTIP) to encourage BMP and increase the landowners' awareness about forest stewardship. Under the MFTIP, the landowner is ultimately responsible for the management of their lands, mostly handling basic tending activities on their own or hiring forest consultants to complete challenging operations. These activities should comply with BMP, and harvesting operations must be conducted according to the MNRF's silvicultural guide (MNRF, 2012).</p> <p>Other than the documents listed above, PP describes in the section E1. Of the GHG plan that a conservative approach was modelled utilizing BMPs found in the "Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales" authored by the Ontario Ministry of Natural Resources. VVB interviews confirmed that for bigger private properties and conservation lands, this guide is a reference of common practice in Southern Ontario. As described in the issue 22-21 below, while verifiers confirmed that some elements of the guide were incorporated in the GHG plan, other sections as the silvicultural treatments in RMZ areas are not used. Please clarify if that is a common practice in the region for private lands.</p> <p>The cited paper "The Economic Value of Private Woodlots in Southern Ontario" by H. Kim (2020) breaks down the southern region of Ontario in four sub-regions (southern, western, central, and Eastern region). The VVB agrees that the southern/western region of Southern Ontario had an average harvest to land base area ratio of 70% however, the Quinte conversion project seems to be located in the central region. According to the paper, in the central region, low-value timber (polar, birch or balsam fir) and negative impressions of logging have made landowners hesitate to harvest, so the average harvest rate is around 52% not 70%. Please clarify and update as needed.</p> <p>Verifiers understand that Conservation Authorities have become involved in a wide range of activities depending on their resource management needs, however, it does</p>	<p><i>Quinte_GHGPlan_03_10_23.pdf</i></p>
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		<p>not seem a common practice that Conservation Authorities lands commercially harvest all their lands because of their inherent preservation vocation. According to VVB's interviews and internet research, an approach using commercial harvesting treatment in ALL conservation authority lands could be perceived by the public as a conflict of interest since these organizations were created in the 40's to protect the public from flooding with important funding from the government (see https://conservationontario.ca/conservation-authorities/about-conservation-authorities/history-of-conservation-authorities).</p> <p>Please clarify and provide further evidence for the argument that forest management conducted by a conservation authority could feasibly resemble that of other forestland ownership in the region with commercial harvest. For instance, the verifiers request supporting justification as to how the baseline harvest regime was determined to be considered common practice, when harvesting has taken place only in 4,000 acres of 30,000 acres?</p> <p>PP reiterates that there are no regulations that would prohibit the baseline harvest regime from being implemented, but these points are more related to the Regulatory Surplus Test. While the verifiers do not question this statement, it does not appear to explicitly address the intent of the Common Practice Test as part of demonstrating Additionality. Sufficient evidence that the proposed project activities (limited harvesting – around 10% harvesting in the project area) is not a common practice management in similar landowners is currently lacking.</p>	
<p>ACR Standard, v7.0, Section 4.A.2; IFM Methodology on Canadian Forestlands v1.0, 2.4, 4.6</p>		<p><u>August 16, 2023 Findings</u></p> <ul style="list-style-type: none"> - VVB interviews confirmed that for bigger private properties and conservation lands, the Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales is a reference of common practice in Southern Ontario. When this guide is mandatory for public land, it is optional for private lands. However, it is known to be the BMB practices in the province. PP added further clarifications in the section E1 of the GHG plan explaining how the guide is applied to the modelling. Further details are described and covered in the Regulatory Surplus Test check. This issue is now closed. - PP updated GHG plan with proper information from the cited source. This issue is now closed. - Verifiers confirmed that Quinte Conservation holds FSC certification in the entire project area. See Applicability Condition checks for further details. It is the verifiers understanding that there are no requirements in the FSC standards that requires a certified holder to harvest their lands. FSC 	<p><i>Quinte_GHGPlan_06_30_23.pdf</i> <i>Quinte_CommonPractice_06_18_23.pdf</i> <i>CommonPractice File Folder</i></p>

			<p>certification provides a third-party review that ensures that Quint Conservation strives to protect the plant and animal communities that depend on the forests, as well as to respect the land rights of local Indigenous Peoples. That said, verifiers understand that Quinte has maintained and paid its FSC certification for over two decades, which demonstrates at least:</p> <p>70. - their interest in applying sustainable forest management in the entire project area;</p> <p>71. - Quinte has been ready to harvest and sell certified wood from the entire project area.</p> <p>72. This clarification above with additional evidence described below is substantial to demonstrate additionality. This issue is now closed.</p> <p>73.</p> <p>- PP provided forest management plans for the surrounding region and similar ownership (conservation authorities and county forests) in south/central Ontario to demonstrate that the assumptions used in the baseline are coherent with practices in that region and that the project scenario is not common practice. Verifiers compared the values provided with the five FMPs for each owner. Some small discrepancies were found mainly related to the conversion of acres to hectares in the calcs (e.g., values were in acres but not converted to hectares). Verifiers also assumed that the best way to compare the figures are using the productive forest land not the total land area as suggested by the PP. Finally, PP did not use the most updated Table E1-11 of the GHG plan, thus VVB and PP are slightly different. Despite these minor differences, verifiers could confirm the rationale provided and confirmed that:</p> <p>74. - Considering a weighted average (productive area vs annual harvesting rate), annual harvest rates are around 4.14% of the productive area in forest managed by conservation authorities and 5.56% for county forests. The average harvest rate modeled in the baseline of the Quinte project is 2.17%/year of the productive forest (project area) over the next 40 years. The examples of various Conservation Authorities and County Forests have now been provided to show harvest rates varying from 1.68% to 7.85%/year of the productive forest land. Thus, verifiers agree with the assumptions used in the baseline modeling.</p> <p>- PP updated GHG plan and now explicitly address the intent of the Common Practice Test as part of demonstrating Additionality. Sufficient evidence has been demonstrated that the proposed project activities (limited harvesting) is not a common practice management in similar landowners. The project activity harvests</p>	
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			<p>below the annual growth of the forest and limits harvesting to less than 2% of the project area per year. This is additional to what's common practice as other forest landowners of similar ownership type harvest greater than 2% of their forested land base per year. For instance, the table E1-11 suggests that the project will harvest only 0.16% of the productive forest land annually. Thus, additionality has been fully demonstrated.</p> <p>This issue is now closed.</p>	
OPO/APD Response				
Date	PP Comment	Additional evidence submitted for review by PP		
10-Mar-23	<p>Common practice in the area was determined through local forester interviews and supplemented with the Mazinaw-Lanark forest management plan. Additionally, a research paper titled "The Economic Value of Private Woodlots in Southern Ontario" by H. Kim also provided background on the forest industry in the region and common practices. In this paper, it was found that the southern/western region of Southern Ontario had an average harvest to land base area ratio of 70% with woodlots in this region having the highest Land Expectation Value in Southern Ontario (Pg. 33).</p> <p>Ontario has a managed forest incentive tax program and at the time the management plan was developed, this was incorporated for tax reduction purposes. Under this program, only forested lands that are planned to be harvested over a set period of time are given the designation of "managed forest", however there are no legal constraints that require Quinte Conservation to remain in this program. This management plan that is used for the tax incentive program, is updated periodically and Quinte Conservation has rights to commercially harvest all lands including those in and outside of the management plan. The management plan was created in 1998 and Quinte Conservation is actively developing an updated plan that can incorporate the entire project area. The definition of a working forest is a forest that is managed to generate timber revenue, amongst other possible ecosystem services and revenue streams. Quinte conservation is receiving revenue from timber harvests and could receive revenue from timber harvests on other lands.</p> <p>Quinte conservation owns over 30,000 acres of protected land for the purpose of ensuring preservation and protection of overall watershed health, however they have no obligation to ensure the preservation and protection of the forest. Additional supporting evidence has been added to the supporting docs folder and is referenced in the GHG plan for justifying the common forest management regime. Page 19 of the GHG plan states "If the Bluesource – Quinte Community Forest Project was not implemented, a more aggressive harvest regime could be implemented in the project area", this is different than stating "Quinte's ownership includes heavily managed forest land." This line simply states that's the project activity exceeds the common practice baseline activity by being a more aggressive harvest regime, which may not necessarily be a heavy harvest rate. Language within the GHG plan has been updated to avoid further confusion.</p>	<p><i>MU 140_2021_FMP_TXT_AnPack.pdf</i></p> <p><i>2020 MFC Capstone_Hyemin Kim.pdf</i></p>		

	<p>A summary has been added to Section C2 describing the process used in determining the proposed project activity exceeds the common practice of similar landowners managing similar forests in the region.</p>	
18-Jun-23	<p>The GHG plan incorporates the silvicultural treatments in RMZ areas as described in the Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales. Lakes, ponds with high potential sensitivity (HPS) to forest management operations, ponds with moderate potential sensitivity (MPS) for forest management, rivers, and streams, all described in table 4.1a. and 4.1b. are assumed to be captured within the provincial hydrology layer used for determining RMZs. All water features according to the guide are described as “mapped”, and the provincial hydrology layer is considered “mapped” water features as the carbon inventory methodology did not include the mapping of any water features, nor is it required for an IFM project.</p> <p>The RMZ areas follow the operation prescription for harvesting according to the guide. Harvest is permitted as long as ≥50% of the RMZ is retained as forest surrounding small lakes (<100 ha), HPS ponds, and MPS ponds; ≥75% of the RMZ is retained as forest surrounding medium lakes (<1000 ha); and ≥90% of the RMZ is retained as forest surrounding large lakes (≥1000 ha). The retention of forest must meet the definition of residual and according to the guide, the quantifiable definition of residual forest is ≥50% canopy closure based on dominant/codominant trees; ≥35 years of age or ≥10 m in height; 0.1 ha minimum patch size; sub-stand pattern that resembles an older forest with small gaps; and species composition, average stem diameter, and average stem quality similar to that found in the stand before harvest. Forest must be retained on at least 1 side of rivers, HPS streams, and MPS streams; and mature forest with relatively uniform canopy closure ≥60% must be retained of HPS and MPS streams.</p> <p>In order to meet all harvest requirements of the guide, the model is constrained to only single tree selection (STS) harvests with the RMZs. RMZs are not eligible for harvest until a stand reaches >28 m²/ha in basal area and >135 m³/ha in merchantable timber. Once STS is applied, a residual basal area of 18 m²/ha must be retained. Since the project is constrained to the capabilities of desktop modeling, it is assumed that basal area simulates the parameters surrounding canopy closure and residual forest. STS prescriptions reduce basal area to 64% (18 m²/ha / 28 m²/ha) of a stand’s original stocking. The modeling assumes that all harvests with RMZs will maintain at least 64% canopy closure which meets the requirements of retaining ≥60% canopy closure surrounding HPS and MPS streams. It also satisfies the harvest requirements surrounding lakes and ponds as 100% of the RMZ is retained as forest according to the quantifiable definition of residual forest of having ≥50% canopy closure. The other parameters that quantify residual forest are met by the definition of STS and are met through the universal standards of that harvest prescription.</p> <p>The cited paper “Economic Value of Private Woodlots in Southern Ontario” by H. Kim (2020) does indeed cite an average harvest rate of 52% for the central region where Quinte is located. Of note is the immensely high percentage that does apply to the entire southern/western/central region of Ontario. This has now been updated in the GHG plan.</p>	<p><i>Quinte_GHGPlan_06_18_23.pdf</i> <i>Quinte_CommonPractice_06_18_23.pdf</i> <i>CommonPractice File Folder</i></p>

Forest management conducted by a conservation authority could feasibly resemble that of other forestland ownership in the region with commercial harvest due to the fact that Quinte Conservation has FSC certification across their entire forested ownership. If there was no intention to ever harvest in certain areas of their ownership, then they would not seek forest certification on those parcels. Quinte Conservation ownership can also be classified as non-federal and non-provincial public lands, therefore their forest management could feasible resemble that of other forestland ownership in the region with commercial harvest who are also classified as non-federal and non-provincial public land ownership. This includes County forests in the region. Quinte Conservation holds their FSC certification in a group certification with multiple County forests in the region, showing further evidence that their harvest regime could feasible resemble those of County Forests.

Additional supporting documentation has now been provided that shows other Conservation Authorities and County Forests having greater present harvest rates than that modeled in the baseline of the Quinte Conservation project. The average harvest rate modeled in the baseline of the Quinte project is 2.06%/year of the project area over the next 40 years. Examples of various Conservation Authorities and County Forests have now been provided to show average harvest rates being as high as 2.54% - 7.11%/year of the forested land base.

Even though Quinte Conservation has historically only harvested 4,000 acres of their 30,000-acre ownership, the protocol does not restrict harvest in the baseline to historical harvest levels. Quinte Conservation could legally harvest additional acres if they wanted, and they may consider increasing their harvest land base in the future if there is increased financial pressure to do so, they continue to maintain FSC certification across the entire project area. Conservation Authorities and County Forests provided in the supporting documentation do not restrict harvesting to an isolated land base.

The common practice test for Conservation Authorities and County Forests is to implement silvicultural practices such as clearcut, shelterwood, and single tree selection to the specifications outlined in the GHG plan (Table E1-5). It is also common practice to implement single tree selection harvests in the RMZs. These common practice harvest prescriptions have all been modeled into the baseline activities.

The project activity is not to limit harvesting to be around 10% in the project area, project activity is to harvest below the annual growth of the forest and to harvest less than 2% of the project area per year. This is additional to what's common practice as other Conservation Authorities and County Forests harvest greater than 2% of their forested land base per year.

Verifier Issue	Issue ID:	22-14	Status:	Closed	Checked by:	EP	Date Identified	29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description				Comments	

IFM Methodology on Canadian Forestlands v1.0, section 3.3	ERT calculations	Non conformance. May impact conformance; no materiality	It seems that equation 5 for the ERT calculation was not updated to conform with the equation 5 of the IFM Methodology on Canadian Forestlands v1.0 (pg 26). Please review and updated as needed.	Quinte_RP_ERT_HWP_06_16_2022
IFM Methodology on Canadian Forestlands v1.0, section 3.3			<p>May 1, 2023 Findings</p> <p>PP provided communication between Anew and ACR dated July 15, 2022. The communication describes ACR guidance on how project Proponents may temporally distribute the remaining baseline stock change over the rest of the crediting period, after the intersection of baseline stocking with the long-term average – equation 6 of the IFM v1.3 (non-federal U.S forestlands). Equations 6 and 7 identify the year t=T when initial carbon stocks are above or below baseline (respectively). VVB believes that ACR guidance is because there were previously no formalized equations denoting t=T. However, the issue 22-14 is not related to equation #6, but equation #5 (long-term average baseline stocking level for the crediting period). This is also described in the “SUMMARY AND RESPONSE TO PEER-REVIEW COMMENTS” available in the ACR webpage, see comment #8. According to the document: “To derive long-term baseline stocking over a 20-year timeframe the Project Proponent must average carbon stocks over a 20-year duration, including initial carbon stocks at t=0. As such, the denominator must consider 21 datapoints in the long-term average.”</p> <p>This issue remains open</p>	<p>Change in Baseline Carbon Stock for year t.pdf</p> <p>Quinte_GHGPlan_03_10_23.pdf</p>
IFM Methodology on Canadian Forestlands v1.0, section 3.3			<p>August 21, 2023 Findings</p> <p>PP updated the formula in the workbook “ACR_IFM_ERT_Calcs” to match Equation 5 of the v1.0 protocol. This issue is now closed.</p> <p>However, in the same way, the file “Quinte_100Yr_calcs_06_30_2023”, “Baseline_Project_40YR_CO2e” tab, section “Crediting Period (20-Year)” averages the HWP harvested as an average for the 20-year crediting period. As such, the denominator must consider 21 datapoints in the long-term average, not 20 as PP suggests. For instance, see cell “B60”, it reads:</p> <p>“=SUM(5*\$C\$52,10*\$C\$53,5*\$C\$54)/20”</p> <p>It is the verifiers understanding that as demonstrated in the eq.5 of the protocol that the 20-year average baseline carbon stock should include the initial value (i.e., t=0). Thus, the denominator must consider 21 datapoints in the long-term average. Please clarify and update as needed columns “Baseline 20-Yr average CO2e in wood products (tons)” and “Actual 20-Yr average CO2e in wood products (metric tons)”.</p>	<p>Quinte_RP_ERT_HWP_06_29_2023</p> <p>Quinte_100Yr_calcs_06_30_2023</p>

			This issue remains open.	
IFM Methodology on Canadian Forestlands v1.0, section 3.3			<p><u>October 27, 2023 Findings</u></p> <p>Verifier acknowledges and accepts PP clarification. Looking at “ACR_IFM_ERT_Calcs” tab, verifiers confirmed that for the HWP, there are 20 data points and there is no separate HWP datapoint for the beginning and end of RP1as it is required in the eq. 5.</p> <p>This issue is now closed.</p>	<p><i>Quinte_100Yr_calcs_10_04_2023</i> <i>Quinte_RP_ERT_HWP_10_04_2023</i></p>

OPO/APD Response

Date	PP Comment	Additional evidence submitted for review by PP
10-Mar-23	ACR has allowed us to use this version of equation 5 as it's in line with their online ERT template. Please see e-mail thread in the supporting docs folder.	<i>Change in Baseline Carbon Stock for year t.pdf</i>
18-Jun-23	The formula in the workbook has been updated to match Equation 5 of the v1.0 protocol.	
4-Oct-23	The HWP formula fully accounts for 20 years as currently set up. In the case of the average baseline stock, 21 datapoints are used in the average to include the start date, which is “year 0”. In including the Start Date, there are 21 datapoints between the start date (year 0) and RP20. For the HWP, there are 20 data points up to RP20 (i.e., there is no separate HWP datapoint for the beginning and end of RP1). Note that there are 20 years of harvest accounted for in the numerator (5 + 10 + 5), and the denominator of the formula divides by 20, so the result is an annual average of the first 20 years of harvest. As an aside, this also matches the approach taken in the US ACR IFM protocol.	

Verifier Issue	Issue ID:	22-15	Status: Closed	Checked by: EP	Date Identified	29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
ACR Standard, v7.0, Section 2.B.3 and ; IFM Methodology on Canadian Forestlands v1.0, section 3.5	Section E4	Clarification. May impact OMM or conformance.	In Section E4, Uncertainty, while the text denotes the overall result from total uncertainty calculation, verifiers request additional descriptive details on the results for the ACR equations that were utilized in the calculation.		<i>Quinte_GHGPlan_06_16_22</i>	
ACR Standard, v7.0, Section 2.B.3 and ; IFM			<p><u>May 1, 2023 Findings</u></p> <p>PP provided in Section E4, Uncertainty additional descriptive details on the results for the ACR equations that were utilized in the calculation. Further, equations of the IFM on Canadian Forestlands Version 1.0 are now updated. However, uncertainty Live</p>		<p><i>Quinte_GHGPlan_03_10_23</i> <i>Quinte_Start_RP_CO2_03_09_2023</i></p>	

Methodology on Canadian Forestlands v1.0, section 3.5			Tree CO2 and Uncertainty Dead Wood CO2 (initial inventory) shown in Section E4. of the GHG plan and in the file Quinte_RP_ERT_HWP_06_16_2022 tab ACR_IFM_ERT_Calcs (6,14% and 35.52%) does not match with uncertainty for live and dead CO2 used in the calculations in the inventory file Quinte_Start_RP_CO2_03_09_2023 (6.16% and 19.60%). Please review and update as needed. The issue remains open.	<i>Quinte_RP_ERT_HWP_03_08_2023</i>
ACR Standard, v7.0, Section 2.B.3 and ; IFM Methodology on Canadian Forestlands v1.0, section 3.5			August 21, 2023 Findings PP updated GHG plan and workbooks. Uncertainty values now match between workbooks. Uncertainty showed in in Section E4. of the GHG plan and in the file Quinte_RP_ERT_HWP_06_16_2022, ACR_IFM_ERT_Calcs tab (Uncertainty Live Tree CO2, initial inventory and Uncertainty Dead Wood CO2, initial inventory - 6,17% and 35.52%) does match uncertainty for live and dead CO2 displayed in the inventory file Quinte_Start_RP_CO2_03_09_2023. The issue is now closed.	<i>Quinte_GHGPlan_06_30_23 Quinte_RP_ERT_HWP_06_29_2023 Quinte_Start_RP_CO2_06_29_2023</i>
OPO/APD Response				
Date	PP Comment			Additional evidence submitted for review by PP
10-Mar-23	The ACR equations utilized are referenced in Section E4. of the GHG plan and results are indicated. Further detail has been added to include the breakout of live and dead uncertainty.			<i>Quinte_GHGPlan_03_10_23.pdf</i>
18-Jun-23	Uncertainty values now match between workbooks. The CO2 calcs workbook calculates the uncertainty values in detail, and the ERT uncertainty values match the CO2 calcs workbook uncertainty values. Note that recent ACR guidance has been to use the uncertainty from the inventory date instead of grown/degrown from the start date or to the RP end date. These values can be seen in the Stats_InvDate tab of the CO2 calcs workbook.			<i>Quinte_Start_RP_CO2_06_29_2023.xlsx Quinte_RP_ERT_HWP_06_29_2023.xlsx</i>

Verifier Issue	Issue ID:	22-16	Status: Closed	Checked by: EP	Date Identified 29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments
ACR Standard, v7.0, Section 5A, ACR Risk Tool v1.0	Section B.8	Clarification. May impact OMM or conformance.	Verifiers confirm the Permanence Risk rating and contribution to the Buffer is correctly calculated. However, the following issues require further clarification: <ol style="list-style-type: none"> 1. PP uses default value for social/policy even though the country is located outside the US. Please clarify. 2. PP used default values for category "F - Diseases and Pests. Field work interviews and internet research confirmed that some pests and diseases have been observed in the Southern part of Ontario (e.g., https://www.canada.ca/en/health-canada/services/pest-control- 		<i>Quinte_GHGPlan_06_16_22</i>

			tips/gypsy-moths.html, https://www.ontario.ca/page/lymantria-dispar-dispar-ldd-moth). The verifiers request more detail on what information was specifically used to assess pest disease risk and how low risk was determined.	
ACR Standard, v7.0, Section 5A, ACR Risk Tool v1.0			<p><u>May 1, 2023 Findings</u></p> <ol style="list-style-type: none"> 1. PP submitted a deviation request has been submitted to ACR dated March 8, 2023. PP proposed to ACR a default value of 2% under the social/political risk category. VVB accepts PP clarification, however this issue remains open until further ACR deviation request approval. 2. According to the government of Ontario, the project is located in an area that presented moderate to severe defoliation in 2021, 2022, and it is still projected to present moderate to severe defoliation in 2023 (see https://www.ontario.ca/files/2021-10/NDMNRF-Map-of-areas-defoliated-by-LDD-moth-en-1200x928-2021-10-01_0.png and https://www.ontario.ca/page/spongy-moth). <p>75. According to ACR Risk Tool v1.0 page 2: “Some risk categories allow projects to claim a lower risk score (as noted) by providing evidence in support of the claim. <u>Evidence may include written communication from State, Federal or Local independent experts in the applicable field, peer reviewed literature, or other scientific documentation or reports.</u> This evidence must be <u>current at the time of verification.</u> Evidence must be <u>verifiable and presented to a verification body at the time of GHG Project Plan validation,</u> and during subsequent full verifications (every 5 years).” Verifiers request further evidence in order to accept a lower risk score. This issue remains open.</p>	Quinte_GHGPlan_03_10_23
ACR Standard, v7.0, Section 5A, ACR Risk Tool v2.0			<p><u>August 16, 2023 Findings</u></p> <ol style="list-style-type: none"> 1. PP informed on June 18, 2023 that guidance from ACR has been to use the 2.0 Risk Tool. A new workbook has been provided with the resulting project risk score and the GHG plan has been updated. Verifiers recalculated buffer risk using risk tool v2.0 and obtained the same figures as PP. This issue is now closed. 2. Guidance from ACR has been to use the 2.0 Risk Tool. PP is now addressing biotic risk by applying default value. Anyhow, verifiers reviewed the documentation provided by PP. Ontario.ca’s webpage on Spongy Moth have recorded defoliation and forecasts for 2022 and 2023, respectively, that show low levels of defoliation activity in the project area. Defoliation caused by Spongy Moth in Ontario decreased from almost 1.8 million hectares in 2021 to 58,031 hectares in 2022. Most defoliation occurred in Southwestern Ontario in the Aylmer and Guelph districts (outside the project area). This issue is now closed. 	<p>Quinte_Conservation_ACR_RiskTool_2.0_06_16_23.xlsx</p> <p>Quinte_GHGPlan_06_30_23.pdf</p>

OPO/APD Response		
Date	PP Comment	Additional evidence submitted for review by PP
10-Mar-23	<p>1. The default value for social/policy risk is used even though the country is located outside the US. However, Canada has similar social/policy risk to the U.S. A deviation request has been submitted to ACR.</p> <p>76.</p> <p>2. The information that was specifically used to assess pest and disease risk came from the collected inventory data. Within the inventory methodology cruisers are instructors to note any presence of pest or disease surrounding plots, which are distributed throughout the project area. Gypsy moth was observed during data collection, however upon further research and discussion with Quinte Conservation, it was determined that the forest is maintaining endemic levels of pest and disease. Gypsy Moth has a history in the area of blooming and then dying through natural causes, self-regulating cycles, and various methods of treatment. In the 1980's, the region received widespread aerial spray treatment of <i>Bacillus thuringiensis</i> (Btk). Quinte Conservation opted not to re-treat their property because of the detrimental effects on other native and non-damaging insects. The history of infestations in the area have historically self-regulated either through low temperatures or the natural predation of the Gypsy Moth. Quinte Conservation is confident in the level of pest and disease presence and do not see Gypsy Moth as a risk to the forest.</p> <p>77.</p>	<p>Quinte_Deviation_Request_03_08_23.pdf</p>
18-June-23	<p>1. Guidance from ACR has been to use the 2.0 Risk Tool. A new workbook has been provided with the resulting project risk score and the GHG plan has been updated.</p> <p>2. Ontario.ca's webpage on Spongy Moth have recorded defoliation and forecasts for 2022 and 2023, respectively, that show low levels of defoliation activity in the project area. See: Spongy moth ontario.ca: "Defoliation caused by spongy moth in Ontario decreased to 58,031 hectares in 2022, down from almost 1.8 million hectares in 2021. This area included both light and moderate to severe defoliation in the Southern Region. Most defoliation occurred in Southwestern Ontario in the Aylmer and Guelph districts."</p> <p>2022 Map: mnrf-defoliation-mapspongy-moth-EN-1200x927-2023-02-14.jpg (1200x927) (ontario.ca)</p> <p>2023 Map: mnrf-projected-spongy-moth-defoliation-map-EN-1200x927-2023-02-14.jpg (1200x927) (ontario.ca)</p>	<p>Quinte_Conservation_ACR_RiskTool_2.0_06_16_23.xlsx</p> <p>Quinte_GHGPlan_06_18_23.pdf</p>

Verifier Issue	Issue ID:	22-17	Status: Closed	Checked by:	EP	Date Identified	29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments	

ACR Standard, v7.0, Section 4.A.3 and ; IFM Methodology on Canadian Forestlands v1.0, section 2.4	Section C3	Clarification. <i>May impact OMM or conformance</i>	In Section C3, project proponent describes that “financial feasibility assessment is provided separately for verification, demonstrating the financial barrier that carbon funding overcomes in project implementation”. While many tabs demonstrate relevant information to the barrier test in the document “Quinte_100Yr_calcs_06_08_2022”, PP has not provided all the sources used. Verifiers request additional descriptive details on the sources used to determine financial barrier test.	Quinte_GHGPlan_06_16_22 Quinte_100Yr_calcs_06_08_2022
ACR Standard, v7.0, Section 4.A.3 and ; IFM Methodology on Canadian Forestlands v1.0, section 2.4			<p><u>May 1, 2023 Findings</u></p> <p>78. PP asserted on using NPV analysis at the 4% harvest discount rate for NGO’s as described in the protocol. Verifiers are looking for clarification how PP demonstrates conformance with the following section of protocol requirement (underlined section below):</p> <p>79.</p> <p>80. IFM Methodology on Canadian Forestlands v1.0, 1.6</p> <p>81. “In cases where the mission, objective or goal of an NGO includes land conservation and stewardship, the Project Proponent (NGO or associated private entity claiming carbon credit ownership) must justify the baseline scenario by demonstrating they manage their lands consistent with the definition of a “working forest”. If sufficient justification can be provided and verified, baseline harvest levels may be determined using an NPV analysis at the 4% harvest discount rate for NGO’s. <u>In the baseline, harvests and silviculture must also be constrained such that documented long-term management objectives of the NGO</u>, specific to the project area if available, can reasonably and verifiably be expected to be accomplished.”</p> <p>82.</p> <p>83. GHG plan states in section C.2:</p> <p>84. Since Quinte is a watershed conservation authority, it’s common practice for them to preserve and protect the overall health of the watershed. Therefore, the baseline implements a conservative harvest regime surrounding all waterbodies and watercourses in order to mimic what Quinte Conservation does when implementing their commercial harvests. Areas Of Concern (AOC) include riparian management zones (RMZs) that are buffered 30 – 90 meters from existing waterbodies and watercourses in the common practice baseline scenario. . . <u>The baseline scenario is constrained to minimal harvesting in over 10% of the project area.</u></p>	Quinte_TimberPrices_04_20_22.csv Williams_Stumpage.pdf Smith_Stumpage.jpg Pineau_Stumpage.pdf stumpage_matrix_-_2021-22.xlsx Quinte_GHGPlan_03_10_23

			<p>85.</p> <p>86. While it is clear for the verifiers that Quinte Conservation manages their lands consistent with the definition of a “working forest”, it is not clear in <u>the baseline, how harvests and silviculture was constrained such that documented long-term management objectives of the NGO</u>. For instance, please clarify what PP means by “The baseline scenario is constrained to minimal harvesting in over 10% of the project area”. PP has not indicated any constraint to the project area.</p> <p>87.</p> <p>88. Further, with regard to the Implementation Barrier Test, the PP has opted to demonstrate financial barriers in the form of “limited access to capital” that would prevent the adoption of the proposed project activity. According to the GHG plan, carbon revenues will allow Quinte Conservation to reduce their commercial harvest levels. It is, however, the verifier’s understanding that the PP has only implemented harvesting in over 13% of all their ownership. Therefore, it is not clear how the cited financial barrier is truly preventing the adoption of the project activity since it has been the prevailing management approach of the PP’s lands. This concern leads the verifiers to question the reality of the financial barriers faced by the PP in adopting the project activities.</p> <p>89.</p> <p>90. Furthermore, please address/clarify the following points regarding the calculations:</p> <p>91.</p> <ul style="list-style-type: none"> - Quinte_100Yr_calcs_03_08_2023, values are divided by 5 in the first period (2020-2024), then divided by 10 until the period 9 (2025-2034, 2035-2044, etc.), then divided by 5 once again (2115-2129). Verifiers understand the approach used to group amounts per decade, splitting the first and last decade. Please provide a brief clarification about that in the GHG plan to document the methodology used. - Quinte_100Yr_calcs_03_08_2023, tab Baseline_WoodProducts, column AB suggested that volumes were calculated from bf. Values are divided by 1000, which suggests that they were then converted to MBF. However, tab HarvestRevenue cell A5 reads “thousand m3”. Please clarify which unit is used. - "Quinte_100Yr_calcs_03_08_2023" tab Baseline_Revenue. Verifiers did not have the same values when using formula for calculating timber revenue. Verifiers request further clarification about the 	
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			<p>formula (for instance, cell "P50"). Verifiers are looking for understanding:</p> <p>92. a) why the formula applies amount + period*2 (6+P\$3*2) for the first period and then "6+Q\$3*2*2-2" for the subsequent periods;</p> <p>93. b) Please clarify how the stumpage prices are applied in the 100 Year Calculation workbook.</p> <ul style="list-style-type: none"> - Quinte_100Yr_calcs_03_08_2023, tab Baseline_WoodProducts, column P suggested that volumes were calculated from pulp cubic feet. Values are divided by 75, However, then tab HarvestRevenue makes reference to that amount, but now cell B13 reads mt. Please clarify which unit is used and why values are divided by 75. - Quinte_100Yr_calcs_03_08_2023, tab Harvest Revenue, row 24 suggested that costs are displayed in the table, however, Baseline_WoodProducts row 4 seems to be harvested amount total including (merch + pulp) in green tons. Please clarify. - Quinte_100Yr_calcs_03_08_2023 tab financials. The cost assumptions seem to be based on actual known expenses from the proponent. Please clarify which costs are included and provide additional supporting documentation (how \$CAD 14.38/ha was obtained, does it include property tax, forest management costs, etc.). - PP applies to financial analysis the total area of 10,073 ha. However, according to table E1-11 of the GHG plan states that 855 ha should be a "grow" treatment, a no harvest prescription. Please clarify. - PP uses USD 5.59 for the carbon price per tonne (for tradable balance at time t). Please provide a source. Carbon prices in 2020 are USD 5.60 as per ecosystem marketplace State of the Voluntary Carbon Markets 2020. Further, the carbon price seems to be in USD while other amounts seem to be in CAD. - Quinte_RP_ERT_HWP_03_08_2023 tab Financial_Barriers_Test. Buffer credits are removed twice. PP uses the tradable balance with buffer in row#23. Then, in row#28, PP shows the buffer amounts in USD amounts, finally, in row#29, buffer amounts are subtracted from tradable balance with buffer. Please review and update as needed. - It is the verifiers understand that the project does have other revenues (e.g., recreational activities). Please clarify why "other revenues" were not added to the baseline and project scenario. - Verifiers cross-checked the stumpage prices for some of the most recurrent species in the project area (e.g., red maple, eastern white pine, red oak, eastern white cedar, sugar maple, and red pine). While the file "Quinte_TimberPrices_04_20_22" does cite sources in column "G", verifiers could not find the respective species or prices listed in the provided documents. Also, verifiers have not found stumpage 	
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			prices for pulp species. Please provide the sources used for the following species for sawtimber and pulpwood: red maple, eastern white pine, red oak, eastern white cedar, sugar maple, and red pine. 94.	
ACR Standard, v7.0, Section 4.A.3 and ; IFM Methodology on Canadian Forestlands v1.0, section 2.4			<p><u>August 17, 2023 Findings</u></p> <ul style="list-style-type: none"> - PP clarification is coherent with assumptions and clarification already verified in the Regulatory surplus test and Common practice test. Since there are no documented long-term management objectives of the ownership that specifically relate to forest management, Quinte Conservation's mission to preserve and protect the overall health of the watershed has been modeled into the baseline. The baseline scenario is constrained to minimal harvesting in over 10% of the project area. This statement means that over 10% of the project area is within a designated riparian management zone (>12%), and this area has been constrained to only single tree selection harvest prescriptions being implemented in the baseline. The VVB's interviews with local foresters and the review of forest management plans of other conservation authorities revealed that this is indeed a conservative approach. Verifiers concludes that this is reasonable approach which aligns with the overall mission of the Quinte Conservation authority. This issue is now closed. - Section E1. in the GHG plan on page 35 has been updated to document the methodology used to group amounts per decade, splitting the first and last decade. This issue is now closed. - The units used in Quinte_100Yr_calcs.xlsx, tab Baseline_WoodProducts, column AB are thousand m3. The Baseline_WoodProducts tab has been updated to thousand m3. This issue is now closed. - After PP's clarification, verifier did have the same values when using formula for calculating timber revenue for the sampled StandID_RX "Quinte_4_CC_2020". Please note that PP has changed the modelling since the first IL, thus verifier recalculated figures with the most updated file (Quinte_100Yr_calcs_06_30_2023" tab Baseline_Revenue). This issue is now closed. - PP explained that stumpage prices are applied in the 100 Year Calculations workbook by species-specific in order to calculate timber revenues in the FVSPivot_baserev tab. Timber prices are calculated by adding saw volume * saw prices, +pulp volume * pulp prices. Timber revenues are calculated at the tree level, then aggregated to the plot/year/RX level and the aggregated value is shown in the FVSPivot_baserev tab. As PP used modeling to have specific species timber revenue, verifiers used the average of the prices for softwood 	

			<p>and hardwood species to compare with PP amounts. Verifiers got very close figures to PP. VVB calculated amounts are 0.72% higher than PP which is reasonable. This issue is now closed.</p> <ul style="list-style-type: none"> - PP explained that Quinte_100Yr_calcs.xlsx, tab Baseline_WoodProducts, column P references column G of the FVSPivot_woodprod tab, which is in cubic meters. Row 4 of Baseline_WoodProducts tab for columns P-Z inaccurately divide the cubic meters by 75, this has now been corrected. The label has also been updated to no longer reference pulp cubic feet or cords. Verifiers recalculated volumes displayed in the tab "Baseline_WoodProducts for the sampled Stand ID_RX "Quinte_4_CC_2020" and now got similar values to PP. This issue is now closed. - PP explained that Quinte_100Yr_calcs.xlsx, tab Harvest Revenue, row 24 suggests there are no costs as there are no variable management costs based on green tons, so the cost is 0. The clarification is accepted, and this issue is now closed. - PP provided an email from Corporate Service manager confirming forest management costs budget for 2022. In addition, verifiers reviewed the financial statements available at Quinte's conservation webpage. The disclaimer is that verifiers are not financial accountants, but verifiers could overall confirm that the figures provided in the email are reasonable with the last three financial statements. For instance, verifiers looked at "forest operation costs" and "taxes and insurances" labels. Verifiers confirmed that amounts to the 2022 budget are reasonable compared to the 2021. Approved 2022 financial statement was not available at the time of the validation. Verifiers used the three years average to compare with 2022 amounts in order to compare the figures throughout the time. Verifiers got very close amounts to PP expenses per ha. VVB's calculated expenses are on the average of \$CAD 26.61/ha compared to PP's expenses of \$ CAD 26.82 in 2022 (less than 1% difference). Anyhow, the verifiers performed some sensitivity analysis on the baseline and project NPV calculations. Net baseline timber revenue can decrease by 50% and net project carbon offset revenue can increase by 50% and the resulting NPVs show that the baseline scenario, and associated revenue from timber harvesting is still more financially viable/attractive than with project scenario. This issue is now closed. - PP explained that the financial analysis should be for the entire project area of 10,073 ha. This issue is related to issue #22-21. PP updated table E1-5 in the GHG plan which led to confusion where GROW prescription should be applied. Verifiers agree with PP clarification. This issue is now closed. 	
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		<ul style="list-style-type: none"> - Quinte_RP_ERT_HWP.xlsx tab Financial_Barriers_Test row #5, PP updated the carbon price per tonne has been to \$5.60 USD and converted to CAD. $\\$5.60 \text{ USD} \times 1.3 = \\7.28 CAD for 2020 from ecosystem marketplace in our input file and in the Financial Barriers Test tab. This issue is now closed. - PP updated Quinte_RP_ERT_HWP.xlsx tab Financial_Barrier_Test. Row #23 now references the total tradeable balance without the buffer subtracted. Buffer is then calculated from the row #23 total in row #28. PP updated row #23. It refers now to the total tradeable balance without the buffer subtracted (E37 cell in the ACR_IFM_ERT_Calcs tab). This issue is now closed. - PP explained that the project does not have other revenues (e.g., recreational activities). The project proponent generates revenue from other financial revenue streams outside of the project activity. "Other revenues" were not added to the baseline and project scenario as they would exist in equivalent amounts in both the baseline and project scenario as they are outside the scope of the project. Project activities and baseline activities do not affect the revenues Quinte Conservation receives from recreational activities. Verifiers accept clarification and agree that the project scenario does not create any other revenues than other recreational revenue which already exists in the baseline scenario. This issue is now closed. - PP provided references and methodology used for the stumpage prices. Verifiers recalculated stumpage prices for six species using the PP's reference and got similar figures. This issue is now closed. 	
OPO/APD Response			
Date	PP Comment	Additional evidence submitted for review by PP	
10-Mar-23	Sources used for determining the financial barrier test are now provided in the verification folder. Stumpage values for each species and product can be found in the Quinte_TimberPrices_04_20_22.csv workbook. The source of each value is referenced within the workbook and have been provided by several different forest professionals in the region based on recent timber sales for private woodlot owners in the region. Where stumpage values for species could not be found, stumpage values from Crown land were used. Stumpage sources are in various units (MBF-Scribner C, Cords, and Green tonnes), and were converted to m ³ using conversion factors found in Section 3.3.2 of the protocol.	Quinte_TimberPrices_04_20_22.csv Williams_Stumpage.pdf Smith_Stumpage.jpg Pineau_Stumpage.pdf stumpage_matrix_-_2021-22.xlsx	
18-June-23	The project demonstrates conformance with the section of the protocol requirement where in the baseline, harvests and silviculture must also be constrained such that documented long-term management objectives of the NGO, specific to the project area, if available, can reasonably and verifiably be expected to be accomplished. Since there are no documented long-term management objectives of the ownership that specifically relate to forest management, Quinte Conservation's mission to preserve and protect the overall health of the watershed has been modeled into the baseline. The baseline scenario is constrained to minimal harvesting in over 10% of the project area. This statement	Quinte_GHGPlan_06_18_23.pdf Quinte_TimberPrices_06_28_23.xlsx Quinte_ManagementCosts_06_30_23.pdf	

means that over 10% of the project area is within a designated riparian management zone (>12%), and this area has been constrained to only single tree selection harvest prescriptions being implemented in the baseline.

It does not matter whether historical harvesting has only been implemented on over 13% of the ownership, this could change in an instant and Quinte Conservation could begin to harvest on all lands included in the project area. Since the entire project area is under FSC certification, Quinte Conservation has thought of implementing forest management on any of their landholdings. Without carbon revenues, Quinte Conservation would have increased financial pressure to expand their harvest operations and/or sell landholdings in order to generate revenue. The project activity increases carbon stocks over time relative to the baseline activity. The baseline activity does not need to follow historical management, therefore a new management regime for the project activity does not need to be implemented in order to develop an improved forest management project. Quinte Conservation is implementing improved forest management compared to what's common practice in the region. There is still a financial barrier to implementing the project activity as Quinte Conservation could reasonably and verifiably manage their forest according to the baseline activities which would generate greater timber revenues.

- Section E1. Baseline Harvest Schedule Scenario Overview in the GHG plan has been updated to document the methodology used to group amounts per decade, splitting the first and last decade.
- The units used in Quinte_100Yr_calcs.xlsx, tab Baseline_WoodProducts, column AB are thousand m³. The Baseline_WoodProducts tab has been updated to thousand m³.
- a) While a bit complex, the goal with the different formulas in cells P50, Q50, etc. in the Baseline_Revenue tab of the Quinte_100Yr_calcs.xlsx was to provide a consistent lookup reference across all time periods in the FVSPivot_baserev tab.
For example, cell P50 needs to lookup years for the first time period (column 6 in Baseline Revenue) since P\$3 = 0, the lookup is $(6+P\$3*2) = (6+0*2) = 6$.
Cell Q50 needs to lookup years for the 2nd 5-year time period (column 8) and the 3rd 5-year time period (column 10). Since Q\$3 = 1, the lookup formula for the first 5 years are: $(6+Q\$3*2*2-2) = (6+1*2*2-2) = (6+10-2) = 8$, and the lookup formula for the next 5 years are $(6+Q\$3*2*2) = (6+1*2*2) = (6+4) = 10$. While complex, these formulas are consistent across all time periods.
- b) Stumpage prices are applied in the 100 Year Calculations workbook by species-specific prices (seen in the Stumpages tab) in order to calculate timber revenues in the FVSPivot_baserev tab. Timber prices are calculated by adding saw volume * saw prices, +pulp volume * pulp prices. Timber revenues are calculated at the tree level, then aggregated to the plot/year/RX level and the aggregated value is shown in the FVSPivot_baserev tab.

- Quinte_100Yr_calcs.xlsx, tab Baseline_WoodProducts, column P references column G of the FVSPivot_woodprod tab, which is in cubic meters. Row 4 of Baseline_WoodProducts tab for columns P-Z inaccurately divide the cubic meters by 75, this has now been corrected. The label has also been updated to no longer reference pulp cubic feet or cords. There is no conversion factor used.
- Quinte_100Yr_calcs.xlsx, tab Harvest Revenue, row 24 suggests there are no costs as there are no variable management costs based on green tons, so the cost is 0. If management cost varied with the number of green tons, there would be a \$/t cost multiplied by row 26, that would go into row 27. The cells refer to Baseline_WoodProducts row 4, which are timber volumes. All timber prices are reported as stumpage therefore management costs are already considered. "Baseline_WoodProducts" are not forest management costs.
- Quinte_100Yr_calcs.xlsx financials tab includes cost assumptions based on actual known expenses from the proponent. Costs include those unrelated to harvest costs as those are already accounting for in the stumpage pricing. Fixed management costs include salaries, vehicles, and property taxes. Upon review, it was found that property taxes were not included in the annual management costs, this cost per hectare has now been updated to \$26.82 per hectare. Additional supporting documentation has now been provided to support this value.
- The financial analysis should be for the entire project area of 10,073 ha. Even though 855 ha are never harvested in the baseline over the next 100-years, they continue to be managed, incur costs, and could be harvested in the project scenario in any given year as BMPs are not a legal requirement to the landowner.
- Quinte_RP_ERT_HWP.xlsx tab Financial_Barriers_Test row #5, the carbon price per tonne has been updated to $\$5.60 \text{ USD} * 1.3 = \7.28 CAD for 2020 from ecosystem marketplace in our input file and in the Financial Barriers Test tab.
- Quinte_RP_ERT_HWP.xlsx tab Financial_Barrier_Test has been updated. Row #23 now references the total tradeable balance without the buffer subtracted. Buffer is then calculated from the row #23 total in row #28.
- The project does not have other revenues (e.g., recreational activities). The project proponent generates revenue from other financial revenue streams outside of the project activity. "Other revenues" were not added to the baseline and project scenario as they would exist in equivalent amounts in both the baseline and project scenario as they are outside the scope of the project. Project activities and baseline activities do not affect the revenues Quinte Conservation receives from recreational activities. All harvests that are

	<p>implemented for increased recreational access, enhancements, or road maintenance are on lands that are free for the public to use.</p> <ul style="list-style-type: none"> Red Maple sawlog stumpage can be found in the Williams_Stumpage.pdf. Another name for Red Maple is Soft Maple which can be found and reported in \$/MBF-Scribner C and converted to \$/m³. Pricing for Grade 1 and 2 was used. Eastern White Pine sawlog stumpage can be found in Pineau_Stumpage.pdf. White Pine from Property 4 is reported in \$/tonne and converted to \$/m³. Red Oak sawlog stumpage can be found in Williams_Stumpage.pdf. Oak is reported in \$/MBF- Scribner C and converted to \$/m³. Pricing for the average between Grade 1 and 2 was used. Eastern White Cedar sawlog stumpage can be found in Smith_Stumpage.jpg. Cedar, white is reported in \$/MBF- Scribner C and converted to \$/m³. Sugar Maple sawlog stumpage can be found in Smith_Stumpage.jpg. Another name for Sugar Maple is Hard Maple which can be found and reported in \$/MBF- Scribner C and converted to \$/m³. Red Pine sawlog stumpage can now be found in Pineau_Stumpage.pdf. Red Pine is reported in \$/tonne and converted to \$/m³. The average Red Pine stumpage from Property 1, Property 2, and Property 3 is now being applied. The stumpage values for both hardwood and softwood pulpwood can be found in Smith_Stumpage.jpeg. Pulp hardwood and pulp, softwood is reported in \$/cord and converted to \$/m³. Please see <i>Quinte_TimberPrices.xlsx</i> for all references and conversions used. 	
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Verifier Issue	Issue ID:	22-18	Status: Closed	Checked by: EP	Date Identified	29-Aug-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
	GHG plan, table E1-6 and table E1-11, section B8 (pg 17), and section E4	Clarification. <i>May impact materiality or conformance.</i>	<p>Verifiers note potential discrepancies, typos and/or needed clarifications within the GHG plan and Monitoring Report, which are listed below. Please review, clarify and/or revise as appropriate.</p> <ol style="list-style-type: none"> GHG plan describes that seven silvicultural prescriptions were used in the linear programming model, however, table E1-6 and table E1-11 show only 4 treatments. GHG plan shows on page 17 buffer pool for the project period not for the reporting period. Please review and updated as needed. GHG plan does not refer to the right equations on section E4. Please review and update as needed. Total uncertainty showed in section E4 in the GHG plan does not coincide with the calculated values on file "Quinte_RP_ERT_HWP_06_16_2022". Please review and update as needed. 		Quinte_GHGPlan_06_16_22	

		<p><u>May 1, 2023 Findings</u></p> <p>1. to 3. GHG Plan was updated, and the issues are now closed. 4. See issue 22-15 above.</p> <p>This issue is now closed.</p>	<p><i>Quinte_GHGPlan_03_10_23.pdf</i></p> <p><i>Quinte_Start_RP_CO2_03_09_2023.xlsx</i></p>
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PP Response

Date	PP Comment	Additional evidence submitted for review by PP
10-Mar-23	<p>1. There are only 4 silvicultural treatments used in the linear programming model: GROW, SHW(Shelterwood), CC (Clearcut), and STS (Single Tree Selection). Seven was erroneously written in the text and has been removed.</p> <p>2. Sample calculation has been removed as it's not required.</p> <p>3. Equation numbers for uncertainty in Section E4 have been updated.</p> <p>4. The uncertainty for combined baseline CO2e stocks now matches cell D27 in the ACR_IFM_ERT_Calcs tab of the ERT workbook (6.05%). The live and dead values come from the inventory date uncertainty in the Stats_InvDate tab of the CO2 calcs workbook.</p>	<p><i>Quinte_GHGPlan_03_10_23.pdf</i></p> <p><i>Quinte_Start_RP_CO2_03_09_2023.xlsx</i></p>

Verifier Issue	Issue ID:	22-19	Status: Closed	Checked by: EM/EP	Date Identified	30-Nov-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
	GHG plan, section E1	Clarification. <i>May impact materiality or conformance.</i>	Verifiers have reviewed the methodology used to calculate the product ratios used in the calculation of wood products. While the GHG plan mentions that an article by Kershaw et al. 2007 is used, the full reference is not included in any of the footnotes in the GHG plan. Please update the GHG plan to include the full reference. In addition, while the code for the PRCalc has been provided verifiers have been unable to confirm calculations as the minimum product specifications (top diameter and log length), were not included in the code. Please provide the product specifications that were used.		<i>Quinte_GHGPlan_06_16_22.docs</i> <i>PRCalc_CalcSawlog_Pulp.R</i> <i>PRCalc_Saw_Ratio.R</i>	
			<p><u>May 1, 2023 Findings</u></p> <p>Quinte_RP_ERT_HWP_03_08_2023 tab Actual_RP1_HWP_Step_1, table step 1 show the actual harvested Wood products. Please provide sources and evidence for the Harvest Summary Data for validation.</p>			
IFM Methodology on Canadian Forestlands v1.0, section 3.3.2			<p><u>August 17, 2023 Findings</u></p> <p>The review of the data and the ERT workbook revealed the following issues:</p> <ul style="list-style-type: none"> When reviewing the tabs "Baseline_HWP_Step_4_5" and "Actual_RP1_HWP_Step_4_5" (file Quinte_RP_ERT_HWP_06_29_2023), verifiers could not find the mill efficiencies. Only the product allocations from the Canadian IFM 		<p><i>Quinte_RP_ERT_HWP_06_29_2023</i> <i>Quinte_HarvestData_06_28_23.xlsx</i> <i>MillSlips folder</i></p>	

			<p>Methodology (e.g., see cells from T16 to W16, file Actual_RP1_HWP_Step_4_5). It seems that PP has used the product categories and mill efficiency interchangeably. The review of the GHG plan on page 37 (“step 2”) suggests some misunderstanding on what the methodology describes as mill efficiency and product allocation. The methodology suggests a default value of 75% (25% product loss) if mill efficiency is not known, but PP has used the table on page 40 of the methodology instead. Please clarify and update as needed.</p> <p>95.</p> <ul style="list-style-type: none"> - File “file Quinte_RP_ERT_HWP_06_29_2023”, tab Miles_Smith_MC_BR. Please clarify a) how the “Adjusted 1 - Bark Ratio” are obtained and b) why these values are used as bark ratio instead of the figures on column “D” (1 - Bark Ratio). The issue remains open. 	
<p>IFM Methodology on Canadian Forestlands v1.0, section 3.3.2</p>			<p><u>October 27, 2023 Findings</u></p> <ul style="list-style-type: none"> - Mill efficiencies are now provided Source in the file Quinte_RP_ERT_HWP_10_04_2023, Baseline_HWP_Step_4_5 tab. PP has applied the default values as described in the step 2, section 3.3.2 of the protocol. This issue is now closed. <p>96.</p> <ul style="list-style-type: none"> - Verifiers have reviewed the “Adjusted 1 – Bark Ratio” provided, to ensure that the process is understood properly. Verifiers requested a call to review the associated calculations. The term “1- Bark” refers to the bark volume expressed as a percentage of wood volume and the term “1-Bark Adjusted” refers to the bark volume expressed as a percentage of total volume. PP modelling provides total gross volume, however, PP used Miles and Smith (2009) as reference for average bark volume as % of wood volume. Thus, PP has applied the eq. 7 of Miles and Smith (2009) in order to obtain bark percent of total volume. This approach is reasonable. This issue is now closed. <p>97.</p> <p>New finding:</p> <ul style="list-style-type: none"> - Once the PP adjusted the mill efficiency coefficients, verifiers observed in the tab “Baseline_HWP_Step_4_5” (file Quinte_RP_ERT_HWP_10_04_2023) that the default values specified in Table E1-9, page 39 of the GHG plan (Steps 3 and 4) were not applied accordingly to the workbook. Verifiers held a call with PP on Oct. 30th and PP acknowledged the error in the formula. PP and VVB agreed that PP will adjust the Wood Product Classes to the protocol default values once the other issues in the IL are resolved. This issue remains open until PP provided the up-to-date workbook calculations. 	<p>Quinte_RP_ERT_HWP_10_04_2023</p>

		<p>December 1, 2023 Findings PP provided file called “Quinte_RP_ERT_HWP_11_21_2023.xlsx”, not “Quinte_RP_ERT_HWP_11_23_2023.xlsx”</p> <p>Verifiers reviewed file “Quinte_RP_ERT_HWP_11_21_2023.xlsx” and confirmed that tabs “Actual_RP1_HWP_Step_2_3”, “Baseline_HWP_Step_1_2_3”, and “Actual_20YR_HWP_Step_1_2_3” are updated. PP included the ratio of paper/(paper+fuel) to represent the % of pulp that goes into paper HWP, and fuel/(paper+fuel) to represent the % of fuel that goes into fuelwood HWP. However, in the tab “Baseline_HWP_Step_4_5”, cell “N22”, PP applies the 100-year average storage factor for paper (0.151) instead of fuel (0). See cell “U36”. Please review and update as needed. This issue remains open.</p>	Quinte_RP_ERT_HWP_11_21_2023.xlsx
		<p>December 7, 2023 Findings The Baseline_HWP_Step_4_5 tab, Actual_RP1_HWP_Step_4_5 tab, and Actual_20YR_HWP_Step_4_5 tabs have been updated to include 100-year storage factors for fuel to zero. PP corrections are now coherent with standard requirements and assumptions. This issue is now closed.</p>	<p>Quinte_RP_ERT_HWP_12_04_2023.xlsx Quinte_GHGPlan_12_04_2023.pdf Quinte_MonitoringReport_12_04_2023.pdf</p>
PP Response			
Date	PP Comment	Additional evidence submitted for review by PP	
10-Mar-23	The GHG plan has been updated to reference the product ratio calculator. The minimum product specifications have also now been provided in the verification folder.	<p>Quinte_GHGPlan_03_10_23.pdf PRCalc_Coefs.csv PRCalc_Products.csv</p>	
18-Jun-23	Sources and evidence have now been provided for the data in the Actual_RP1_HWP_Step_1 tab of the ERT workbook. A second workbook showing all RP1 harvest volumes by load and mill slip is now provided. A folder has also been provided with all the mill slips.	<p>Quinte_HarvestData_06_28_23.xlsx MillSlips folder</p>	
4-Oct-23	-Thank you for the feedback. Mill efficiencies have been adjusted to the default value of 75%. - the “Adjusted 1 – Bark Ratio” is used instead of (1- Bark Ratio) due to adjustments from the Miles and Smith (2009) paper. See Equations #8 and #9 in the Miles and Smith (2009) source for estimating bark ratio from green weight.	<p>Quinte_RP_ERT_HWP_10_04_2023.xlsx Quinte_GHGPlan_10_04_23.pdf Quinte_100Yr_calcs_10_04_2023.xlsx Miles_Smith_rn_nrs38.pdf</p>	
22-Nov-23	Thank you for the feedback. We made an adjustment in the calculations to split paper and fuelwood HWP using the %’s specified in the protocol. We have made adjustments in the tabs “Actual_RP1_HWP_Step_2_3”, “Baseline_HWP_Step_1_2_3”, and “Actual_20YR_HWP_Step_1_2_3” to include both paper and fuelwood from pulp harvest. To do so, we took the ratio of paper/(paper+fuel) to represent the % of pulp that goes into paper HWP, and fuel/(paper+fuel) to represent the % of fuel that goes into fuelwood HWP. For all 3 tabs, these adjustments can be seen in cells N12, H20/I20, and H22/I22.	Quinte_RP_ERT_HWP_11_21_2023.xlsx	
04-Dec-23	Additional evidence ERT file from November 22 nd response has now been revised to Quinte_RP_ERT_HWP_11_21_2023.xlsx	<p>Quinte_RP_ERT_HWP_12_04_2023.xlsx Quinte_GHGPlan_12_04_2023.pdf Quinte_MonitoringReport_12_04_2023.pdf</p>	

	The Baseline_HWP_Step_4_5 tab, Actual_RP1_HWP_Step_4_5 tab, and Actual_20YR_HWP_Step_4_5 tabs have been updated to include 100-year storage factors for fuel to zero.	
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Verifier Issue	Issue ID:	22-20	Status: Closed	Checked by: EM	Date Identified	30-Nov-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments
	GHG plan, section E1	Clarification. <i>May impact materiality or conformance.</i>	<p>The mortality adjustment document details the process used to calibrate the mortality settings in the FVS Ontario variant. Data from a forest management plan was utilized; but no description of why this management plan was chosen, why the expectation is that the growth model used in forest management plan is more reasonable, or how particular yield curves were chosen for comparison. Please update the mortality adjustment document with these pieces of information.</p> <p>The mortality adjustment document details how the “FIXMORT” keyword was calibrated for the project. The FVS keywords also use the “MORTSMB” keyword. Please clarify how the “MORTSMB” keyword was calibrated.</p> <p>The GHG plan provides little detail as to how the FVS variant used was calibrated. While verifiers have reviewed the details provided in the mortality adjustment document, a summary should also be included in the GHG plan.</p>			<i>Quinte_GHGPlan_06_16_22.docs</i> FVS-ON_MortalityAdjustmentExplanation_June10_2022.docs
			May 2023 Response Verifiers have reviewed the updated mortality adjustment document and are satisfied with the additional information provided. Verifiers have confirmed the use of the FVS keywords is as described in this response and are satisfied that the overall mortality adjustment used in the model is as described in the document provided. This issue is considered closed.			
PP Response						
Date	PP Comment				Additional evidence submitted for review by PP	
10-Mar-23	<p>The mortality adjustment document has been updated to explain the use of the Mazinaw-Lanark FMP, and the yield curves utilized.</p> <p>MORTMSB: The FVS variant would not run correctly without setting the MORTMSB keyword in some way. This keyword was integrated into the FVS keyfiles, but note how it was entered: MORTMSB 0.1 500 999 The 0.1 factor is technically the amount of mortality, but 500 is the minimum DBH that MORTMSB applies to, and 999 is the max DBH. This means that no trees were actually affected by this keyword, but the keyword was included, because the FVS variant was not working otherwise.</p>				FVS-ON_MortalityAdjustmentExplanation.pdf	

	The approach used to modeling mortality is proprietary to Anew. The mortality calibration details are not provided in the public-facing GHG plan intentionally.	
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Verifier Issue	Issue ID:	22-21	Status: Closed	Checked by: EM/EP	Date Identified	30-Nov-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
	GHG plan, table E1-6 and section C1	Clarification. <i>May impact materiality or conformance.</i>	It is not clear in the GHG plan how any of the legal requirements listed in section C.1 are considered in the development of baseline constraints. Section E1 mentions only that single tree selection treatments were utilized in all SMZ areas and points to Table E1-6. Table E.1-6 mentions “all constrained areas”, but there is no detail provided to determine how these constrained areas were determined, how were the remaining legal requirements assessed and considered in the baseline?		<i>Quinte_GHGPlan_06_16_22</i>	
			<p>The following questions arose after review of the guide:</p> <ul style="list-style-type: none"> i. GHG plan on pages 35 reads: “BMP requirements are summarized in table E1-6. For conservatism, harvest was limited to single tree selection in the RMZs”. <i>Quinte_RP_ERT_HWP_03_08_2023</i> tab “Area”* shows in the column “D” – constrained areas 1,246.81 ha. The review of the layer “ <i>Quinte_RMZ_02_03_2023</i>” confirmed that the 1,246.80 ha refers to the RMZ areas. However, according to the Table E1-11 in the GHG plan (page 39), STS treatment is only applied to 936 ha. Please review and update as needed. 98. *The file suggests that unit is “acres”, but it should be in hectares. 99. ii. Table E1-11 suggests that the “grow” treatment is applied to 855 ha. Further, Table E1-5 suggests that: “This prescription applies to all constrained areas”. However, Table E1-6 on page 36 suggests that: “No specific harvest prescriptions prohibited”. Further, as described above, Table E1-5 suggests that the STS treatment is applied to the RMZ areas, not the “grow” treatment. Please review and update as needed. 100. iii. Table E1-5, column SHW (Shelterwood): please clarify to which stands this prescription applies. 101. iv. The stand and site scales guide identify three different types of watercourses (e.g., rivers, HPS streams, and MPS streams) which will generate different AOC buffer zones. Table E1-7 of the GHG plan suggests that all the watercourses have been addressed in the most conservative way – classified as rivers/HPS streams. However, the review of spatial data for some sampled properties revealed that slope 			

			<p>was not considered when defining the buffer zone - slope over 15% and 30 m width applied. For instance, see the property “Macaulay Mountain Conservation Forest” and property on coordinates 361387.72 E 4936433.93 N (UTM 18 T). Further, it seems clear that some waterbodies are not fully covered by the waterbody layer and RMZ buffer layer is inferior to expect in the Stand and Site Scales guide. For instance, RMZ areas near to the coordinates (UTM 18 T):</p> <p>339124.00 m E 4958585.00 m N 339234.00 m E 4958105.00 m N 352404.70 m E 4944283.76 m N 318814.87 m E 4955401.38 m N 359998.43 m E 4929716.20 m N</p> <p>102. Please clarify. 103.</p> <p>v. There are an important number of waterbodies within the project area. Verifiers confirmed that RMZ areas were overall added around waterbodies. However, stand and site scales guide on pages 40 and 41 have specific requirements concerning forest management practices in AOC around waterbodies. GHG plan does not address how waterbodies have been classified (large, medium, small lakes, HPS, and MPS ponds) and which management practices should apply, if any. Please clarify.</p> <p>104.</p> <p>vi. Similar to waterbodies, stand and site scales guide on page 50 has specific requirements concerning forest management within AOC around watercourses. PP states on section A5.3 Project Purpose and Objectives (page 7): The baseline reflects Quinte Conservation’s management for watershed health by restricting harvesting activities within 30 – 90 meters (slope dependent) of all waterbodies and watercourses to leaving at least 60% canopy cover. It is the verifiers understanding that:</p> <p>105. - Forest that meets the definition of residual must be retained within the AOC on at least 1 side of rivers, HPS streams, and MPS streams.</p> <p>106. - Mature forest with relatively uniform canopy closure $\geq 60\%$ must be retained within the inner 15 m of the AOC on both sides of HPS and MPS streams.</p> <p>107. - If forest is not mature or does not have an initial canopy closure $\geq 60\%$, no harvest is permitted.</p> <p>108. Please clarify PP approach using the Stand and Site Scales guide.</p> <p>109. 110.</p>	
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	GHG plan, table E1-6 and section C1	Clarification. <i>May impact materiality or conformance.</i>	<p>August 15, 2023 Findings</p> <p>Verifiers reviewed PP clarification and the updates to the GHG plan. PP has added further clarification in the section E1. Baseline about baseline constraints and how modelling was performed considering those constraints. Verifiers agree with clarifications and updates to the GHG plan. VVB checks for each element described below is presented in the VVB's Regulatory Surplus check.</p> <p>This issue is now closed.</p>	Quinte_GHGPlan_06_30_23.pdf
PP Response				
Date	PP Comment			Additional evidence submitted for review by PP
10-Mar-23	<p>A description has now been added to GHG Plan section E, Baseline Constraints. The law/regulation/regulatory frameworks in section C1 do not affect the baseline or project modeling. However, BMPs were retrieved from "Forest Management Guide for Conserving Biodiversity at the Stand and Scales" and was utilized for determining the baseline constraints. These are not legal constraints but simply best management practices. The process used to delineate the constrained areas has now been outlined in the GHG plan. The hydro layer used for depicting the watercourses and waterbodies have now been provided in the verification folder, along with the digital elevation model.</p>			<p>stand-amp-site-guide.pdf</p> <p>Quinte_Watercourse_Clip_01_30_2023.shp</p> <p>Quinte_Waterbody_Clip_01_30_2023.shp</p> <p>Quinte_DEM_10_7_21.tif</p> <p>Quinte_GHGPlan_03_10_23.pdf</p> <p>Quinte_RMZ_02_03_2023.shp</p>
18-Jun-23	<p>i. Table E1-11 in the GHG plan (page 39) does not match the total constrained area (1,246.81 ha) because that table is an output of the optimization. The model has 1,246.81 ha available for single tree selection in the baseline, however in the first 5 years it's only implementing single tree selection on 772 ha of the 1,246.81 ha available for harvest, and in the next 5 years it is implementing single tree selection on 164 ha. As a part of the optimization, the model does not harvest 100% of the land base in the first 5 years, it is constrained for example in the single tree selection prescription to only harvest stands that are greater than 28 m²/ha, therefore the optimized acres will not harvest 100% of the eligible acres. The Quinte_RP_ERT_HWP.xlsx, Area tab now references hectares instead of acres.</p> <p>Upon further review, Table E1-5. Silvicultural prescriptions used for the baseline harvest schedule has been updated as it was identified that prescriptions were being applied to additional areas within the baseline harvest.</p> <p>ii. Table E1-11 reports that the "grow" treatment is being applied to 855 ha because that's the amount of hectares that are not being harvested in the next 100 years in the baseline harvest prescriptions. A different treatment may not be applied in any given year due to constraints of all the other eligible silvicultural prescriptions, in which case the "grow" prescription would be applied.</p> <p>Table E1-5 is correct, the "grow" treatment applies to all strata and all constrained areas within each strata.</p> <p>Table E1-6 on page 36 is correct and indicates that no specific harvest prescriptions are prohibited for forest management activity constraints related to roads and water crossings, rutting and compaction, erosion, and hydrological impacts. This applies to the entire project area. The row above it indicates that</p>			Quinte_GHGPlan_06_18_23.pdf

the RMZs are constrained to single tree selection harvest prescriptions.

Table E1-5 has been updated to reflect the “grow” treatment in all strata, including constrained areas, and the single tree selection treatment has been updated to indicate its application to all hardwood strata and within constrained areas.

iii. Table E1-5 has been updated to clarify that the shelterwood prescription is applicable to all strata but is prohibited in the constrained areas.

iv. The RMZ buffers were determined based on the intersecting slope of a water feature. Most of this area is flat, so there is a relatively uniform buffer width applied. Where water features intersect steeper slopes, a wider buffer is applied according to the BMPs. At the MacCaulay Mountain Conservation Forest point 361387.72 E 4936433.93 N (UTM 18 T), if the RMZ is followed to the area where the stream intersects a steeper slope, a wider buffer corresponding with BMP widths can be seen.

The waterbody layer used is a provincially sourced shapefile and was developed by the province. It is accurate to the extent of the data used at the time of interpretation. It is also important to note that water levels vary between seasons, so the water level at the time of photo interpretation by the province could be different from the water levels in the imagery the VVB is reviewing. The RMZ buffer layer may seem inferior in some locations based on the waterbody layer used to develop the RMZ layer, however, there is equal chance of the waterbody layer missing a few slivers of water edge as there is equal chance of it overcompensating and capturing forestland as well.

For RMZ areas near to the coordinates (UTM 18 T):

339124.00 m E 4958585.00 m N – the waterbody is delineated here, it simply does not extend to what the current imagery indicates, however, water levels rise and recede, and it can be observed along the same body of water where it extends across canopy cover where the RMZ layer is being conservative.

339234.00 m E 4958105.00 m N – the watercourse has been buffered from the middle of the stream. Imagery suggests that the watercourse is wider than the width of the polyline, however water levels rise and recede, and it can be observed in other areas where water courses have been mapped in the provincial layer but you would never know they were there based on observation of aerial imagery as the canopy cover is too dense. In these areas, the RMZ layer is being conservative.

352404.70 m E 4944283.76 m N – same response to the point 339234.00 m E 4958105.00 m N is applicable.

318814.87 m E 4955401.38 m N - same response to the point 339124.00 m E 4958585.00 m N is applicable.

359998.43 m E 4929716.20 m N – The RMZ buffer width is based on the slope class that intersects the

water feature. In this instance, the increased slope angle does not intersect the watercourse, it is outside of the hydrological layer. The digital elevation model is coarse and relied upon for where it intersects with the water features of the hydrological layer.

Examples of where the provincial hydrology layer is conservative are:

347,632.78 m E 4,960,967.92 m N

345,517.87 m E 4,961,271.60 m N

338,628.96 m E 4,959,078.95 m N

314,423.89 m E 4,934,182.78 m N

Additionally, ~12.38% of the project area consists of RMZs which is a reasonably conservative estimate of the amount of area to be constrained in a forest, and is an indicator of the adequacy of the hydrology layer used.

v. Waterbodies within the project area were not classified by size. All waterbodies and watercourses were treated as HPS ponds and streams and assigned the same slope dependent buffer widths in the BMPs. A single tree selection prescription was applied within all the AOCs in order to meet and surpass all the BMP's described on pages 40 and 41 of the stand and site scales guide. According to BMPs, residual forest retention is required in certain percentages.

The RMZ areas follow the operation prescription for harvesting according to the guide. Harvest is permitted as long as ≥50% of the RMZ is retained as forest surrounding small lakes (<100 ha), HPS ponds, and MPS ponds; ≥75% of the RMZ is retained as forest surrounding medium lakes (<1000 ha); and ≥90% of the RMZ is retained as forest surrounding large lakes (≥1000 ha). The retention of forest must meet the definition of residual and according to the guide, the quantifiable definition of residual forest is ≥50% canopy closure based on dominant/codominant trees; ≥35 years of age or ≥10 m in height; 0.1 ha minimum patch size; sub-stand pattern that resembles an older forest with small gaps; and species composition, average stem diameter, and average stem quality similar to that found in the stand before harvest. Forest must be retained on at least 1 side of rivers, HPS streams, and MPS streams; and mature forest with relatively uniform canopy closure ≥60% must be retained of HPS and MPS streams.

In order to meet all harvest requirements of the guide, the model is constrained to only single tree selection (STS) harvests with the RMZs. RMZs are not eligible for harvest until a stand reaches >28 m²/ha in basal area and >135 m³/ha in merchantable timber. Once STS is applied, a residual basal area of 18 m²/ha must be retained. Since the project is constrained to the capabilities of desktop modeling, it is assumed that basal area simulates the parameters surrounding canopy closure and residual forest. STS prescriptions reduce basal area to 64% (18 m²/ha / 28 m²/ha) of a stand's original stocking. The modeling assumes that all harvests with RMZs will maintain at least 64% canopy closure which meets the requirements of retaining ≥60% canopy closure surrounding HPS and MPS streams. It also satisfies the harvest requirements surrounding lakes and ponds as 100% of the RMZ is retained as forest according to the quantifiable definition of residual forest of having ≥50% canopy closure. The other parameters that

<p>quantify residual forest are met by the definition of STS and are met through the universal standards of that harvest prescription.</p> <p>The GHG plan now addresses how waterbodies have been classified (large, medium, small lakes, HPS, and MPS ponds), and which management practices apply are now described.</p> <p>vi. See above for response of requirements concerning forest management within AOC surrounding watercourses.</p> <ul style="list-style-type: none"> - Forest that meets the definition of residual ($\geq 50\%$ canopy closure) must be retained within the AOC on at least 1 side of rivers, HPS streams, and MPS streams. By constraining the model to STS within the RMZs, a residual forest of at least 64% canopy closure is always maintained on both sides of all waterbodies and watercourse. - Mature forest with relatively uniform canopy closure $\geq 60\%$ must be retained within the inner 15 m of the AOC on both sides of HPS and MPS streams. By constraining the model to STS within the RMZs, a residual mature forest of at least 18 m²/ha and 64% canopy closure is always maintained within the inner 15 m of the AOC on both sides of all waterbodies and watercourse as the RMZ is a minimum of 30 m. - If forest is not mature or does not have initial canopy closure $\geq 60\%$, no harvest is permitted. By constraining the model to implement STS only once a stand reaches >28 m²/ha in basal area and >135 m³/ha in merchantable timber, the requirement of the forest being mature and having an initial canopy closure of $\geq 60\%$ is assumed to be met as these parameters are indicators of a mature, full canopy cover forest. 	
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Verifier Issue	Issue ID:	22-22	Status: Closed	Checked by: EM	Date Identified	30-Nov-22
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
	GHG plan, section E1	Clarification. <i>May impact materiality or conformance.</i>	Verifiers have been unable to confirm the calculation of standing dead stocks in the baseline. In addition to the code that has been provided, please provide a written description of what data and process is used to calculate baseline standing dead stocks.		computeStandingDead.R	
			May 2023 Response Verifiers have reviewed the response provided and have examined the steps used to calculate standing dead. While verifiers have no issues with the description provided, there continue to be discrepancies between the values calculated by verifiers and those provided. To clarify the discrepancies verifiers are requesting the tree-level output for the standing dead calculations for the "Quinte_CC_2020" output.			
			September 2023 Response Verifiers have reviewed the snag calculations provided and have noted the following questions:		Quinte_TreeLevel_Calcs_CC_2020_06_28_2023.xlsx	

			<ol style="list-style-type: none"> 1. Step 3 of the Standing Dead Wood section of the protocol (3.3.1.2.1) indicates that the biomass estimate must take into account the decay class, in particular that decay class 4 must limit the estimate of biomass to the main stem of the tree. Please clarify how the use of the volume from the FVS snag report meets this requirement. 2. The calculation of both hard and soft biomass utilizes 0.97 as the dead wood density class deduction (columns H and I on the “DeadStocking” tab). Please clarify why both hard and soft classes of snags are using the lowest deduction noted in Step 4 of the Standing Dead Wood section of the protocol. 	
			October 2023 Response Verifiers are requesting a call to clarify the remaining issues surrounding snag calculations <ol style="list-style-type: none"> 1. Verifiers agree that the FFE extension calculations do model height loss over time but do not see any indication of whether the volume calculated is limited to only the bole for soft snags. 2. Can you clarify where the results of the computeStandingDead.R code were output during the process? From the response provided, it appears that the tree-level calculations provided in the excel workbook were not those used in the baseline. 	
			November 2023 Response Following an additional call and review of the FFE extension manual, verifiers are reasonably assured that the volume calculated is adjusted for soft snags. The flow and location of the standing dead trees were also confirmed. This issue is considered closed.	
PP Response				
Date	PP Comment			Additional evidence submitted for review by PP
10-Mar-23	For the first year of the baseline scenario, the CO2 calcs workbook shows step-by-step how standing dead stocks are calculated, using allometric equations, with: <ul style="list-style-type: none"> • biomass formulas shown in col “T” of the “StartDate_Tree_CO2” tab • Tree-specific defect (not species-specific defect, as in future years) deducted in column U • CO2e calculated in column Z For subsequent years, the calculation is similar, but since there is no measured inventory available in subsequent years, the steps are a little different. For each prescription and year, the following steps are used: <ul style="list-style-type: none"> • Calculate average dead defect for each species by FIA code. If a species has no dead trees in the inventory, use the average defect for all dead trees in the inventory. 			

	<ul style="list-style-type: none"> • Pull in data from the FVS_SnagDet table, including the Stand, Species codes, snag DBH, and each snag's hard/soft volume. • Calculate hard snag carbon (in tons) by multiplying the following factors together: <ol style="list-style-type: none"> 111. Hard snag volume (in m3 from SnagDet table) * 112. ft3/m3 conversion factor (to convert to ft3) * Specific gravity of water in lb/ft3 (to convert to lb) * 113. unitless species-specific green density of wood * Hard snag factor (0.97, from ACR protocol) * carbon % of wood (50%) • Calculate soft snag carbon (in tons) the same as hard snags, except the soft snag factor is 0.80, not 0.97. • Use species-specific dead defect estimate to calculate the carbon in each snag with a defect deduction. This defect deduction is in addition to the hard/soft snag factor deduction. • Multiply by molecular weight factor (3.664) to convert carbon weight to CO2e <p>Resulting value is CO2e weight for each snag. At this point, snags are aggregated at the plot level.</p>	
30-Jun-23	The tree-level output for the standing dead calculations for the "Quinte_CC_2020" output are now provided.	Quinte_TreeLevel_Calcs_CC_2020_06_28_23.xlsx
4-Oct-23	<ol style="list-style-type: none"> 1. The biomass deduction is included in the R calculations. It is assumed that hard snags are class 1 (0.97 factor is used), and all soft snags are assumed to be no higher than class 4 (0.80 factor is used). Also, as part of the decay projections, note that soft snags have height loss (Section 2.3.4 of the attached FFE Guide documentation), decay faster (Section 2.3.5), and falldown (Section 2.3.6), which includes loss of limbs, etc. 2. This was a typo in the tree-level Excel file assembled for the verification, and 0.97 was not used for soft snags in baseline projections. Separate hardSnagFactor(0.97) and softSnagFactor(0.80) are used in the actual R calculations, calculated in computeStandingDead.R. computeStandingDead.R has been added to the supplemental documentation. 	FFEguide.pdf computeStandingDead.R Quinte_TreeLevel_Calcs_CC_2020_10_3_2023.xlsx

Verifier Issue	Issue ID:	22-23	Status: Closed	Checked by: EM	Date Identified	5-Jun-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments	
	GHG plan, section E1	Clarification. <i>May impact materiality or conformance.</i>	Verifiers have been unable to confirm the data contained in the "FVSPivot_baseinv" and "FVSPivot_baseharv" tabs in the 100yrs calculation workbook. Verifiers are seeking clarification on the following items: <ol style="list-style-type: none"> 1. The "processFVSoutput.R" contains code to apply the PRCalc functions to the treelist (beginning at line 367) to determine product ratios; however, in the portion of the code related to cutlist processing for ACR projects 		processFVSoutput.R Quinte_100Yr_calcs_03_08_2023.xlsx	

			<p>(beginning at line 746) the code on lines 772-790, appears to use the “MCuM” and “TCuM” values directly to determine sawlog and pulpwood values. Please clarify why both methods are included in the code and which values were used in the processing of the cutlist data.</p> <p>2. The treelist processing code on line 567 of the “processFVSoutput.R” code uses the data “co2Pools” created by “computeCstocks_100yr.R” to populate the carbon values used for Canadian ACR projects. Please provide the “computeCstocks_100yr.R” code or indicate where in the code provided the carbon values are calculated.</p>	
			<p>August 2023 Response</p> <p>1. Based on the response provided, it is the verifiers understanding that the project is not using the PRCalc method to determine the breakdown of products. Step 3 in section 3.3.2 of the protocol indicates that regions outside of BC must use the PR Calc Software to determine product classes. Please clarify how the current approach meets the protocol requirement.</p> <p>2. Verifiers have reviewed the “computeCstocks_100yr.R” file and have no further questions regarding this file.</p>	
			<p>October 2023 Response</p> <p>Verifiers have reviewed the code provided, to ensure that the process is understood properly. The verifiers are requesting a call to review “processFVSoutput.R” and the associated code provided that is called within that code.</p>	<p><i>processFVSoutput.R</i> <i>convertColNames.R</i> <i>PRCalc_CalcSawlog_Pulp.R</i> <i>PRCalcs_Saw_Ratio.R</i> <i>PRcalcs.R</i></p>
			<p>November 2023 Response</p> <p>Verifiers have been able to replicate some of the numbers produced from the “processFVSoutput.R” code but continue to have issues replicating the sawlog values. In particular, on line 413-415, the sawlog values appear to be calculated using the “TCuM” value directly and verifiers are not able to produce the same “Ston” numbers. Please provide an example calculation of the harvested wood product calculations for the baseline, for example, if you could provide the calculations for “Quinte_4_CC_2020” for the year 2020 and show how the FVS cutlist output for that plot produces the values in columns F-L on the “FVSPivot_baseharv” tab of the 100 year calculation workbook. If it is preferred to arrange a call to review this data that can also be arranged.</p>	
			<p>November 2023 Response</p> <p>Verifiers have been able to confirm the calculations and flow from the FVS cutlist to the FVSPivot tabs in the 100 year calculation workbook. The changes to the calculation of sawlogs have been confirmed and this issue is considered closed.</p>	
PP Response				
Date	PP Comment			Additional evidence submitted for review by PP
30-Jun-23	<p>1. To calculate sawlog CO₂, MCuM (aka merch cubic meters to saw diameter top) is used as the volume for sawlog. (TCuM - MCuM) is used to determine volume for pulp, where TCuM is the</p>			computeCstocks_100yr.R

	total volume to pulp diameter top. In other words, TCuM is Saw+Pulp volume, MCuM is sawlog volume, and TCuM - MCuM is the estimated pulp volume.	
4-Oct-23	<p>2. The computeCstock_100yr.R code has now been provided in the verification folder.</p> <p>1. The PRCalc method is used to determine the breakdown of products. However, it is noted that TCuM-MCuM should not be used directly. The variable “PulpCuM” should have been used instead, which applies the PRCalc method to the tree-level volume. An additional script called in processFVSoutput.R where this adjustment was made (convertColNames.R) has been supplied which shows where this adjustment was made. The variable that should have been used directly is cutList\$PulpCuM. processFVSoutput.R was not using this variable properly before. processFVSoutput.R has been updated, and an updated version of the script has been added to the verification folder.</p>	<p>processFVSoutput.R convertColNames.R PRCalc_CalcSawlog_Pulp.R PRCalcs_Saw_Ratio.R PRcalcs.R</p>
22-Nov-23	Thank you for catching this. This is a typo in the code. Instead of TCuM, MCuM should have been used, which has been adjusted using the PRCalcs scripts. This adjustment significantly decreases the HWP estimate, since an adjusted % of MCuM is used, instead of TCuM. Note that this adjustment and subsequent calculations only affects HWP, and not the optimization, since MCuM and TCuM were already properly used in the optimization. Only the HWP changes, as can be seen in the updated 100 year calcs and ERT calcs. An updated processFVSoutput.R has been added to the verification folder with the single change from “TCuM” to “MCuM”. An example calculation has also been provided of the harvested wood product calculations for the baseline “Quinte_4_CC_2020” for the year 2020, please see Quinte_DetailedCalcs_FVSPivot_baseharv_plot4.xlsm. The output for this plot matches the values in columns F-L on the “FVSPivot_baseharv” tab of the 100 year calc workbook.	<p>Quinte_RP_ERT_HWP_11_23_2023.xlsx Quinte_100Yr_calcs_11_23_2023.xlsx processFVSoutput.R Quinte_DetailedCalcs_FVSPivot_baseharv_plot4.xlsm</p>

Verifier Issue	Issue ID:	22-24	Status: Closed	Checked by: EP	Date Identified 15-Aug-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description		Comments
ACR Standard, v7.0, Chapter 3, table 2, row 1	GHG plan, Section H1.	Observation. <i>Not a conformance issue.</i>	<p>Project validation/verification took longer than three years after the project start date. GHG plan states on section H1: The project “Anew – Quinte Forestry Project has a project start date of June 22, 2020.</p> <p>VVB contacted ACR on August 11, 2023:</p> <p>“ . . . One of these Projects I just noted has a start date of 6/30/2020, meaning we have surpassed the 3 year mark for validation from my understanding. I’m wondering if there is a procedure we should follow here- if this might be considered a deviation and we should raise it with the PP to that end, or if the PP should reach out to ACR and can appeal this type of thing or if there are other options for the Project to move forward toward registration and crediting still? . . . ”</p> <p>ACR Forestry Program Officer replayed on August 11, 2023:</p>		Quinte_GHGPlan_06_30_23

		<p>“Without adjusting their Start Date (which folks generally prefer to avoid), the only option for this project is to request a deviation from ACR. You can make this an issue in your Issues Log, and we’ll interact with them directly about it.”</p> <p>This issue is an observation for ACR follow-up.</p>	
PP Response			
Date	PP Comment		Additional evidence submitted for review by PP
4-Oct-23	<p>ACR Standard Version 7.0 has a start date eligibility criteria requiring the validation of AFOLU Projects within 3 years of the project Start Date. One exception applies to these timeframes: Projects using a newly approved methodology or a newly approved modification that expands the eligibility of a previously published methodology may submit it for listing with ACR within 10 years of the project Start Date. However, the date of listing submittal must be within 6 months of the methodology publication date, and the project must then be validated within 2 years of the listing.</p> <p>The Anew – Quinte Forestry Project is utilizing the methodology for the quantification of monitoring, reporting and verification of greenhouse gas emissions reductions and removals from Improved Forest Management on Canadian Forestlands Version 1.0 that was published in September, 2021. The Anew – Quinte Forestry Project has a project start date of June 22, 2020 and a listing date of November 22, 2021. The project was listed within 10 years of the project Start Date and within 6 months of the methodology publication date. The project must be validated by November 21, 2023 (within 2 years of the listing).</p> <p>A deviation request is currently with ACR in case we do not meet this deadline.</p>		Quinte_Deviation_Request2_09_26_23.pdf

Verifier Issue	Issue ID:	22-25	Status: Closed	Checked by: EM	Date Identified	13-Sep-23
ACR Standard ref	GHG Plan Section	Significance	Issue Description			Comments
ACR Protocol 3.3.1.1	GHG plan, Section E.	Clarification. <i>May impact materiality or conformance.</i>	Verifiers note that the approach to calculating belowground biomass currently utilizes total aboveground biomass rather than sound aboveground biomass. Using the total aboveground biomass for the belowground biomass calculation results in higher belowground biomass calculations than if the sound biomass is used. Please justify the use of total aboveground biomass for the calculation of belowground biomass.			Quinte_Start_RP_CO2_06_29_2023.xlsx
			Verifiers have reviewed the Li (2003) reference provided and some of the cited references and agree that there is no indication that aboveground biomass used in the calculation was adjusted for defect. This issue is considered closed.			
PP Response						
Date	PP Comment				Additional evidence submitted for review by PP	

4-Oct-23	<p>In the publication used to obtain empirical ratios between aboveground and belowground biomass (Li 2003), total biomass is used to derive the empirical equations. There is no methodology shown in the publication that shows where sound aboveground biomass is used. In this case, it appears reasonable to use total aboveground biomass, given that there is no clear indication in the underlying publication to use sound aboveground biomass. The Li 2003 publication has been provided as supplemental documentation.</p>	Li(2003)BelowgroundBiomass Equations.pdf
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Appendix C: Project Team

Verification Team	Qualifications
Carlos Eduardo Paixão	Eduardo joined S&A Carbon as a subcontractor in 2021 and expanded the existing capacity of the forest carbon offset verification team. Eduardo currently supports the S&A team as a lead verifier with reviews of verification documents and field verification of forest carbon offset projects. Eduardo holds a bachelor's degree in forestry and in wood engineering, and a master's in forestry. He has 8 years of experience in natural resources management. He has conducted assessments of deforestation in supply chains in South America, Africa, and in Indonesia. Previously, he participated in the development of technical and economic studies for two European forestry investment funds in Latin America. Eduardo is a sustainable forestry and agriculture standard auditor and has conducted audits worldwide (FSC, PEFC, RSPO sustainable palm oil, sustainable farm assessment, Rainforest Alliance, UTZ coffee and cocoa, and the international sustainability carbon certification). Eduardo is also involved in academic research and has been a lecturer at the University of Quebec in Canada since 2018. Native Portuguese speaker, he also speaks French and English.
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.
Kyle Silon	Kyle Silon holds an M.S. in Energy and Environmental Economics. He has ten years' experience in climate change mitigation strategies and carbon reduction projects. Prior to founding S&A, he worked for a leading international certification company, specializing in validation and verification of small-scale household energy demand projects (such as cook stove and water filter projects), primarily located in South America,



Verification Team	Qualifications
	Asia, and Africa. He has participated in numerous verifications of forestry, landfill, and livestock projects, and has worked across all major GHG programs, including the Air Resources Board, Verified Carbon Standard, Climate Action Reserve, American Carbon Registry, Gold Standard, and Clean Development Mechanism (CDM).
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.
Bill Stack	Bill Stack is a forester, natural resource manager, and ecosystem restoration specialist with over 29 years experience working on forest and aquatic ecosystems in the northeast and northwest US. He holds a master's degree in Forest Engineering from Oregon State University. He is an ARB accredited lead verifier and forest project specialist. Bill has participated on the verification of forest offset projects throughout the US including Alaska. Verification responsibilities included pre-site visit prep, forest inventory, data processing and analysis, developing findings, and report writing. Bill also provides a broad range of forest management consultation services to private landowners owners in preparing and implementing ecologically-based forest stewardship plans. He holds professional forester licenses in New Hampshire and Vermont. His comprehensive approach balances water, soil, wildlife, timber, recreation, aesthetics, and other resources with landowner goals and values. Previously, Bill has worked as a Senior Project Scientist with Stantec consulting on ecosystem restoration projects and as a Forest Hydrologist on interdisciplinary project teams for the USDA Forest Service.
Alexa Kandarlis	Alexa Kandarlis has 6 years' experience in carbon auditing and climate change mitigation policy and is accredited by ARB as a lead verifier under

Verification Team	Qualifications
	<p>their US Forests protocol and the Ozone Depleting Substances protocol, and by the Climate Action Reserve (CAR) as a lead verifier. In this time, she has participated in verifications of carbon offset projects and corporate inventories under a variety of GHG programs, including the Air Resources Board, Climate Action Reserve, American Carbon Registry, Verified Carbon Standard/Climate Community & Biodiversity Standard, and Carbon Disclosure Project. Alexa developed tracking systems for a program registered under the Clean Development Mechanism and registered with the Gold Standard. Alexa is currently responsible for implementation of S&A's corporate management system to ensure ongoing improvement and compliance with ISO requirements. In addition to this, she has field experience with Forestry, Ozone Depleting Substances, and Livestock verification projects. She holds a Bachelor of Arts in Economics with a focus on natural resource and environmental Economics.</p>

Appendix D: Version Tracking

Version	Date	Developed By	Version Notes
1.0	9/5/2023	Eduardo Paixão	Initial Document
1.1	12/1/2023	Eduardo Paixão	Updated prior to closure of Issues Log
1.2	12/11/2023	Eduardo Paixão	Updated after closure of Issues Log
1.3	12/14/2023	Kyle Silon	Technical Review
1.4	12/15/2023	Alexa Kandarís	Internal Approval
2.0	12/29/2023	Eduardo Paixão	Updated following ACR review
2.1	1/12/2024	Alexa Kandarís	Updated to address final ACR review comments

Signature Page

S&A Carbon Lead Validator/Verifier	Eduardo Paixão 
Name and Signature:	
S&A Carbon Technical Reviewer	Kyle Silon 
Name and Signature:	
Date:	1/12/2024