VALIDATION AND VERIFICATION REPORT

American Carbon Registry

Puget Sound Energy Baker-White River Forest Carbon Project

Reporting Period:
26 February 2020 to 15 March 2020

Prepared for:

Puget Sound Energy

27 October 2020

AMERICAN CARBON REGISTRY

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Executive Summary

This report describes the validation and initial verification services provided for the Puget Sound Energy Baker-White River Forest Carbon Project ("the project"), an Improved Forest Management project located in Washington, USA, that was conducted by SCS Global Services. The overall goal of the validation engagement was to review impartially and objectively the GHG project plan against the requirements laid out in the ACR Standard and relevant methodology. The overall goal of the verification engagement was to review impartially objectively the claimed GHG emission reductions/removal enhancements for the reporting period from 26 February 2020 to 15 March 2020 against relevant ACR standards and the approved methodology. The validation and verification engagements were carried out through a combination of document review, interviews with relevant personnel and on-site inspections. As part of the validation and verification engagements 46 findings were raised: 26 Non-Conformity Reports, 18 New Information Requests and two Observations. These findings are described in Appendix A of this report. The project complies with the validation and verification criteria, and SCS holds no restrictions or uncertainties with respect to the compliance of the project with the validation and verification criteria.

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1 Introduction

1.1 About SCS Global Services

SCS Global Services (SCS) is a global leader in third-party certification, auditing, testing services, and standards. Established as an independent third-party certification firm in 1984, our goal is to recognize the highest levels of performance in environmental protection and social responsibility in the private and public sectors, and to stimulate continuous improvement in sustainable development. In 2012, Scientific Certification Systems, Inc. began doing business as SCS Global Services, communicating its global position with offices and representatives in over 20 countries.

SCS' Greenhouse Gas (GHG) Verification Program has been verifying carbon offsets since 2008 and to date has verified over 250 million tonnes of CO2e, providing GHG verification services to a wide array of industries including manufacturing, transportation, municipalities, and non-profit organizations. The GHG Verification Program draws upon SCS's established expertise to serve the global carbon market.

1.2 Objectives

1.2.1 Validation Objectives

The overall goal of third-party validation was to review impartially and objectively the GHG project plan against the requirements laid out in the ACR Standard and relevant methodology. SCS independently evaluated the project design and planning information, based on supporting documentation and GHG validation best practices.

The objectives of validation were 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.
- Reported GHG baseline, ex ante estimated project emissions and emission reductions/removal enhancements, leakage assessment, and impermanence risk assessment and mitigation (if applicable).

SCS reviewed any relevant additional documentation provided by the project proponent to confirm the project's eligibility for registration on ACR.

1.2.2 Verification Objectives

The overall goal of third-party verification was to review impartially and objectively the claimed GHG emission reductions/removal enhancements against relevant ACR standards and the approved

methodology. SCS independently evaluated the GHG assertion, based on supporting evidence and GHG verification best practice. The objectives of verification were to evaluate

- 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.
- Any significant changes in the GHG project's baseline emissions and emission reductions/removal enhancements since the last verification.

SCS reviewed the GHG project plan, GHG assertion, and any additional relevant documentation provided by the client 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 was consistent with the GHG project plan.
- Eligibility for registration on ACR.
- Sources and magnitude of potential errors, omissions, and misrepresentations, including the
    - Inherent risk of material misstatement.
    - Risk that the existing controls of the GHG project would not have prevented or detected a material misstatement.

1.3 Scope

1.3.1 Scope of Validation

The validation included examination of all of the following elements of the 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
- 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
- Project-specific conformance to ACR eligibility criteria

1.3.2 Scope of Verification

Verification included examination of some or all of the following elements of the 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 client staff
- QA/QC procedures and results
- Processes for and results from uncertainty assessments
- Project-specific conformance to ACR eligibility criteria

SCS examined the reported data, quantification methodologies, calculation spread-sheets or databases, source data, project data management systems, data quality controls in place, measurement and monitoring systems, and records pertaining to emissions quantification. Calculation and error checks, site inspections, interviews with project participants, an iterative risk assessment, sampling plan, and audit checklist were performed to the extent necessary for SCS to develop an understanding of how data are collected, handled, and stored for a specific project.

Finally, as a full verification, the verification services included a field visit to the project site and

- Such carbon stock measurements as SCS required to provide a reasonable level of assurance that the GHG assertion is without material discrepancy (per ACR's materiality threshold of ±5%).
- Updated assessment of the risk of reversal and an updated buffer contribution.

1.4 Validation and Verification Criteria

The validation and verification criteria were comprised of the following:

- ACR Standard, Version 6.0
- Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal U.S. Forestlands, Version 1.3 ("the methodology")
- ACR Tool for Risk Analysis and Buffer Determination, Version 1.0

1.5 Level of Assurance

The level of assurance was reasonable.

1.6 Treatment of Materiality

For validation purposes, a material misstatement was declared if any of the following circumstances were detected:

- The physical or geographic boundary of the GHG project plan was not reasonably accurate.
- In respect of the project baseline,
    - The procedures for determining baseline emissions were not technically sound.
    - Data representative of the operations and activities had not been used, either from a single year or a multi-year average.
    - The baseline scenario chosen was not one for which verifiable data are available.
- In respect of the quantification methodology,
    - The quantification method for each data type was not clearly defined, and/or the degree of supporting documentation provided was inadequate to support a reasonable level of assurance.
    - Methods were not appropriate for accurately quantifying each data type:
        - Activity data had not been correctly applied from the original documentation.
        - The most accurate activity data readily available had not been used.
        - The quantification methodology did not account for all variations in activity data over the relevant crediting period.
        - Any emission factors used did not meet the requirements of the approved methodology and/or are not appropriate to the activity.
        - Any emission factors used had not been correctly applied from the original documentation to the relevant activity data.
        - The most appropriate factors readily available had not been selected.
        - Where there was a choice among equally defensible emission factors, the principle of conservativeness had not informed the choice of emission factors.
    - Methods were not applied consistently to develop estimates of emission reductions and removal enhancements.
    - The ISO principle of conservativeness was not applied; i.e., the choice of assumptions, calculation methods, parameters, data sources, and emission factors was not more likely to lead to an underestimation than overestimation of net GHG emission reductions and removal enhancements.

For verification purposes, it was required that discrepancies between the emission reductions/removal enhancements claimed by the project proponent and estimated by SCS be immaterial, i.e. be less than ACR's materiality threshold of ±5%, as calculated according to the equation in the ACR Standard.

1.7 Summary Description of the Project

The project is located in Washington, USA and is aimed at generating GHG removals by managing mature, well-stocked forest stands carbon stocking levels in excess of those that would be maintained under the baseline scenario.

2 Assessment Process

2.1 Method and Criteria

The validation and verification services were provided through a combination of document review, interviews with relevant personnel and on-site inspections, as discussed in Sections 2.2 through 2.4 of this report. At all times, an assessment was made for conformance to the criteria described in Section 1.2 of this report. As discussed in Section 2.5 of this report, findings were issued to ensure conformance to all requirements.

The audit team created a sampling plan following a proprietary sampling plan template developed by SCS. The audit team identified areas of "residual risk"—those areas where there existed risk of a material misstatement (see Section 1.6 above) that was not prevented or detected by the controls of the project. Sampling and data testing activities were planned to address areas of residual risk. The audit team then created a validation and verification plan that took the sampling plan into account.

2.2 Document Review

The GHG project plan (version 6.0 dated 12 October 2020; "PP") and monitoring report (version 6.0 dated 12 October 2020; "MR") were carefully reviewed for conformance to the validation and verification criteria. The following provides a list of additional documentation, provided by project personnel in support of the aforementioned documents, that was reviewed by the audit team.

Documentation Reviewed During the Course of Validation and Verification Activities		
Document	**File Name**	**Ref.**
Appendix A_Baker-White River Forest Carbon Project Inventory Strata List_Inventory Plot List_v2_08Apr2020	Appendix A to PP (plot list)	/1/
Appendix B_Baker-White River Forest Carbon Project Inventory SOPs	Appendix B to PP (inventory processes manual)	/2/
Appendix C_Baker-White River Forest Carbon Project Inventory Report_Rev_21Aug2020	Appendix C to PP (inventory report)	/3/
Appendix D_ACR Risk Analysis and Buffer Determination V1.0 Calculation	Appendix D to PP (documentation of risk score)	/4/

Appendix E_Baker-White River Forest Carbon Project-ACR ERT Worksheet_12Oct2020	ERT calculation worksheet	/5/
GIS shapefile showing all possible inventory plots	InventoryPoints_AllConsideredLocations	/6/
GIS shapefile showing the final set of inventory plots included in sample	InventoryPoints_FinalLocationsUsed.shp	/7/
GIS shapefile delineating project boundary	projectBoundary	/8/
GIS shapefile identifying assessor's parcel identification for parcels within project area	PSEOwnedParcels	/9/
GIS shapefile identifying roads within project area	Roads	/10/
GIS shapefile identifying "slivers" within project area	Slivers	/11/
GIS shapefile delineating strata within project area	Strata	/12/
GIS shapefile delineating buffers applied to watercourses within project area to model protection as required by WAC 222-30-021	WaterBuffers	/13/
GIS shapefile identifying areas that could be harvested within the first five years of the baseline (used to ensure conformance to WAC-30-025)	Year1HarvestZones	/14/
Inventory standard operating procedures (as provided at the outset of the engagement; includes some out-of-date information)	PSE Carbon Cruise SOPs_June2019_Final	/15/
Inventory data as prepared for input into FVS (as provided at the outset of the engagement; may include some out-of-date information)	PSE inventory data for FVS	/16/
Inventory sample design (as provided at the outset of the engagement; includes some out-of-date information)	PSE sample design Apr2019_Final	/17/
Inventory calculation workbook	PSE inventory 2019 calcs and stats_Final_Rev_13Sept2020	/18/
Evidence of ownership for selected assessor's parcels	AF#201812280096 - Special Warranty Deed to PSE; Deed to PSPL Properties - AF#180877; Special Warranty Deed to PSE from Seefeld - AF#201106200180; WR 0620353001 Assessor office current ownership; WR 0620353001 Property Subdivision maps; WR1_A	/19/
"Attestation of Property Rights" dated 30 September 2020	Attestation of Property RIghts - SIGNED (2020-09-30)	/20/
"Letter of Intent - Forest Carbon Offset Project" dated 4 February 2020	letter of intent_Corest Offset Project Signed Mills 02042020	/21/
"Reversal Risk Mitigation Agreement" (August 2020)	PSE_ACR Risk Mitigation Agreement 2020	/22/
Listing document	PSE_IFM_acr-project-listing_01Feb2020_Update17Mar2020	/23/
.KEY files, .OUT files, batch files and Access database output files for each silvicultural prescription modeled	[various files]	/24/
Crosswalk document showing how inventory plot numbers were converted to FVS plot numbers	PSE Plot Alpha to Numeric_20Sept2020	/25/
Databases containing inputs to FVS modeling	PSEb_Database_Oct2020; PSEwr_Database_Oct2020	/26/
Yield tables showing "N-yields" (regenerated stand yields) and "X-yields" (existing stand yields)	Data_PSE_NYield_Oct2020; Data_PSE_XYield_Oct2020	/27/

.GMS file containing inputs to net present value maximization analysis	Data_PSE_Sep2020	/28/
.GMS fie (showing inputs to modeling) and .LST (showing modeling outputs) for baseline analysis	PSE_Baseline_Oct2020	/29/
.GMS fie (showing inputs to modeling) and .LST (showing modeling outputs) for project analysis	PSE_Project_Oct2020	/30/
Stratum-level carbon stock outputs for baseline	PSE_Baseline_Oct2020_Carbon_Stocks	/31/
Summary outputs for baseline and project scenario	PSE_NPV_Summary_Oct2020	/32/
Study by Diaz et al. (2018), used for harvesting cost information	Ecotrust FSC v BAU forestry study	/33/
Detailed explanation of silvicultural practices modeled in the baseline and how they relate to settlement agreement (see NIR 1)	FERC Articles_Baseline Rxs_25August2020_Final_Slivers	/34/
Results of intersection of various GIS shapefiles for baseline constraint modeling purposes	FinalIntersectionTables_11September2020	/35/
Detailed information regarding linear programming model for net present value maximization	PSE_ACR_LP_Model_Oct2020; PSE_LP Formula Explanation_2Oct2020	/36/
Explanation of how site index was derived for modeling purposes	PSE_FVS_Site_Index Explanation	/37/
Directory of modeling files	PSE_Model_Files_Directory_2Oct2020	/38/
Site index calculations	Sheet1_wSI_Oct2020	/39/
Documentation of how requirements for "wildife reserve tree" retention in WAC 222-30-020(12)(b) were accounted for	Wildlife green recruitment trees calc_02Oct2020	/40/
List of assessor's parcels included in project boundary	PSE_Baker_White RiverProject Parcels_23March2020	/41/
ACR Guidance on use of Monitoring Report Version 1	Documentation of ACR's guidance on monitoring report preparation	/42/
Proposal regarding removal of dam and associated areas from project boundary	Project Area Update-Dam Removal	/43/
Description of then-planned actions to remove non-forest areas from project boundary	PSE property boundary analysis_42920; PSE_propertyboundaryreview_429	/44/
Responses to questions posed to project personnel regarding baseline modeling	PSE Response to VB Questions_22Sept2020; PSE Responses to Zane Haxtema	/45/
Memo regarding compliance of baseline modeling with methodology requirements	PSE_ACR Memo on Habitat Rx_3Sept2020	/46/
Explanation of how carbon in harvested wood products was calculated in conformance with methodology requirements	PSE_HWP_Explanation	/47/

2.3 Interviews

2.3.1 Interviews of Project Personnel

The process used in interviewing project personnel was a process wherein the audit team elicited information from project personnel regarding (1) the work products provided to the audit team in support of the PP and MR; (2) actions undertaken to ensure conformance with various requirements and (3) implementation status of the project activities. The following provides a list of personnel associated with the project proponent who were interviewed.

Interview Log: Individuals Associated with Project Proponent			
Individual	**Affiliation**	**Role**	**Date(s) Interviewed**
Molly Middaugh	Puget Sound Energy	Project Development Manager, Decarbonization	Throughout audit
Joel Schleppi	Puget Sound Energy	Supervisor, Property Management	23 April 2020, 27 April 2020
Scott Milne	Puget Sound Energy	Real Estate/Property Management	23 April 2020, 27 April 2020
Kurt Krebs	Puget Sound Energy	Real Estate	23 April 2020, 27 April 2020
Melanie Summers	Puget Sound Energy	GIS Analyst	15 April 2020, 23 April 2020
David Ford	L&C Carbon	Principal	Throughout audit
David Schoch	TerraCarbon	Director, Forestry and Technical Services	15 April 2020, 24 April 2020, 4 June 2020
Rebecca Dickson	TerraCarbon	Senior Manager, Remote Sensing and Spatial Modeling	24 April 2020, 4 June 2020
Greg Latta	Latta Forestry	Principal	8 May 2020, 8 July 2020, 28 August 2020, 28 September 2020

2.3.2 Interviews of Other Individuals

Individuals not associated with the project proponent were not interviewed as part of the audit engagement described in this report.

2.4 Site Inspections

The objectives of the on-site inspections were as follows:

- Confirm the quality of the forest carbon inventory data used to quantify the baseline and project carbon stocks
- Evaluate the project activities and the appropriateness of the baseline scenario as described in the PP
- Confirm absence of unreported disturbance or timber harvest

In support of the above objectives, the audit team performed an on-site inspection of the project area on the dates 12 May 2020 through 14 May 2020. The main activities undertaken by the audit team were as follows:

- Carried out on-site inspections of the project's measurement and/or monitoring methodologies through the following activities:
    - Independently re-measured a number of inventory plots and compared the re-measured results to reported values using a t-test (the project inventory passed the t-test, thus confirming its quality)
    - Ground-truthed the stratification scheme to confirm its appropriateness
    - Ground-truthed delineation of the project area (to assess whether non-forest areas were removed as indicated)
    - Performed on-site reconnaissance in order to generally assess
        - Timber quality
        - The diversity of timber types within the project area
        - Feasibility of management under the baseline scenario
        - Whether any unreported instances of disturbance or timber harvest had occurred during the reporting period

2.5 Resolution of Findings

Any potential or actual discrepancies identified during the audit process were resolved through the issuance of findings. The types of findings typically issued by SCS during this type of validation and verification engagement are characterized as follows:

- Non-Conformity Report (NCR): An NCR signified a discrepancy with respect to a specific requirement. This type of finding could only be closed upon receipt by SCS of evidence indicating that the identified discrepancy had been corrected. Resolution of all open NCRs was a prerequisite for issuance of a validation and/or verification statement.
- New Information Request (NIR): An NIR signified a need for supplementary information in order to determine whether a material discrepancy existed with respect to a specific requirement. Receipt of an NIR did not necessarily indicate that the project was not in compliance with a specific requirement. However, resolution of all open NIRs was a prerequisite for issuance of a validation and/or verification statement.
- Observation (OBS): An OBS indicates an area where immaterial discrepancies exist between the observations, data testing results or professional judgment of the audit team and the information reported or utilized (or the methods used to acquire such information) within the GHG assertion. A root cause analysis and corrective action plan are not required, but highly recommended. Observations are considered by the audit team to be closed upon issuance, and a response to this type of finding is not necessary.

As part of the audit process, 26 NCRs, 18 NIRs and two OBS were issued. All findings issued by the audit team during the audit process have been closed. All findings issued during the audit process, and the impetus for the closure of each such finding, are described in Appendix A of this report.

2.6 Techniques and Processes Used to Test the GHG Information and GHG Assertion

The major techniques and processes used to test the GHG information and GHG assertion were as follows:

- Independent re-measurement of inventory plots and on-site reconnaissance (see Section 2.4, above)
- Assessment of spatial products to confirm that
    - The project acreage is correctly reported in the PP
    - The shapefile delineating the project area /8/ correctly excludes non-forest areas following the process described in Section B3.1 of the PP
    - The real property included in the project area is wholly owned, in fee simple, by the project proponent
    - Any constraints on timber harvest under the baseline scenario (e.g., constraints pertaining to riparian management zones under the Washington State Forest Practices Rules) have been accurately and/or conservatively modeled
- Recalculation of carbon stocks and carbon stock changes under the baseline and project scenarios

3 Validation Findings

3.1 Project Boundary and Activities

3.1.1 Project Boundary and Procedures for Establishment

The audit team confirmed that the project boundary was delineated in a manner consistent with the process described in Section B3.1 of the PP through on-site reconnaissance, inspection against aerial imagery available from Google Earth and ESRI, and review against roads data accessed via Google Maps. The audit team confirmed, through on-site inspection and review of aerial imagery, that the project area meets the definition of "forest" as set out in Appendix A.3.1 of the ACR Standard since it contains at least 10% cover by live trees in the aggregate, even if relatively small portions of the project area are devoted to nonforest land uses such as roads.

3.1.2 Physical Infrastructure, Activities, Technologies and Processes

As documented in Section A5.1 of the PP, "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." The audit team confirmed, via interviews with project personnel, that this management strategy is consistent with the historical management strategy that the project proponent has employed within the project area. As shared with the audit team in interviews, the

project proponent has a clear plan and timeline in place to secure certification under the American Tree Farm System within a year of the project start date.

3.1.3 GHGs, Sources, and Sinks within the Project Boundary

The GHG sources, sinks and/or reservoirs are identified in Section B.4 of the PP. It is correctly stated therein that "Identification of GHG sources and sinks follows ACR's Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal U.S. Forestlands, version 1.3, April 2018." No optional sources, sinks and/or reservoirs are included in the project boundary.

3.1.4 Temporal Boundary

The project crediting period is 20 years, as required by the ACR Standard. Because the GHG project plan was submitted on 25 March 2020, the project start date is not more than one year before submission of the GHG plan. Therefore, it is not required that the project proponent provide evidence that GHG mitigation was seriously considered in the decision to proceed with the project activity. See Section 3.3, below, for the audit team's findings regarding the project start date.

3.2 Description of and Justification for the Baseline Scenario

Section C1 of the methodology establishes that "The IFM baseline is the legally permissible harvest scenario that would maximize NPV of perpetual wood products harvests", with the discount rate set by Table 1 of the methodology according to the ownership class. As described below, the audit team confirmed that the 6% discount rate, for "Private Industrial" ownerships, applies to the project proponent.

While the term "private industrial" used to refer specifically to timberland ownerships that included ownership of wood processing facilities, such "vertically integrated" entities have largely receded from the picture and real estate investment trusts (REITs) and timberland investment management organizations (TIMOs) have taken their place as the dominant forms of private timberland ownership. Therefore, the term "private industrial" no longer has the clear meaning that it once had. However, the document https://americancarbonregistry.org/carbon-accounting/standards-methodologies/improved-forest-management-ifm-methodology-for-non-federal-u-s-forestlands/description-of-npv-calculation-07-11-11_final.pdf (accessed 21 May 2020), which describes the basis for the discount rates used in the methodology, states the following:

"… the U.S. Forest Service FIA data system covers all types of land ownerships in the country. For example, data is collected on private corporate (hereafter labeled Private Industrial (PI)) and private non-corporate (hereafter labeled Private Non-industrial (PNI)) and reported in their periodic assessment of United States Forest Resources (Smith et al. 2009). The PI category consists of forest industry and forest management companies, timber investment management organizations, and other companies. The PNI

category consists of individuals, couples, estates, trusts, nongovernmental organizations, clubs, associations, and other unincorporated groups."

As the project proponent is an "other company", it falls under the private industrial ownership category. Therefore, the 6% discount rate is applicable to the project proponent.

Once the discount rate is established, project personnel are required to determine the legally permissible harvest scenario that would maximize net present value (NPV) of perpetual wood products harvests. This scenario was subject to various legal constraints. The manner in which the constraints were accounted for in determination of the baseline was assessed by the audit team as described below.

- The audit team performed a risk-based spot check of a sample of Forest Vegetation Simulator (FVS) .key files /24/ in order to confirm that the Washington State Forest Practices Rules were complied with in respect of the silvicultural prescriptions, while also ensuring that the methodology requirement that the modeled prescriptions were "based on silvicultural prescriptions recommended by published state or federal agencies to perpetuate existing onsite timber producing species while fully utilizing available growing space", as required by the methodology.
- The audit team performed a review of the harvest schedule indicated in the "PSE_Baseline_Oct2020.lst" file /29/ in order to confirm its compliance with the adjacency restrictions set out in the Washington State Forest Practices Rules.
- The audit team reviewed a sample of .key files for the "Elk" and "Hardwood" prescriptions against the terms of the settlement agreement entered into on 24 November 2004 /24/ in order to confirm that all relevant provisions of Articles 502 and 503 of the agreement were modeled in the baseline. While questions were raised as to whether these prescriptions were "based on silvicultural prescriptions recommended by published state or federal agencies to perpetuate existing onsite timber producing species while fully utilizing available growing space", as required by the methodology, the audit team received confirmation from ACR personnel, in an email dated 8 September 2020, that "We find ACR539's proposed baseline modeling scenarios for the acres referred to by the Settlement Agreement Articles 502 and 503 meet the intent of the ACR Standard and IFM Methodology." Therefore, subsequent to receiving this guidance, the audit team discontinued any review of whether these prescriptions met the requirement of the methodology as quoted above.

Based upon review of the modeling and application of professional judgment, the audit team agrees that an NPV-maximizing strategy would involve clear-cutting all unconstrained areas and converting them to Douglas-fir plantations as soon as was legally permissible. This is the strategy that has been modeled in the baseline. Thus, the audit team agrees that the baseline scenario has been appropriately established in accordance with the methodology.

3.3 Project-Specific Conformance to ACR Eligibility Criteria

The audit team reviewed the demonstration of conformance, as set out in the PP, to each of the relevant eligibility criteria listed in the ACR Standard. The audit team confirmed the full conformance of the project with the relevant eligibility criteria. A more detailed assessment of the audit team's findings is provided below.

Actions Undertaken to Confirm Conformance to Eligibility Criteria		
Criterion	**ACR Requirement**	**Validation Activities**
Start Date, All Projects	Non-AFOLU Projects must be validated within 2 years of the project Start Date. AFOLU Projects must be validated within 3 years of the project Start Date.	Confirmation that this report was issued less than three years after 26 February 2020, the start date of the project according to the PP.
Start Date Definition, Non-AFOLU Projects	ACR defines the Start Date for all projects other than AFOLU as the date on which the project began to reduce GHG emissions against its baseline.	Not applicable; this project is an AFOLU project.
Start Date Definition, AR or Wetland Projects	For AR or Wetland restoration/revegetation projects, the Start Date is when the Project Proponent began planting or site preparation.	Not applicable; the project is not an AR or wetland project.
Start Date Definition, IFM Projects	For IFM, the Start Date may be denoted by one of the following: 1. The date that the Project Proponent began to apply the land management regime to increase carbon stocks and/or reduce emissions relative to the baseline. 2. The date that the Project Proponent initiated a forest carbon inventory. 3. The date that the Project Proponent entered into a contractual relationship to implement a carbon project. 4. The date the project was submitted to ACR for listing review. Other dates may be approved by ACR on a case by case basis.	Confirmation, through a search of the project's APX webpage, that the project was submitted to ACR for listing review on 26 February 2020, the project start date as indicated in Section A3 of the PP.
Start Date Definition, Avoided Conversion Projects	For Avoided Conversion of non-forest, the Start Date is when the Project Proponent implemented the project action physically and/or legally, such as securing a concession or placing a land conservation agreement on the project land.	Not applicable; the project is not an avoided conversion project.
Start Date Definition, Other Agricultural	For other Agricultural Land-based projects, the Start Date is the date by which the Project Proponent began the Project Activity on project	Not applicable; the project is not an other agriculture land-based project.

Land-based Projects	lands, or the start of the cultivation year during which the Project Activity began.	
Minimum Project Term (AFOLU Projects Only)	Project Proponents of AFOLU projects with a risk of reversal shall commit to a Minimum Project Term of 40 years. The minimum term begins on the Start Date, not the first or last year of crediting. This requirement applies only to AFOLU projects that have had ERTs issued that are associated with GHG removals (sequestration). AFOLU projects that have claimed only avoided emissions are not subject to this requirement.	Review of the PP to confirm that the minimum term is 40 years, as required.
Crediting Period	The Crediting Period for non-AFOLU projects shall be 10 years. All AR projects shall have a Crediting Period of 40 years. All IFM projects shall have a Crediting Period of 20 years. Avoided Conversion projects on both forest and non-forest land with land conservation agreements in place shall have a Crediting Period of 40 years, unless otherwise specified in chosen methodologies. Wetland Restoration/Revegetation projects shall have a Crediting Period of 40 years. The Crediting Periods for agriculture projects that avoid emissions by changing to lower GHG practices and those that include a soil sequestration component will be specified in the applicable methodology.	Review of the PP (Section A.3) to confirm that the crediting period is 20 years, as required given the project type.
Real	GHG reductions and/or removals shall result from an emission mitigation activity that has been conducted in accordance with an approved ACR Methodology and is verifiable. ACR will not credit a projected stream of offsets on an ex-ante basis.	Review of the emission mitigation activity, as described in the PP, to confirm that it conforms to the requirements of the methodology and will be verifiable if implemented as described.
Emission or Removal Origin (Direct Emissions)	The Project Proponent shall own, have control over, or document effective control over the GHG sources/sinks from which the emissions reductions or removals originate. If the Project Proponent does not own or control the GHG sources or sinks, it shall document that effective control exists over the GHG sources and/or sinks from which the reductions/ removals originate.	Independent review of county parcel data to confirm that the project proponent owns, in fee simple, the real property included in the project area; interviews with project personnel to confirm that nothing is on the title for said real property that would sever control from fee simple ownership
Emission or Removal Origin	For projects reducing or removing non-energy indirect emissions, the following requirement applies:	Not applicable; the project is not reducing or removing non-energy indirect emissions.

(Indirect Emissions)	The Project Proponent shall document that no other entity may claim GHG emission reductions or removals from the Project Activity (i.e., that no other entity may make an ownership claim to the emission reductions or removals for which credits are sought).	
Offset Title (All Projects)	The Project Proponent shall provide documentation and attestation of undisputed title to all offsets prior to registration. Title to offsets shall be clear, unique, and uncontested.	(1) Interviews with project personnel regarding the ownership status of the project area, (2) Review of the attestations made in Section G1 of PP, (3) review of supplementary attestations regarding the project proponent's title in fee simple and the absence of any legal challenges or encumbrances that would affect ownership or control of timber rights on forestland /20/ and (4) independent checks to confirm the project proponent's fee simple ownership of the real property included in the project area.
Land Title (AFOLU Projects Only)	For U.S. projects with GHG emissions reductions resulting from terrestrial sequestration, Project Proponents shall provide documentation of clear, unique, and uncontested land title. For international projects, Project Proponents shall provide documentation and/or attestation of land title; ACR may require a legal review by an expert in local law. Land title may be held by a person or entity other than the Project Proponent, provided the Project Proponent can show clear, unique, and uncontested offsets title. AFOLU projects that result only in the crediting of avoided emissions with no risk of reversal may not require demonstration of land title.	
Additional	Every project shall use either an ACR-approved performance standard and pass a regulatory surplus test, or pass a three-pronged test of additionality in which the project must: 1. Exceed regulatory/legal requirements; 2. Go beyond common practice; and 3. Overcome at least one of three implementation barriers: institutional, financial, or technical.	Confirmation that the project meets all relevant additionality requirements (see Section 3.4 below for more details).
Regulatory Compliance	Projects must maintain material regulatory compliance. To do this, a regulatory body/bodies must deem that a project is not out of compliance at any point during a reporting period. Projects deemed to be out of compliance with regulatory requirements are not eligible to earn ERTs during the period of non-compliance. Regulatory compliance violations related to administrative processes (e.g., missed application or reporting deadlines) or for issues unrelated to integrity of the GHG emissions reductions shall be treated on a case-by-case basis and may not disqualify a project from ERT issuance. Project Proponents are required to	(1) Review of the regulatory compliance attestation as included in Section III(4) of MR; (2) discussion with project personnel regarding ongoing actions to ensure regulatory compliance in the conduct of project activities and (3) risk-based review of possible risks of regulatory noncompliance.

	provide a regulatory compliance attestation to a verification body at each verification. This attestation must disclose all violations or other instances of non-compliance with laws, regulations, or other legally binding mandates directly related to Project Activities.	
Permanence (All AFOLU Projects)	AFOLU Project Proponents shall assess reversal risk using ACR's Tool for Risk Analysis and Buffer Determination, and shall enter into a legally binding Reversal Risk Mitigation Agreement with ACR/Winrock that details the risk mitigation option selected and the requirements for reporting and compensating reversals.	The reversal risk mitigation agreement /22/, executed by the project proponent (the audit team confirmed with ACR personnel, in an email dated 1 October 2020, that execution by the project proponent was adequate for the audit team's review purposes), was provided for review by the audit team. The agreement details the risk mitigation option selected and the requirements for reporting and compensating reversals.
Permanence (Terrestrial Sequestration, Avoided Conversion Projects)	Proponents of terrestrial sequestration or avoided conversion projects shall mitigate reversal risk by contributing ERTs to the ACR Buffer Pool or using another ACR-approved insurance or risk mitigation mechanism.	The reversal risk has been correctly calculated at 18% (see Section 4.5, below, for details).
Permanence (Geologic Sequestration Projects)	Proponents of geologic sequestration projects shall mitigate reversal risk during the project term by contributing ERTs to the ACR Reserve Account and post-project term by filing a Risk Mitigation Covenant, which prohibits any intentional reversal unless there is advance compensation to ACR, or by using another ACR-approved insurance or risk mitigation mechanism.	Not applicable; the project is not a geologic sequestration project.
Permanence (All Projects)	All projects must adhere to ongoing monitoring, reversal reporting, and compensation requirements as detailed in relevant methodologies and legally binding agreements (e.g., the ACR Reversal Risk Mitigation Agreement).	Confirmation that the timeline set out in in Section H2 of the PP is consistent with the crediting period, minimum project term and verification interval requirements in the ACR Standard; confirmation that neither the methodology nor the reversal risk mitigation agreement specifically impose requirements that are not already established in the ACR Standard
Net of Leakage	ACR requires Project Proponents to address, account for, and mitigate certain types of leakage, according to the relevant sector requirements and methodology conditions. Project Proponents must deduct leakage that reduces the GHG emissions reduction and/or removal benefit of a project in excess of any	See Section 4.5, below.

	applicable threshold specified in the methodology.	
Independently Validated	ACR requires third-party validation of the GHG Project Plan by an accredited, ACR-approved VVB once during each Crediting Period and prior to issuance of ERTs.	The PP has been independently validated by SCS, an accredited, ACR-approved validation/verification body.
Independently Verified	Verification must be conducted by an accredited, ACR-approved VVB prior to any issuance of ERTs and at minimum specified intervals.	The PP has been independently verified by SCS, an accredited, ACR-approved validation/verification body.
Environmental And Community Assessments	ACR requires that all projects develop and disclose an impact assessment to ensure compliance with environmental and community safeguards best practices. Environmental and community impacts should be net positive, and projects must "do no harm" in terms of violating local, national, or international laws or regulations. Project Proponents must identify in the GHG Project Plan community and environmental impacts of their project(s). Projects shall also disclose and describe positive contributions as aligned with applicable sustainable development goals. Projects must describe the safeguard measures in place to avoid, mitigate, or compensate for potential negative impacts, and how such measures will be monitored, managed, and enforced. Project Proponents shall disclose in their Annual Attestations any negative environmental or community impacts or claims thereof and the appropriate mitigation measure.	(1) Review of Section F1 of the PP to confirm that documentation is provided pertaining to each of the areas required by Section 8.A of the ACR Standard; (2) Independent review, based on on-site observations and interviews with project personnel, to confirm that the project will have positive environmental risks and impacts in each of the identified factors, and that the overall environmental and community impacts will be net positive, even in consideration of the small amount of employment benefit that would generated under the baseline scenario relative to the project scenario (this potential impact is likely offset by positive tourism potential in respect of the Baker complex and general community benefits relating to preserving the last intact large block of forestland in an area that is experiencing rapid development, in respect of the White River component).
	This methodology is applicable only on non-federally owned forestland within the United States	Not applicable; through independent confirmation of ownership, the audit team confirmed that the project is not located on federal lands.
	The methodology applies to lands that can be legally harvested by entities owning or controlling timber rights on forestland	See "Offset Title (All Projects)" and Land Title (AFOLU Projects Only)", above.
	Private or non-governmental organization ownerships subject to commercial timber harvesting at the project Start Date in the with-project scenario must be certified by FSC, SFI, or ATFS or become certified within one year of the project Start Date. If there are no ongoing harvests at the project Start Date, but harvests occur later in the project life cycle, the project	The PP contains a commitment that "All Puget Sound Energy is committed to complete ATFS Certification within one year of the project Start Date for all its forestland, including the entire Project Area" (Section B.2). Such certification would be adequate to meet this requirement.

	area must become certified before any commercial timber harvesting can occur	
	All Tribal lands in the United States, except those lands that are managed or administered by the Bureau of Indian Affairs, are eligible under this methodology, provided that they meet ACR requirements for Tribal lands	Not applicable; through independent confirmation of ownership, the audit team confirmed that the project is not located on tribal lands.
	Public non-federal ownerships currently subject to commercial timber harvesting in the with-project scenario must…	Not applicable; through independent confirmation of ownership, the audit team confirmed that the project is not located on public lands.
	Use of non-native species is prohibited where adequately stocked native stands were converted for forestry or other land uses after 1997	On-site inspections to confirm that no conversion of lands within the project area to forestry after 1997 occurred (such conversion would have resulted in plantations of approximately 20 years in age or less, which would have been obvious).
	Draining or flooding of wetlands is prohibited	On-site inspections to confirm the absence of wetlands within the project area; review of Section B2 of the PP which states "The project activity does not involve any hydrological manipulation of wetlands."
	Project proponent must demonstrate its ownership or control of timber rights at the project start date	See "Offset Title (All Projects)" and Land Title (AFOLU Projects Only)", above (through completion of independent checks in April-May 2020, the audit team confirmed with reasonable assurance that ownership was demonstrated at the project start date).
	The project must demonstrate an increase in on-site stocking levels above the baseline condition by the end of the Crediting Period	Through review of the graph in Section E6.2 of PP and associated calculations, the audit team can confirm that project on-site carbon stocking levels are projected to be far above those under the baseline at the end of the crediting period.

3.4 Demonstration of Additionality

The audit team reviewed the demonstration of additionality, as set out in the PP, and confirmed that the additionality requirements set out in the ACR Standard have been met. A more detailed assessment of the audit team's findings is provided below.

3.4.1 Regulatory Surplus Test

Section 4A.1 of the ACR Standard states that "The regulatory surplus test requires the Project Proponent to evaluate existing laws, regulations, statutes, legal rulings, or other regulatory frameworks that directly or indirectly affect GHG emissions associated with a project action or its baseline candidates, and which require technical, performance, or management actions." This evaluation has been carried out in establishment of the baseline scenario (see Section 3.2, above). The project activity involves maintaining carbon stocks above and beyond baseline levels and, therefore, the project passes the regulatory surplus test (i.e., the project proponent is not required to maintain carbon stocks at the relatively high levels that will be maintained under the project activity).

3.4.2 Common Practice Test

Section 4.A.2 of Appendix A to the ACR Standard requires that "The common practice test requires the Project Proponent to evaluate the predominant technologies or practices in use in a particular industry, sector, and/or geographic region, as determined by the degree to which those technologies or practices have penetrated the market, and demonstrate that the proposed Project Activity is not common practice and will reduce GHG emissions below levels produced by common technologies or practices within a comparable environment (e.g., geographic area, regulatory framework, investment climate, access to technology/financing)." Project personnel have argued that, for purposes of this test, the project proponent is most appropriately classified as a private timberland landowner, because the project proponent is distinct from many other regulated utilities in that it is privately held and run for the purpose of profit creation. In support of this assertion, the audit team was referred to Item 1 of Form 10-K which was filed with the United States Securities and Exchange Commission on 21 February 2020. In that document, it is stated that "Puget Energy is an energy services holding company incorporated in the state of Washington in 1999. Substantially, all of its operations are conducted through its regulated subsidiary, Puget Sound Energy, Inc. (PSE), a utility company… Puget Energy is owned through a holding company structure by Puget Holdings, LLC (Puget Holdings). All of Puget Energy's common stock is indirectly owned by Puget Holdings, LLC (Puget Holdings). Puget Holdings is owned by a consortium of long-term infrastructure investors including the Canada Pension Plan Investment Board, the British Columbia Investment Management Corporation (BCI), the Alberta Investment Management Corporation (AIMCo), Ontario Municipal Employee Retirement System (OMERS) and PGGM Vermogensbeheer B.V… Puget Energy's business strategy is to generate stable earnings and cash flow by offering reliable electric and natural gas service in a cost-effective manner through PSE." Given the information reported to the Securities and Exchange Commission, the audit team agrees that, due to the project proponent's ownership structure and business strategy, the project proponent is appropriately classified as a private timberland owner, for whom revenue generation is a priority.

From significant academic and professional experience with the region in which the project is located, the audit team can confirm that the project activity of "extending the rotation age of the standing timber", as described in Section A.5.3 of the PP, is not common practice for private timberland owners

that have a significant revenue generation motive. The general consensus is that rotation periods in this region have generally gotten shorter over the last several decades, and that this trend has been exacerbated by the significant transfer of timberlands to REIT and TIMO ownership. From on-site inspections, the audit team can confirm that common practice among this ownership class would involve a strategy of lowering carbon stocking within the project area through regeneration (clearcut) harvest, and that the general age of the stands within the project area is beyond the range of rotation length generally practiced by private timberland owners. Therefore, the audit team agrees that the project activities passes the common practice test.

3.4.3 Implementation Barriers Test

The "financial barrier" option was chosen by the project proponent as an implementation barrier. SCS Global Services received guidance from ACR personnel, in an email dated 6 June 2019, stating the following:

The intent of the financial implementation barrier test encompasses the interpretation and wording in Table 2, in which "carbon funding is reasonably expected to incentivize the implementation of the project scenario", yielding increased carbon stocks compared to the baseline. A quantitative assessment demonstrating forgone profit as a result of employing the project scenario suffices for passing this test.

Given this guidance, a financial barrier was demonstrated through a quantitative assessment demonstrating foregone profit as a result of employing the project scenario (i.e., demonstrating that the net present value of the baseline scenario was higher than the project net present value of the project scenario). The audit team's findings regarding this assessment are provided below.

As discussed under Section 3.2, above, Section C1 of the methodology establishes that "The IFM baseline is the legally permissible harvest scenario that would maximize NPV of perpetual wood products harvests". Since the baseline scenario has been correctly determined following this guidance, by definition, any other legally permissible harvest scenario (including the project scenario) will have a lower NPV. Thus, it has been demonstrated that the NPV of the baseline scenario is higher than the NPV of the project scenario, and the project passes the implementation barriers test.

3.5 Processes for Emission Reductions/Removal Enhancements Quantification

3.5.1 Methods, Algorithms, and Calculations To Be Used to Generate Estimates of Emissions and Emission Reductions/Removal Enhancements

The audit team undertook the methods described below to assess the different components of the ex-ante quantification of GHG removal enhancements. After checking the individual components, the audit team also assessed the ex-ante quantification of GHG removal enhancements, as reported in Table 2 of the PP, to confirm that all relevant equations from the methodology were duly followed.

Actions Undertaken to Check Methods Used to Quantify Carbon Stock Changes		
Carbon Pool(s)	**Scenario**	**Validation Activities**

Above-ground biomass carbon, below-ground biomass carbon	Baseline	1. Tracing data to confirm that the inputs to modeling were appropriate and, where relevant, were consistent with the data assessed by the audit team as part of the t-test activity (see Section 3.5.4, below) 2. Tracing the data and independent checks on modeling to confirm that the TREEBIO keyword, available in the Fire and Fuels Extension package in FVS, was used to calculate live aboveground and belowground biomass using the Jenkins equations, as allowed for by Section C3.1 of the methodology 3. Data testing to confirm that the baseline carbon stock changes duly took account of all constraints (as discussed in Section 3.2, above) 4. Recalculation of onsite carbon stocking for a sample of years
	Project	Same as (1)-(2) above in respect of the value for on-site carbons stocks reported for the end of the reporting period; audit team performed a review of projected carbon stock changes under the project scenario and confirmed these changes resulted from "a conservative approach", per Section E1 of the methodology (a light harvest was modeled such that an annual increment of 2-3% in onsite stocking was projected, which seems conservative given the condition of the timber)
Harvested wood products	Baseline	Recalculation of carbon in harvested wood products, using mill efficiency values and assessment area default values specified in the methodology, to confirm that the requirements of the methodology have been adhered to
	Project	

3.5.2 Process Information, Source Identification/Counts, and Operational Details

As described elsewhere in this report, the processes used for ex-ante quantification of GHG removal enhancements were assessed in detail by the audit team and found to be appropriate in this context.

3.5.3 Data Management Systems

Data management systems pertaining to spatial data were assessed through thorough review of the relevant spatial products and application of spatial tools in ArcMap such as the Intersect tool, the Ruler tool and area recalculation in order to confirm that processes were correctly undertaken. The audit team also spot checked the .gms files /29/ /30/ to confirm that area calculation results were appropriately transcribed to these files in order to calculate baseline and project carbon stocks.

Data management systems pertaining to aspatial data included FVS modeling environments, workbooks and databases, as well as the GAMS 24.7.1 software package. Through recalculation of a sample of data, the audit team was able to confirm the presence of robust data management systems for importing inventory data into FVS, running prescriptions in FVS and exported results to the GAMS software package for NPV analysis and quantification of carbon stocks and other variables.

3.5.4 QA/QC Procedures

The QA/QC procedures for inventory data were discussed in detail with project personnel during and prior to the site visit. The audit team understands that check cruising was performed by experienced

personnel and that manual checks of the submitted inventory data (e.g., sorting, querying) were undertaken to catch any obvious errors or omissions. The quality of the QA/QC processes was evident during the site visit, in which the reported inventory results were very similar, on the whole, to the carefully measured results obtained by the audit team.

3.5.5 Processes for Uncertainty Assessments

The audit team was able to replicate calculation the value of 9.6% for the "percentage uncertainty expressed as 90% confidence interval percentage of the mean of the carbon stock in above and below ground live trees (in metric tons CO2) for the initial inventory in year 1", as reported in Section E4 of the PP. Thus, the appropriateness of the process for uncertainty assessment was confirmed.

4 Verification Findings

4.1 Results of Quantitative Uncertainty Assessment

The audit team agrees that, given that carbon stock changes under both the baseline and project scenarios are quantified as zero for the reporting period, it logically follows that the result of Equation 19 is zero. (Technically speaking, Equation 19 results in a divide-by-zero error under these conditions, but the practical effect of this is a quantification of zero uncertainty.) Thus, the uncertainty assessment reported in Section E4 of the PP was correctly undertaken.

4.2 Analysis of the Quantification Methodologies and Applicable Data Sets and Sources

The audit team agrees that it is appropriate (and conservative) to quantify carbon stock changes and GHG emissions for the reporting as zero, given the very short duration of the reporting period and the fact that it took place entirely prior to the 2020 growing season. No further assessment of quantification methodologies was required or undertaken.

4.3 Basis of Data and Information Supporting the GHG Assertion

The following table indicates whether the data and information supporting the GHG assertion were based on assumptions and industry defaults, future projections, and/or actual historical records.

Assumptions and Industry Defaults	☒
Future Projections	☒
Actual Historical Records	☐

4.4 Leakage Assessment

The methodology addresses two different types of leakage, activity-shifting leakage and market effects leakage (see Section A3 of the methodology). These will be dealt with in turn.

Section D6 of the methodology states that "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" and provides a number of requirements for demonstrating the absence of such leakage. The Errata & Clarification issued by ACR on 27 July 2020 clarifies that the demonstration of the absence of activity-shifting leakage "is not applicable if Project Proponent and associated landowners enroll all of their forested landholdings, owned and under management control, within the ACR carbon project."

Documentation that the project proponent has enrolled all forested landholdings within the project has been provided in the form of an attestation /20/, signed by an individual in an appropriate role, stating that "PSE represents and warrants that all of the Company's forestland holdings, owned or under management, are enrolled in the Baker-White River Forest Carbon Offset Project". This attestation has been supported by information provided by project personnel in interviews, in which the extent of the ownership of real property by the project proponent was discussed. Given that, by definition, the landholdings of the project proponent are primarily related to energy supply and distribution infrastructure, the likelihood that unreported forested landholdings outside of the project area are owned by the project proponent is relatively low, and so the audit team has reasonable assurance regarding the assertion discussed above.

Regarding market effects leakage, this has been addressed through selection of the highest default factor set out by the methodology, as described in Section E3 of the PP. The audit team agrees this is a conservative choice, in light of any uncertainty regarding the level of total wood products that will be produced by the project over the crediting period.

4.5 Risk Assessment

The reported value of the total risk score, as determined based on the risk analysis documented in the PP and MR, was 18%. The audit team performed a complete review of the risk assessment against the requirements of the ACR Tool for Risk Analysis and Buffer Determination. The audit team concludes that the assignment of risk scores is appropriate and in conformance to the ACR Tool for Risk Analysis and Buffer Determination. A more detailed review of the audit team's conclusions may be found below.

Actions Undertaken to Evaluate Whether the Risk Assessment Has Been Conducted Correctly		
Risk Category	**Value Selected**	**Verification Activities**
A	4%	Confirmation, through site inspections, that project is not located on public or tribal lands
B	4%	Confirmation, through site inspections, that project is not located on public or tribal lands
C	2%	Confirmation, through site inspections, that the project is not located outside the United States
D	0%	Not applicable; the conservation easement deduction has not been claimed
E	2%	Visual inspection of project boundary in comparison to fire maps available at https://www.firelab.org/project/wildfire-hazard-potential (accessed 21

		May 2020) to confirm the overwhelming majority (if not all) of the project area has been assigned a "Very Low" or "Low" wildfire hazard potential; application of general knowledge of the region where the project is located to confirm that a fire greater than 1,000 acres has not occurred within a 30 mile radius of the project area within the past 12 months
F	4%	On-site inspections to confirm absence of epidemic disease or infestation within project area; spot-checks within 30 miles of project area using Google Earth; application of general knowledge of the region where the project is located to confirm that epidemic disease or infestation is not present within a 30 mile radius of the project area
G	0%	Confirmation, through site inspections, that project is not a wetland project or a forest project where more than 60% of the project area is not a forested wetland
H	2%	Confirmation that default value has been applied in the risk assessment calculation

5 Conclusion

The audit team asserts, with no qualifications or limitations, that

- The PP conforms, in full, to the validation criteria.
- The quantification of GHG emission reductions and/or removal enhancements, as reported in the MR, conforms to the verification criteria and is without material discrepancy.

Reported Greenhouse Gas Emission Reductions or Removal Enhancements	
Period	**Emission Reductions/Removal Enhancements (tCO2e)**
26 February 2020 to 15 March 2020	0

Lead Auditor Approval	 Zane Haxtema, 27 October 2020
Internal Reviewer Approval	 Francis Eaton, 27 October 2020

Appendix A: List of Findings

Please see Section 2.5 above for a description of the findings issuance process and the categories of findings issued. It should be noted that all language under "Project Personnel Response" is a verbatim transcription of responses provided to the findings by project personnel.

NIR 1 Dated 30 Apr 2020
Standard Reference: Methodology, Section C1
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Section B5
Finding: The methodology states the following in Section C.1: "The IFM baseline is the legally permissible harvest scenario that would maximize NPV of perpetual wood products harvests." Section B5 of the GHG project plan states the following: "The baseline management regime rapidly harvests the older stands through clearcutting to establish young fast-growing stands in the early years of the baseline period."
The audit team understands that Puget Sound Energy entered into a settlement agreement on 24 November 2004 and that the provisions of the agreement are legally binding. The agreement was independently accessed by the audit team from Puget Sound Energy's website. From a review of that agreement, it appears that the following articles may act as legal constraints on the baseline modeling:
- Articles 501-505
- Articles 509-517
Please provide a description of how each of the above articles is either adhered to in the baseline scenario or is not relevant to forest management activities.
Project Personnel Response: The settlement agreement articles (501-505 & 509-517) were reviewed by PSE staff who were involved in negotiating and drafting the articles to determine what, if any, management restrictions must be applied to baseline harvest prescriptions.

Based on this review, PSE staff determined that Settlement Agreements 501, 504-505, 509-517 do not impose any management restrictions that would impact baseline harvest. PSE staff determined that Articles 502 and 503 do set restrictions on some forest management activities; however, do not prohibit timber harvest.

The result of this work indicated that some adjustments to the baseline management actions were warranted. A new workbook (FERC Articles_Baseline Rxs_27June2020) was created that includes a worksheet (FERC Approved Articles) containing a table that lists each settlement article, a summary statement and, if applicable, any legally binding restriction(s) to timber harvesting.

In addition, the workbook includes a worksheet (Silviculture Rx) containing the baseline forest management prescription for various components making up the project area, such as CMZ, RMZ, Elk habitat, deciduous forest bird habitat and general forest zones by stratum.
Auditor Response: In review of the workbook "FERC Articles_Baseline Rxs_01July2020_Final" against the settlement agreement (accessed most recently from https://www.pse.com/pages/hydro-licensing/licensing-baker-river-project on 21 July 2020), the audit team agrees that only Articles 502 and 503 set restrictions on forest management activities that would be feasibly modeled in the baseline scenario. The management prescriptions described in the "Silviculture Rx" worksheet of the workbook for "Hardwood - Birds" and "Elk Habitat" are consistent with the relevant requirements of Articles 502 and 503, respectively. In addition, in review of the files "FVS_PSEb_Hwd.key" and "FVS_PSEb_Elk.out", the audit team was able to confirm that the FVS scripts are consistent with the description in the "FERC Articles_Baseline Rxs_01July2020_Final" workbook. Therefore, the information request has been satisfied. However, see NIR 32.

NIR 2 Dated 30 Apr 2020
Standard Reference: ACR Standard, Appendix A.3.3
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, page 5
Finding: Table 4 in Appendix A.3.3 of the VCS Standard, Version 6.0, states the following:
"For IFM, the Start Date may be denoted by one of the following:
1. The date that the Project Proponent began to apply the land management regime to increase carbon stocks and/or reduce emissions relative to the baseline.
2. The date that the Project Proponent initiated a forest carbon inventory.
3. The date that the Project Proponent entered into a contractual relationship to implement a carbon project.
4. The date the project was submitted to ACR for listing review. Other dates may be approved by ACR on a case by case basis."
The GHG project plan indicates, on page 5, that 4 February 2020 is the project start date because it is "the date that the project was submitted for listing review". However, the audit team has confirmed with ACR personnel that the project listing documentation was not uploaded to the APX website until 26 February 2020. The audit team was provided with a letter issued by Puget Sound Energy senior management, dated 4 February 2020, authorizing, among other things, the registration of the project. However, it is not clear that the project was submitted to ACR for listing review on 4 February 2020. The audit team consulted with ACR personnel regarding this matter and received the following response in an email dated 29 April 2020: "ACR concluded that the LOI [letter of intent] did not meet the ACR Standard requirements and instead suggested they use date of listing submittal as project start." Given that submission of the letter of intent was determined to not constitute a qualifying action to denote the project start date, please provide other evidence that a qualifying action to denote the project start date, as set out in the ACR Standard, occurred on 4 February 2020.
Project Personnel Response: The Project Start Date was revised to 02/26/2020 as per consultation with ACR staff. This revised Project Start Date is based on the date the Project Proponent submitted the Project Listing Document to ACR via the Registry website. Project documents have been updated to reflect the revised Project Start Date of 02/26/2020.
Auditor Response: The audit team agrees that 26 February 2020 is appropriately selected as the project start date, given that the listing documentation was uploaded on this date. The revised GHG project plan, entitled "PSE_Baker White River_GHG Plan_v2_ 01July2020_Final", consistently refers to 26 February 2020 as the project start date. Therefore, as the selected project start date is clearly in conformance with the ACR Standard, this finding may be withdrawn.

NIR 3 Dated 30 Apr 2020
Standard Reference: Methodology, Section C1
Document Reference: StrataBreakdown
Finding: The methodology states the following in Section C.1: "The IFM baseline is the legally permissible harvest scenario that would maximize NPV of perpetual wood products harvests." The audit team understands, from a conference call held 24 April 2020, that legal constraints on riparian management zones (RMZs) in the baseline, as required in WAC 222-30-021, were accounted for through creation of a separate RMZ stratum that was intended to correspond to the RMZ width that would be legally required under the baseline scenario. It was indicated to the audit team that the site class data available from the Washington Geospatial Open Data Portal was used in order to determine the site class for purposes of establishing the RMZ width which, per the definition of "Riparian management zone (RMZ)" in WAC 222-16, varies by site class.
Through independent checks of the mapping in the provided "StrataBreakdown" shapefile, the audit team was able to confirm that the widths used to buffer RMZ areas in GIS were appropriate for streams for which site class data was available. However, there are also portions of the project area for which no site class data is available, particularly those areas to the north and west of the White River. Under the definition of "Site Class" in WAC 222-16, the following guidance is provided: "In Western Washington, if no site index is reported in the soil survey, use the site class for conifer in the most physiographically similar adjacent soil polygon." For at least some areas where no site class information is available, the audit team's independent checks revealed that the lowest site class was assumed, such that a 90-foot width on either side of the stream was used to delineate the RMZ area. This was the case even though the nearest areas with conifer site class data indicated a site class of II or III. It seems highly unlikely, to the audit team, that these areas actually have a site class of V. Specific examples are described under separate cover in an email to project personnel.
Please clarify the method used to impute site class data to portions of the project area where no site class data are available. Please provide a convincing justification that the method used is consistent with the requirement to "use the site class for conifer in the most physiographically similar adjacent soil polygon".
Project Personnel Response: For areas White River where no site class information was available, we revised our method to use the site class for conifer in the most physiographically similar adjacent soil polygon.

The majority of White River is bordered by no site class (Site class 0 values) or Red Alder (Site class 6). The closest higher conifer site class is site class 3, so we used that RMZ width for site class 3 (140 ft total buffer) for the entire CMZ boundary. All other F & S waters were buffered according to their site class in both the White River and the Baker complex of the project area. There were no areas of Site Class "0" at Baker Lake.

The site class information we used to assign areas where no site class information was available is located at the WA geospatial portal http://data-wadnr.opendata.arcgis.com/datasets/site-class
Auditor Response: Through review of the RipZones field in the revised GIS layer, entitled "StrataByManagement", the audit team can confirm that, where conifer site class data was missing, the site class for the closest polygon containing conifer site class information was III, and that such areas were assigned a buffer according to the requirements for areas for a site class of III (e.g., a 140-foot total RMZ buffer was applied). Nearest-neighbor imputation is a reasonable process for imputing missing site class data in this context. Therefore, the RMZ buffering in "StrataByManagement" took due account of site class, as required, and the non-conformity has been resolved.

NIR 4 Dated 30 Apr 2020
Standard Reference: Methodology, Section C1
Document Reference: StrataBreakdown
Finding: The methodology states the following in Section C.1: "The IFM baseline is the legally permissible harvest scenario that would maximize NPV of perpetual wood products harvests." The audit team understands, from a conference call held 24 April 2020, that legal constraints on riparian management zones (RMZs) in the baseline, as required in WAC 222-30-021, were accounted for through creation of a separate RMZ stratum that was intended to correspond to the RMZ width that would be legally required under the baseline scenario. It was indicated to the audit team that the site class data available from the Washington Geospatial Open Data Portal was used in order to determine the site class for purposes of establishing the RMZ width which, per the definition of "Riparian management zone (RMZ)" in WAC 222-16, varies by site class.
Through independent checks of the mapping in the provided "StrataBreakdown" shapefile, the audit team found that a buffer of approximately 100 feet was applied in order to map the RMZ stratum around Lake Shannon, even though site audit team found that, accordingly to the applicable site class, a much wider buffer seemed to be mandated by the Forest Practice Rules for Type F and Type S waters. Specific examples are described under separate cover in an email to project personnel.
Please clarify the rationale for the application of an approximate 100-foot buffer around Lake Shannon, including a justification that this is consistent with the RMZ protection that would be required under the baseline scenario.
Project Personnel Response: RMZ widths were reviewed for all “type F and S waters” designated by the WA stat-DNR hydro layer. Revisions were made to RMZ widths, including around Lake Shannon, based on site class information (WA geospatial portal http://data-wadnr.opendata.arcgis.com/datasets/site-class). Around Baker and Shannon lakes, the RMZ width was defined from the legal water boundary (WA stat-DNR hydro layer) and then clipped to project boundary. In many cases this results in only a portion of the RMZ included within the project boundary as there is variable distance between the project boundary and the water boundary.
Auditor Response: Through review of the RipZones field in the revised GIS layer, entitled "StrataByManagement", the audit team can confirm that a vuffer around Baker and Shannon Lakes is currently assigned based on site class, as required. Therefore, the non-conformity has been resolved.

NCR 5 Dated 30 Apr 2020
Standard Reference: Methodology, Section C1
Document Reference: StrataBreakdown; PSE_propertyboundaryreview_429
Finding: The methodology states the following in Section C.1: "The IFM baseline is the legally permissible harvest scenario that would maximize NPV of perpetual wood products harvests." The audit team understands, from a conference call held 24 April 2020, that legal constraints on riparian management zones (RMZs) in the baseline, as required in WAC 222-30-021, were accounted for through creation of a separate RMZ stratum that was intended to correspond to the RMZ width that would be legally required under the baseline scenario. It was indicated to the audit team, and is also documented in the "PSE_propertyboundaryreview_429" PowerPoint file, that all water was first removed from the project boundary following the "DNR Hydrography - Water Bodies" layer, available at http://geo.wa.gov/datasets/28a0f93c33454297b4a9d3faf3da552a_1. The overview data for this data source indicates that "DNR Water Bodies (WB) and DNR Watercourses (WC) collectively known as DNR Hydro, contain water feature location and water type that is used by the Forest Practices program to determine the amount and pattern of riparian buffer protection required during forest practices activities." This would seem to support use of this dataset to remove area covered by water, as a basis for creation of the RMZ stratum. However, the audit team notes "Riparian management zone (RMZ)" is defined in WAC 222-16, for Western Washington, as "The area protected on each side of a Type S or F Water measured horizontally from the outer edge of the bankfull width or the outer edge of the CMZ, whichever is greater..." "Channel migration zone (CMZ)" is defined as "the area where the active channel of a stream is prone to move and this results in a potential near-term loss of riparian function and associated habitat adjacent to the stream... For this purpose, near-term means the time scale required to grow a mature forest."
Observation aerial imagery of the White River, as it flows through the project area, indicates that this stream is prone to move and that the movement of the stream has resulted in creation of sandbars, oxbow features, wide alluvial floodplains and other features associated with meandering rivers, all of which preclude growth of a mature forest in the near term. As shown in examples described under separate cover in an email to project personnel, the project area includes land that falls within the outer edge of the channel migration zone for the White River. Because the RMZ buffering used to create the "RMZ" stratum is based on the outer edge of water as indicated in the "DNR Hydrography - Water Bodies" layer, the net effect of this has been that insufficient area adjacent to the White River has been assigned to RMZ protection in the baseline scenario. The audit team notes that the "DNR Hydrography - Water Bodies" layer may not have been intended to comprehensively map the channel migration zones of meandering rivers.

Project Personnel Response: We agree with the audit team's conclusion. Thus, we completed a process to define a Channel Migration Zone (CMZ) for the portion of the White River that bisects the Project Area.

The WA Forest Practices Rules (https://apps.leg.wa.gov/wac/default.aspx?cite=222-16-010) define a CMZ as the “area where the active channel of a stream is prone to move and this results in a potential near-term loss of riparian function and associated habitat adjacent to the stream... For this purpose, near-term means the time scale required to grow a mature forest."

To define mature forest, we reference analysis of Smith et al 2006 (USFS pub) yield curves– 60 year culmination of mean annual increment for Douglas-fir; high productivity and high management intensity in the PNW.

The 299.72 acres CMZ around the White River was defined using a combination of available historic imagery and a data set developed by Oregon State Landscape Ecology, Modeling, Mapping and Analysis group that maps detailed species composition, age class and structure for the Pacific Coast states (https://lemma.forestry.oregonstate.edu /data). This same data set was used in the stratification process for this project. The Oregan State data set was analyzed to delineate the boundary of the CMZ around the White River. Forested areas that are less than 60 years are included within the CMZ boundary. Forested areas greater than 60 years were determined to be mature forests and considered to be outside the boundary of the CMZ, in accordance with the CMZ definition. The CMZ boundary was further refined and finalized using historic imagery that was analyzed to delineate historic channel areas. Any areas that have historically appeared to be part of the active channels were included in the CMZ

The project documentation has been revised to reflect the inclusion of a CMZ around the White River.

The result of this work may be found in the shared Dropbox folder: PSE_Baker_White River Forest Carbon Project_Verification File > GIS FIles > CMZ_RMZ_WMZ.shp.
Auditor Response: Through review of the submitted GIS layer, entitled “StrataByManagement”, the audit team confirmed that the channel migration zone for the White River, as identified by areas having a "RipZones" assignment of "CMZ", had been appropriately defined to include “the area where the active channel of a stream is prone to move and this results in a potential near-term loss of riparian function and associated habitat adjacent to the stream... For this purpose, near-term means the time scale required to grow a mature forest.” The audit team confirmed that the delineated channel migration zone went up to, and conservatively extended into, the limit of the surrounding mature forest area. Therefore, the non-conformity has been resolved.

NCR 6 Dated 30 Apr 2020
Standard Reference: Methodology, Section C1
Document Reference: StrataBreakdown
Finding: The methodology states the following in Section C.1: "The ISO 14064-2 principle of conservativeness must be applied for the determination of the baseline scenario. In particular, the conservativeness of the baseline is established with reference to the choice of assumptions, parameters, data sources and key factors so that project emission reductions and removals are more likely to be under-estimated rather than over-estimated".
The audit team has found that portions of the project boundary, as indicated in the "StrataBreakdown" shapefile, include non-forest features:
1. Two features that appear to be dams, and surrounding infrastructure, on Lake Shannon are included within the project boundary.
2. Numerous instances were noted by the audit team of what appear to be public roads, parking lots and other non-forest infrastructure being included in the project boundary (examples are described under separate cover in an email to project personnel).
The definition of "Forest", as set out in Appendix A.3.1 of the ACR Standard, is applied in aggregate (i.e., it requires that land has at least 10% cover as a whole, which does not necessarily preclude non-forest inclusions so long as the overall canopy cover remains above 10%), so inclusion of non-forest features as described above does not necessarily result in nonconformance to the ACR Standard. However, it appears that most, if not all, of the non-forest inclusions within the project boundary would not have been subject to sampling in the project inventory, either due to safety concerns or other reasons. As evidence of this, the audit team understands that one plot was dropped for safety reasons because it fell on one of the dams on Lake Shannon. Therefore, there appears to be a mismatch between, in statistical terms, the population and the sample frame. The audit team's concern is that mapping of these areas as forest strata in the project area has resulted an in inflation of the baseline carbon stock change, as calculated using Equation 1 of the methodology, because it has resulted in an over-estimate of the area in the baseline strata, per Section C.2 of the methodology. (When multiplied by per-acre values for carbon stock change, an over-estimate in area results in an over-estimate of baseline carbon stock change.)
Project Personnel Response: The Project Boundary was reviewed by PSE's GIS specialist with the assistance of contracted consultants (L&C Carbon and TerraCarbon LLC). Based on this review, the Project Boundary was revised to remove non-forest areas greater than one-acre in size.

A total of 30.01 acres was removed from the Project Boundary, which is made up of the non-forest and small discontiguous pieces of forest land.

The project documentation has been revised to reflect the reduction of acres contained in the Project Boundary.

The result of this work may be found in the shared Dropbox folder: PSE_Baker_White River Forest Carbon Project_Verification File > GIS FIles > ProjectArea.shp

Auditor Response: Through review of the revised project boundary layer, entitled "ProjectBoundary", the audit team has been able to confirm that the footprints of the dams in question have been removed from the project area. Various other portions of nonforest infrastructure remain in the project area although, per the ACR Standard, said areas need not necessarily be excluded from the project area so long as they would be subject to sampling as part of the forest carbon inventory process. The issue of inclusion of nonforest areas is further tracked in NCR 10, and so this finding has become duplicative. Therefore, for administrative purposes, it will be withdrawn.

NCR 7 Dated 30 Apr 2020
Standard Reference: Methodology, Section C1
Document Reference: StrataBreakdown
Finding: The methodology states the following in Section C.1: "The ISO 14064-2 principle of conservativeness must be applied for the determination of the baseline scenario. In particular, the conservativeness of the baseline is established with reference to the choice of assumptions, parameters, data sources and key factors so that project emission reductions and removals are more likely to be under-estimated rather than over-estimated".
As detailed in examples described under separate cover in an email to project personnel, the audit team is concerned that the various processes used to delineate the project boundary have resulted in "slivers"--small areas that could not be feasibly managed for timber production in the baseline--being included in the project boundary, as detected by the audit team through observation of the "StrataBreakdown" shapefile. Many of these slivers are in the portions of the project boundary adjoining Lake Shannon, but some exist elsewhere. The audit team's concern is that inclusion of these areas within the project boundary has resulted an in inflation of the baseline carbon stock change, as calculated using Equation 1 of the methodology, because it has resulted in an over-estimate of the area in the baseline strata, per Section C.2 of the methodology. (When multiplied by per-acre values for carbon stock change, an over-estimate in area results in an over-estimate of baseline carbon stock change.)
Project Personnel Response: The Project Boundary was reviewed by PSE's GIS specialist with the assistance of contracted consultants (L&C Carbon and TerraCarbon LLC). Based on this review, the Project Boundary was revised to remove the smallest slivers from the Project Boundary.

A total of 30.01 acres was removed from the Project Boundary, which is made up of the non-forest and small discontiguous pieces of forest land.

The project documentation has been revised to reflect the reduction of acres contained in the Project Boundary.

The result of this work may be found in the shared Dropbox folder: PSE_Baker_White River Forest Carbon Project_Verification File > GIS FIles > ProjectArea.shp
Auditor Response: Through review of the revised project boundary layer, entitled "ProjectBoundary", the audit team can confirm that the smallest slivers have been removed from the project boundary. However, particularly in the Baker tract, there remain many long stringers of project area, many ranging from 40 to 70 feet in width, that could not be feasibly managed for timber production in the baseline. Therefore, as the non-conformity has not been addressed in full, this finding must remain open. It was the audit team's understanding that there was a plan to assign these stringers of land to a grow-only scenario in the baseline, but this does not appear to have happened.
Project Personnel Response 2: The remaining stringers (slivers) of forestland totaling 105.13 acres are now assigned to no harvest in the baseline. To observe the stringers removed from the baseline harvest, see the GIS information provided.
Auditor Response 2: Through review of the revised stratum layer, entitled "Strata", the audit team can confirm that remaining slivers (all of which fall in the Baker component of the project) have an assignment of [Sliver]="Y". The audit team understands these areas are allocated to a no-harvest status in the baseline. This is sufficient to resolve the non-conformity.

NIR 8 Dated 30 Apr 2020
Standard Reference: ACR Standard, Appendix A.7.3
Document Reference: PSE inventory 2019 calcs and stats_Final
Finding: The ACR Standard requires that "ACR requires a full verification for all projects, including a field visit to the project site, no less frequently than every 5 years... The scope of this verification should include such carbon stock measurements as the verifier requires to provide a reasonable level of assurance that the GHG assertion is without material discrepancy (per ACR's materiality threshold of ±5%)."
In preparation for re-measurement of carbon stocks as required by the ACR Standard, the audit team conducted a review of the quantification of carbon stocking within the project area. In an email to project personnel dated 7 April 2020, the audit team noted a discrepancy in the calculation of onsite carbon stocks at the stratum level, which seemed to result (at least in part) from a discrepancy in plot counts.
Project Personnel Response: [A response to this finding was provided outside the cover of the finding workbook.]
Auditor Response: In response to the audit team's 7 April 2020 email, it was indicated (in an email dated 9 April 2020) that the plots WR49 and B54 had been assigned to the incorrect stratum. The audit team was provided with a revised workbook, entitled "PSE inventory 2019 calcs and stats_Final_Rev_08Apr2020", which included corrected calculations. These corrected calculations matched, to a high level of precision, the independent calculations of the audit team. Therefore, the information request has been satisfied.

NIR 9 Dated 30 Apr 2020
Standard Reference: ACR Standard, Table 2
Document Reference: N/A
Finding: Table 2 of the ACR Standard requires the following: "Project Proponents are required to provide a regulatory compliance attestation to a verification body at each verification. This attestation must disclose all violations or other instances of non-compliance with laws, regulations, or other legally binding mandates directly related to Project Activities." Please provide the required attestation.
Project Personnel Response: PSE updated its initial Monitoring Report to ACR version 2 that includes a statement in Section III.4. confirming the project activity met all material regulatory requirements during the reporting period. The signed Monitoring Report, according to ACR, meets the ACR regulatory compliance attestation.
Auditor Response: Through review of the revised monitoring report, entitled "PSE_Baker-White River_Initial Monitoring Report_V4_14Sept2020", the audit team can confirm that Section III.4 contains a regulatory compliance attestation that meets the requirements of Table 2 of the ACR Standard. Therefore, the information request has been satisfied.

NCR 10 Dated 30 Apr 2020
Standard Reference: ACR Standard, Section 6.B
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Section B3.1; StrataBreakdown; ProjectArea
Finding: Section 6.B of the ACR Standard requires the following: "A GHG Project Plan is a document that describes the Project Activity; addresses ACR eligibility requirements; identifies sources and sinks of GHG emissions; establishes project boundaries; describes the baseline scenario; defines how GHG quantification will be done and what methodologies, assumptions, and data will be used; and provides details on the project's monitoring, reporting, and verification procedures. The GHG Project Plan shall use the ACR template and include the following information... Project location, including geographic and physical information allowing for the unique
identification and delineation of the specific extent of the project."
The GHG project plan indicates the following: "The Project Area is delineated in a shape file archived in the project database and illustrated in Figures 2 and 3. All areas within the project boundary qualify as forestland per the methodology definition of >10 percent stocking, and not currently developed for non-forest uses. This includes some forest areas temporarily un-stocked (e.g. recently harvested). Areas excluded are roads and non-forest areas."
The audit team has identified the following non-conformities with the requirement of the ACR Standard that the "geographic and physical information allowing for the unique identification and delineation of the specific extent of the project" be described in the GHG project plan.
1. The GHG project plan states that "All areas within the project boundary qualify as forestland per the methodology definition of >10 percent stocking [are] not currently developed for non-forest uses... Areas excluded are roads and non-forest areas." As described under NCR 6 above, non-forest areas are included in the project boundary, as shown in both the "StrataBreakdown" and "ProjectArea" shapefiles.
2. In an email sent on 28 April 2020, it was communicated to the audit team that certain areas included in the "ProjectArea" shapefile (but not the "StrataBreakdown" shapefile), and shown in Figures 4 through 9 in the GHG project plan, were identified as non-forest areas and not intended to be included in the project boundary.
Project Personnel Response: The Project Boundary was reviewed by PSE's GIS specialist with the assistance of contracted consultants (L&C Carbon and TerraCarbon LLC). Based on this review, the Project Boundary was revised to remove non-forest areas greater than one-acre in size.

The project documentation has been revised to reflect the reduction of acres contained in the Project Boundary or modeling projections.

The result of this work may be found in the shared Dropbox folder: PSE_Baker_White River Forest Carbon Project_Verification File > GIS FIles > ProjectArea.shp

The reference in the 28 April 2020 email was that original "Project Area" shapefile contained areas of "non-forest" as a reference; however, these "non-forest" acres were not included in the Project Boundary area calculations.

Auditor Response: Through review of the revised project boundary layer, entitled "ProjectBoundary", the audit team has found that some non-forest areas have been removed as described. Specifically, the previously identified nonforest areas that had not been included in the "StrataBreakdown" layer have been excluded from the "ProjectBoundary" layer. In addition, so far as the audit team can tell, all figures within the revised GHG project plan (entitled "PSE_Baker White River_GHG Plan_v2_ 01July2020_Final"), including Figures 4 through 9, have been revised to depict the project boundary as shown in the "ProjectBoundary" layer. Thus, item 2 of the finding as originally issued has been resolved.

However, the following discrepancies continue to exist relative to the description of the project area as found in Section B3.1 of the revised GHG project plan:

1) Roaded areas continue to exist within the project boundary, as outlined in the examples given below; this is inconsistent with the statement in the GHG project plan that "Areas excluded are roads and non-forest areas".

1a) The portion of North River Avenue that runs through the project area, within the Buckley city limits, has not been excised from the project area.

1b) The footprint of the road that continues from south NF-1118 and intersects the northern boundary of the project area (in the Baker tract) has not been excluded from the project area.

1c) While the footprint of the dams themselves have been excluded from the project area in the Baker tract, a substantial number of roads and areas of infrastructure relating to the dams remain included in the project boundary. This is also inconsistent with the statement in the GHG project plan that ""All areas within the project boundary... [are] not currently developed for non-forest uses" (see below). Examples are available from the audit team upon request.

2) Areas currently developed for non-forest uses have been found to remain in the project boundary, as outlined in the examples given below; this is inconsistent with the statement in the GHG project plan that which states "All areas within the project boundary... [are] not currently developed for non-forest uses".

2a) An area of approximately 2 acres in size on the western boundary of the project boundary (in the White River tract) in the northeast 1/4 of the southwest 1/4 of Section 13 in Township 20 North Range 5 East has clearly been developed for an agricultural use.

2b) An area of approximately 1 acre in size on the northern boundary of the project boundary (in the White River tract) in the northeast 1/4 of the southwest 1/4 of Section 28 in Township 20 North Range 6 East has clearly been developed for an agricultural use.

2c) An portion of the project area, of approximately half an acre in size, that projects eastward between two agricultural fields in Township 20 North Range 6 East (White River tract) has not been excluded.

Please note that the examples provided above are not intended to include an exhaustive list of any and all discrepancies.

Project Personnel Response 2: The PSE project team completed a review of the entire project area to address discrepancies related to non-forest area and roads. This process resulted in the removal of an additional 38.02 acres from the project area. Thus, the total project area was reduced from 4,661.92 acres to 4,623.90 acres. The PSE project team used separate workflows to identify and remove non-forest areas and roads.

NF areas
Non-Forested areas, defined as land that has been altered from a forested state to a non-forest land use (i.e. agriculture or structures), were removed from the project's geographic boundary. All potentially non-forested areas were identified through a visual inspection of aerial imagery, Esri's world imagery service was used. Areas that were deemed to have been altered from a forested state to a non-forest land use were excised from the project boundary if they were greater than one acre in size. Roads were processed separately using a different workflow.

Roads
Public roads that are not under PSE control have been removed from the project boundary as non-forested land. Public roads were identified using PSE purchased HERE roads data. Based on reporting from the Federal Highway Administration Research and Technology it is assumed the roads are 2 lanes wide, measuring 18ft wide. Private roads that are 100% PSE controlled where PSE can safely ensure that all traffic can be controlled, were included in the project boundary, because these road segments are within the inventory sample frame and were available to be selected for inventory plot locations.

The GHG Plan has been revised to clarify to state that some private roads are included in the project area that are not contained in the state/county road or in the PSE purchased HERE roads data.
Auditor Response 2: Through review of Section B3.1 of the revised GHG project plan, entitled "PSE_Baker White River_GHG Plan_v3_ 23Aug2020", the audit team can confirm that the GHG project plan no longer contains a blanket assertion that roaded and non-forest lands have been removed. Instead, a more nuanced description of the process used to define the project boundary has been provided. Through spot checks on the revised project boundary layer, entitled "projectBoundary", the audit team can confirm that all non-forest areas greater than one acre in size, and roads not under PSE control, have been removed. Therefore, the revised project boundary layer is consistent with Section B3.1 of the revised GHG project plan, and the non-conformity has been resolved.

NCR 11 Dated 22 May 2020
Standard Reference: Methodology, Section C1
Document Reference: StrataBreakdown
Finding: This is a follow-up to NCR 6 based on observations made during the site visit.
The methodology states the following in Section C1: "The ISO 14064-2 principle of conservativeness must be applied for the determination of the baseline scenario. In particular, the conservativeness of the baseline is established with reference to the choice of assumptions, parameters, data sources and key factors so that project emission reductions and removals are more likely to be under-estimated rather than over-estimated".
During the site visit, the audit team observed that the area where Baker Lake Road bisects the project area, in the vicinity of plot B63, has not been excised from the project area. As with NCR 6, the concern is that this area occupied by the footprint of Baker Lake Road and its associated right-of-way would not have been subject to sampling in the project inventory due to safety concerns. As part of follow-up desk review activities, the audit team has noted other instances of roads being included in the project boundary (e.g., the southwest ¼ of Section 35, Township 20 N Range 06 East, where a road emanating from Highway 410 runs through the project area). Therefore, there appears to be a mismatch between, in statistical terms, the population and the sample frame. The audit team's concern is that mapping of these areas as forest strata in the project area has resulted an in inflation of the baseline carbon stock change, as calculated using Equation 1 of the methodology, because it has resulted in an over-estimate of the area in the baseline strata, per Section C.2 of the methodology. (When multiplied by per-acre values for carbon stock change, an over-estimate in area results in an over-estimate of baseline carbon stock change.)
Project Personnel Response: The Project Boundary was reviewed by PSE's GIS specialist with the assistance of contracted consultants (L&C Carbon and TerraCarbon LLC). Based on this review, the Project Boundary was revised to remove the portion of Bake Lake Road that bisects the Project Boundary. Other public road segments that bisect the Project Boundary were also removed.

The project documentation has been revised to reflect the reduction of acres contained in the Project Boundary due to the removal of these road segments.

The result of this work may be found in the shared Dropbox folder: PSE_Baker_White River Forest Carbon Project_Verification File > GIS FIles > ProjectArea.shp
Auditor Response: Through review of the revised project boundary layer, entitled "ProjectBoundary", the audit team has found the portion of the Baker Lake Road that bisects the project boundary has been removed as indicated. While certain other roads were found to remain in the project boundary (see NCR 10), the audit team is reasonably assured that measurement of any inventory plots falling with the footprint of said roads would not present a safety hazard, since said roads seem to be either private roads or roads where traffic is unlikely to be flowing at a high rate of speed. Therefore, the non-conformity has been resolved.

NIR 12 Dated 22 May 2020
Standard Reference: Methodology, Section C1
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Section E1.1
Finding: The methodology states the following in Section C1: "Required inputs for the project NPV calculation include... costs of logging… Project Proponents shall include roading and harvesting costs as appropriate to the terrain and unit size." A cost of $8/mbf for "Roads" is indicated on page 39 of the GHG project plan. During the web-based meeting held on 8 May 2020, the audit team was informed that this cost was intended to represent the cost of maintaining existing roads. However, during the site visit conducted 12-14 May 2020, the audit team observed that much of the project area was far from a road that would accommodate log hauling, leading to significant doubts as to whether or not the existing road network would be sufficient to accommodate log hauling as contemplated in the baseline scenario. If the existing road network is not sufficient for this (i.e., if additional road creation would be required under the baseline scenario), the requirement of Section C.1 of the methodology that "roading and harvesting costs as appropriate to the terrain and unit size" be included has been violated.
Project Personnel Response: The project development team recognizes the concern of the audit team regarding road costs. To address concerns that cost assumptions were too low and unsupported by documented sources, we have substantially revised the price and cost components of the modeling to values reported in the peer-reviewed literature in Diaz et al. (2018). These new values are presented in detail in Section E of the GHG Plan. The Diaz et al. (2018) values were deemed appropriate as they are recent, specific to western Washington, and also utilized in a business-as-usual baseline counterfactual modeling exercise. This resulted in a higher $15/mbf road maintenance cost. It also has a $35/acre/year ($86 ha/year in the paper) for general administration which is a cost component not included in the original baseline modeling, which commonly includes road building costs. While Diaz et al (2018) do not explicitly call out road construction as part of this cost, other sources such as the University of Alabama's Costs & Trends of Southern Forestry Practices 2018 (https://www.aces.edu/blog/topics/forestry/costs-trends-of-southern-forestry-practices-2018/) state road construction costs are included in their "Custodial Management" cost of $13.73/acre.

We consider the substantially higher costs of road maintenance and the addition of a general administration fee to be suitable for baseline modeling even though the majority of the property is adequately roaded and has been logged.

It should be noted that the NPV for the baseline scenario using the higher costs detailed above as per Diaz et al. (2018) is $39,073,362. Thus, road building costs would have to exceed $37 million dollars before rendering the baseline infeasible and less financially beneficial as compared to the with-project scenario.

Auditor Response: Through review of Section E1.1 of the revised GHG project plan, entitled "PSE_Baker White River_GHG Plan_v2_ 01July2020_Final", against Table 3 of the study by Diaz et al. (2018), the audit team was able to confirm that the costs provided in Diaz et al. (2018) are reflected in the baseline modeling as described in the GHG project plan. The audit team agrees that the augmented road maintenance costs are more reflective of the cost of road work in the baseline scenario. While it continues to seem possible that the actual costs for road construction and maintenance would exceed $15/mbf, the audit team agrees that, given the significant commercial value of harvest within the project area, increases in road costs within a realistic range are unlikely to significantly affect the baseline scenario. The use of values broadly representative of the Pacific Northwest seems appropriate and somewhat conservative, given that both the Baker and White River tracts are relatively close to a highway. Therefore, the information request has been satisfied.

NIR 13 Dated 22 May 2020
Standard Reference: Methodology, Section C1
Document Reference: N/A
Finding: The methodology states the following in Section C1: "Consideration shall be given to a reasonable range of feasible baseline assumptions and the selected assumptions should be plausible for the duration of the baseline application." Please provide evidence that consideration has been given to a reasonable range of feasible baseline assumptions (regarding, for example, costs and revenue values).
Project Personnel Response: The project development team considered a range of feasible baseline assumptions before selecting the assumptions used to model the baseline over the initial 20-year crediting period. Table 7 of the GHG Plan was revised to include a brief description of key assumptions evaluated prior to selecting the final baseline assumptions.

Auditor Response: The audit team reviewed the description provided in Table 7 of the revised GHG project plan, entitled "PSE_Baker White River_GHG Plan_v2_ 01July2020_Final". The actions described therein are appropriate and are adequate to meet the requirement of the methodology. Therefore, the information request has been satisfied.

NIR 14 Dated 22 May 2020
Standard Reference: Methodology, Section C1
Document Reference: StrataBreakdown
Finding: The methodology states the following in Section C1: "The IFM baseline is the legally permissible harvest scenario that would maximize NPV of perpetual wood products harvests." The audit team understands, from a conference call held 24 April 2020, that legal constraints on riparian management zones (RMZs) in the baseline, as required in WAC 222-30-021, were accounted for through creation of a separate RMZ stratum that was intended to correspond to the RMZ width that would be legally required under the baseline scenario. Through spot checks against stream data obtained directly from the DNR Water Type Maps, the audit team has confirmed that a good-faith effort has been made to account for Type F and Type S streams in creating the RMZ stratum (but see findings 3 through 5). However, spot checks have found that streams classified as Type N in the DNR Water Type Maps have not been included in the RMZ stratum, even though protection from harvest for Type Np and Type Ns streams is required under WAC 222-30-021(2). Please provide a description of how each applicable requirement for protection of Type Np and/or Type Ns streams is appropriately accounted for in the baseline.
Project Personnel Response: We agree with the audit team's assessment and have taken the following steps to further delineate type N waters.

Type N waters were identified using the WA state hydro data. According to the WA Forest Practices Rules, type 5 were designated as Ns and Type 4 were designated as Np. Where the type was unclear, the conservative approach was used and the stream was treated as Np. For Np types, a fifty-foot no-harvest buffer was designated based upon the length of the stream and the distance from Type F or S waters. These were established along each side of the Type Np Water required under WAC 222-30-021(2)(b)(i). Ns (seasonal) waters do not impact baseline modeling.

Note: Np vs Ns waters were defined using the lengths determined from the hydro layer clipped to the project boundary. A lot of overlap of Np buffers with RMZs occurred. RMZ designation was prioritized because this is the more restrictive management requirement. As such, Np buffers may appear shorter since the distance is measured from the intersection of the Type F or S stream.

The project modeling and documentation has been revised to reflect the inclusion of buffers around N waters.

The result of this work may be found in the shared Dropbox folder: PSE_Baker_White River Forest Carbon Project_Verification File > GIS FIles > CMZ_RMZ_WMZ.shp.

Auditor Response: Through review of the revised layer, entitled "StrataByManagement", the audit team was able to confirm that at least some Type N waters were buffered as described in response to this finding. However, in conducting review of a risk-based sample of the project area using the , the audit team identified two instances of watercourse segments that were assigned a FP_WTRTY_C value of "N" and a FP_PERIOD_ value of "u" (unknown) that were not accounted for in the buffering in "StrataByManagement". The metadata for this shapefile (accessed at https://fortress.wa.gov/dnr/adminsa/GisData/metadata/ROPA_WCHYDRO.pdf) states the following in the description of the FP_WTRTY_CD field: "The FP_WTRTY_CD (N) combined with the FP_PERI OD_CD (p or s) make up the 'Np' and 'Ns' water types. Note that the Np / Ns break is determined by on-the-ground observation only. There has been no direct translation of the former type 4 and 5 to the new types Np and Ns." Following the response to the finding, watercourse segments with a FP_WTRTY_C value of "N" and a FP_PERIOD_ value of "u" should have been conservatively assumed to be Np watercourse segments.
Based on the response to the finding and the data reviewed, the audit team suspects that the field used to perform the buffering may have been SL_WTRTY_C. The two watercourse for which buffering was not applied both had a SL_WTRTY_C value of 9. A buffering approach that only applied a buffer where SL_WTRTY_C=4 or SL_WTRTY_C=5 would not have identified these watercourse segments as requiring a buffer.
Therefore, the finding cannot be closed and the audit team requests additional justification regarding how each applicable requirement for the protection of Type Np streams is appropriately accounted for in the baseline.
Project Personnel Response 2: The PSE project team completed a review of every N waterway within the entire project area, using the information contained in the WA DNR Hydro Layer at: https://geo.wa.gov/datasets/816586b10c6c4954883b236f9fff208f_0

All N waterways within the project geographic boundary were buffered as required by Section 222-30-021 of the Washington Administrative Code. https://apps.leg.wa.gov/wac/default.aspx?cite=222-30-021

The following logic was used to buffer N waterways.
Each branch of the N waterway was measured from its end point back to its confluence with an F or S waterway. This length measurement was used to determine how long the RMZ buffer needed to be, measured from the F/S confluence, as per the requirements of Section 222-30-021 – (2)(b).

- Length greater than or equal to 1000ft à 500ft long buffer
- Length between 301ft and 999ft à 300ft OR half the full length, whichever is longer
- Length less than or equal to 300ft à full length

Regardless of buffer length, all buffers are 100ft wide (50' on each side of the waterway).

N waterway buffers are modeled as no harvest in the baseline.

Auditor Response 2: The audit team reviewed the revised layer, entitled "WaterBuffers", to see whether the finding could be closed. Unfortunately, a review of this layer showed notable discrepancies between the requirements of WAC 222-30-021 and the extent to which Type N watercourses were buffered.
It is indicated in WAC 222-30-021(2)(b)(7) that “At least fifty percent of a Type Np Waters’ length must be protected by buffers on both sides of the stream (2-sided buffers).” The tables included in WAC 222-30-021(2)(b), including the table cited in response to the finding as well as the table found below WAC 222-30-021(2)(b)(7), appear to be in line with this general principle. A number of instances were identified in which less than 50% of the total watercourse length received protection. Examples are provided in an email under separate cover and briefly summarized below.
1. The overall watercourse was mapped, in the data maintained by the Washington DNR, to be approximately 1,000 feet in length, but a buffer was only applied to a little over 300 feet of distance from confluence with the Type F or S watercourse
2. The overall watercourse was mapped, in the data maintained by the Washington DNR, to be approximately 5,000 feet in length, and was not provided any specific protection.
3. The overall watercourse received protection of far less than 50% of its length.
Therefore, the information request has not been satisfied.
Project Personnel Response 3: The PSE project team completed another review of every N waterway within the entire project area, using the information contained in the WA DNR Hydro Layer at: https://geo.wa.gov/datasets/816586b10c6c4954883b236f9fff208f_0

We reviewed and revised as necessary the buffer lengths on N waterways greater than 1,000 feet to comply with Section 222-30-021 of the Washington Administrative Code, including subsection (2)(b)(7) that states watercourses greater than 1,000 feet in length from the intersection of a Type F or S watercourse shall be buffered 50 percent of the length. Then a 50-foot-wide buffer on each side of the watercourse was applied.

A revised water buffers GIS layer was created. Then a new intersection table was created. The new N waterways buffer acreage increased from 19.31 acres to 43.83 acres, an increase of 24.52 acres. The 43.83 acres of N waterways were not harvested in the baseline scenario.

The following documents have been revised to incorporate revisions necessary because of increasing the N waterway buffers and resultant increased no harvest acres modeled in the baseline scenario. The revised documents are available on the shared Dropbox:
GIS Files > Updated_14Sept2020 > Finalized_9_14 > WaterBuffers shapefile
GIS Intersection worksheet > FinalIntersectionTables_11September2020.xlsx
NPV_Model Files > see modeling files dated September 2020
GHG Plan > PSE_Baker White River_GHG Plan_v4_ 13Sept2020
GHG Plan Appendix ERT Worksheet > Appendix E_Baker-White River Forest Carbon Project-ACR ERT Worksheet_13Sept2020
Monitoring Report Appendix ERT Worksheet > Appendix A_PSE_ACR_ERT worksheet_13Sept2020

Auditor Response 3: Through review of the revised shapefile, also entitled "WaterBuffers", the audit team has been able to confirm that the watercourse buffering was applied as indicated in the project response, and that this constitutes a conservative implementation of the on-the-ground requirements set out in WAC 222-30-021. Therefore, the information request has been satisfied.

NCR 15 Dated 22 May 2020
Standard Reference: Methodology, Section C1
Document Reference: N/A
Finding: The methodology states the following in Section C1: "The IFM baseline is the legally permissible harvest scenario that would maximize NPV of perpetual wood products harvests." The Washington Forest Practice Rules, in WAC 222-30-021, set out requirements for protection of forest within riparian management zones (RMZs). The audit team understands, from a conference call with project personnel held on 8 May 2020, that, while a good-faith effort had been made to delineate the spatial extent of RMZs as part of the "RMZ" stratum, the riparian protections of WAC 222-30-021 were not specifically modeled for this stratum. Please demonstrate that any applicable requirements of WAC 222-30-021 have been duly taken into account in modeling the baseline.
Project Personnel Response: The Baseline modeling was revised to exclude or limit harvest as follows:

RMZ - Core - No harvest within the 50 foot core zone width for all site classes.

RMZ - Inner Zone Width - No harvest within the variable width buffer based on site class.

RMZ - Outer Zone Width - Baker Complex-retain twenty riparian leave trees per acre after harvest > 12" dbh and plant 195 trees per acre. White River-meet the leave tree requirements of twenty riparian leave trees per acre after harvest > 12" dbh through offsets in the CMZ, as per WAC 222-30-021 (c)(C)(iv) and plant 195 TPA.

RMZ - N streams - No harvest in 50' buffer along defined length of type Np waters (see response to Finding Number 14).

CMZ - No harvest.

WMZ - No harvest.
Auditor Response: Through review of the revised FVS .key files "FVS_PSEb_OUT" and "FVS_PSEwr_OUT", the audit team agrees that the "OUT" prescription complies with the relevant requirements for dispersed retention in WAC 222-30-021(1)(c). While the model scripts do not contain a specific test to ensure that the retained trees are at least 12 inches in diameter, the THINBTA (THIN from Below to Trees per Acre target) keyword is used to implement the thin. The audit team has found that, based on the project inventory data, there are fewer than 20 trees conifers at least 12 inches in diameter per acre in the HWD and RMZ strata. However, the requirements from WAC 222-30-021(1)(c)(i) state that " If riparian leave trees of twelve inches dbh or greater are not available, then the next largest conifers must be left". At least 20 conifers per acre are present in all strata, and the THINBTA keyword ensures that the "next largest conifers" are retained.
For all other portions of the riparian management zone, the audit team agrees that it is conservative to assume that no harvest occurs in the baseline, and that a no-harvest prescription is consistent with the requirements of the Washington Forest Practice Rules.
Therefore, the non-conformity has been resolved.

NIR 16 Dated 22 May 2020
Standard Reference: Methodology, Section C1
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Section E1.1
Finding: The methodology states the following in Section C1: "The IFM baseline is the legally permissible harvest scenario that would maximize NPV of perpetual wood products harvests." The Washington Forest Practice Rules, in WAC 222-30-025, set out a suite of requirements for size and timing of even-aged harvests. The net effect of these requirements is to restrict the amount of the land base that may be subject to clearcut harvest within a short period of time. Given that Figure 12 of the GHG project plan depicts a dramatic drop in onsite carbon stocks under the baseline scenario (a rough calculation from inspection of the figure suggests an 80% decrease in onsite carbon stocks between 2020 and 2021), the compliance of the baseline modeling with the requirements of WAC 222-30-025 is seen as an elevated area of risk by the audit team. Therefore, please provide a detailed description of how each applicable requirement in WAC 222-30-025 is satisfied by the baseline scenario.
Project Personnel Response: The baseline scenario was revised from the initial scenario where all the baseline harvest occurred in the initial period to the current baseline initial harvest occurring over a four-year period, with the majority occurring in the initial two years. The baseline scenario is a counterfactual based on a stratified inventory across the project boundary. As such, the model is not spatially explicit, nor does the Methodology require the use of a spatially explicit model.

WAC 222-30-025 sets some limitations on timber harvesting by even-age harvest methods. A key limitation is that individual harvest unit size may not exceed 240 acres. The baseline scenario limits even-age harvests to no more than 120 acres. The other key element of the limitations under this rule section is the adjacency requirements under (3), (4), and (6). Since there is no requirement to spatially model a counter factual scenario based on a stratified inventory (not a stand-based inventory), there is no way to definitively demonstrate compliance with an adjacency requirement. However, by limiting the size of even-aged harvest units, implementing the baseline harvest scenario over multiple time periods, and recognizing that buffers along Type S, F and N Waters are considered fully stocked, mature stand that are not counted as contiguous acreage harvested by even-aged methods, we submit that the current baseline scenario meets the requirement of WAC 222-302-025.

Auditor Response: The audit team agrees, based on review of the "52554 PARAMETER AcresCutYr" output in the PSE_Baseline_Jun2020.lst file, that the initial harvest is now modeled to occur over a four-year period, with all of the initial clearcut harvesting scheduled to occur over the first two years. Unfortunately, it is still not at all clear that each requirement of WAC 222-30-025 has been satisfied. The audit team's remaining concerns are outlined below.

1) Although the audit team appreciates that land within the project area has been allocated as off-limits to clearcut harvest (e.g., through riparian restrictions), and that the clearcut harvest is now spread out over two years, there remains an incredibly steep decline in onsite carbon stocks within the first two years of the project. The baseline value of carbon stored in above and below ground live trees experiences a 78% drop over the first two years of the project (as calculated through the formula =(C5-E5)/C5 in worksheet "PSE_Harvest_Schedule" of the workbook "Appendix E_Baker-White River Forest Carbon Project-ACR ERT Worksheet_01July2020_Final". It is notable that the steep decline is almost identical to the rate of decrease noted in this finding when originally issued. Whether this decrease occurs over one year or two years (or even three or four or five years) has no bearing on whether WAC 222-30-025 is complied with, given the "green-up" requirements in WAC 222-30-025(4), which state, among other things, that "At least ninety percent of the unit's perimeter is in stands of trees that have survived on site a minimum of five growing seasons or, if not, have reached an average height of four feet".

2) As indicated in the "52554 PARAMETER AcresCutYr" output in the PSE_Baseline_Jun2020.lst file, a very high level of clearcut harvest is modeled to occur in the first two years of the baseline. A total of 1,780 acres (877.747 + 921.909) of clearcut harvest is modeled to occur in the Baker tract; this is 65% of the reported 2,768 acres in the Baker Tract. A total of 1,387 acres (690.763 + 696.028) of clearcut harvest is modeled to occur in the White River tract; this is 72% of the reported 1,924 acres in the White River tract. Even if 120-acre harvest units are assumed, it is very difficult to imagine that someone could manage to clearcut 65% or more of a given landbase within a two-year span of time without violating any requirement of WAC 222-30-025(4).

3) The audit team understands that the model is not spatially explicit and that the methodology does not require a spatially explicit modeling process. However, the methodology does require the following: "The ISO 14064-2 principle of conservativeness must be applied for the determination of the baseline scenario. In particular, the conservativeness of the baseline is established with reference to the choice of assumptions, parameters, data sources and key factors so that project emission reductions and removals are more likely to be under-estimated rather than over-estimated..." In the judgment of the audit team, it should be quite feasible to constrain the amount of clearcut harvesting that could be implemented at any given time-step, such that the maximum amount of clearcut harvesting is set based on conservative assumptions (i.e., assumptions that ensure that emission reductions and removals are more likely to be under-estimated rather than over-estimated) in light of the uncertainty inherent in attempting to mimic spatial constraints in an aspatial harvest scheduling process.

Given the concerns outlined above, the information request has not been satisfied, and the finding must remain open.

Project Personnel Response 2: The Project Proponent has revised the project baseline harvest scenario. Although the methodology does not require a spatially explicit modeling process, the Project Proponent created a web-based map to demonstrate that the harvest units in the revised baseline meet the “green-up” requirement of WAC 222-30-025. See: https://www.arcgis.com/home/webmap/viewer.html?webmap=6e8f2af96a6d4f41b19ff08619376136&extent=-121.9236,48.5432,-121.873,48.559

Regarding audit team item 3) – the methodology also states that “However, using the conservativeness principle does not always imply the use of the “most” conservative choice of assumptions or methodologies”.
Auditor Response 2: Through review of the referenced web-based map and the GIS layer entitled "YearOneHarvestZones", the audit team can confirm that an appropriate demonstration has been undertaken regarding the amount of area that may be harvested during the first five-year period. The audit team agrees that the areas identified as [YearOneHarv]="H" in this layer could legally be harvested during the first five-year period. Therefore, the analysis provided is sufficient to demonstrate the amount of land that could be harvested in the first five-year period. The information request has been satisfied, noting that detailed checks on how this information was incorporated into the baseline modeling will be carried out as part of the quantitative analysis phase.

NIR 17 Dated 22 May 2020
Standard Reference: Methodology, Section D6
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Section E3
Finding: The methodology states the following in Section D6:
"If the project decreases wood product production by >5% relative to the baseline then the Project Proponent and all associated land owners must demonstrate that there is no leakage within their operations – i.e., on other lands they manage/operate outside the bounds of the ACR carbon project. Such a demonstration must include one of the following:
• Historical records covering all Project Proponent ownership trends in harvest volumes paired with records from the with-project time period showing no deviation from historical trends over most recent 10-year average; or
• Forest management plans prepared ≥24 months prior to the start of the project showing harvest plans on all owned/managed lands paired with records from the with-project time period showing no deviation from management plans; or
· Entity-wide management certification that requires sustainable practices (programs can include FSC, SFI, or ATFS). Management certification must cover all entity owned lands with active timber management programs."
Section E3 of the GHG project plan states the following: "Due to the project activity, there will be more than a 5% decrease in wood product production relative to the baseline. The GHG project plan states that "...the project proponent will obtain an “entity-wide management certification” that covers all lands with active timber management programs within one year of the project Start Date."
During a conference call held on 28 April 2020, it was explained to the audit team that, because the scope of forestlands owned or managed by the project proponent is extremely limited, the likelihood of any activity-shifting leakage is very small (or nonexistent). However, it is still incumbent upon the project proponent to provide a demonstration of the absence of activity-shifting leakage following one of the three specific options listed in the methodology. While entity-wide certification under ATFS would certainly satisfy the third option, the audit team understands that such certification has not yet been obtained. Please provide a demonstration of the absence of activity-shifting leakage that specifically includes at least one of the three options specified in the methodology.
Project Personnel Response: On July 27,2020, ACR issued guidance regarding the IFM methodology Section D6. Monitoring of Activity -Shifting Leakage. The guidance states: ” If the project decreases wood product production by >5% relative to the baseline then the Project Proponent and all associated land owners must demonstrate that there is no leakage within their operations – i.e., on other lands they manage/operate outside the bounds of the ACR carbon project. This demonstration is not applicable if Project Proponent and associated landowners enroll all of their forested landholdings, owned and under management control, within the ACR carbon project”. See: https://americancarbonregistry.org/carbon-accounting/standards-methodologies/improved-forest-management-ifm-methodology-for-non-federal-u-s-forestlands/errata-and-clarifications-for-acr-ifm-methodology-v1-3_7.27.20.pdf

Auditor Response: The audit team agrees that the Errata & Clarification issued by ACR on 27 July 2020 clarifies that the demonstration of the absence of activity-shifting leakage "is not applicable if Project Proponent and associated landowners enroll all of their forested landholdings, owned and under management control, within the ACR carbon project." However, it is not currently clear to the audit team that the project proponent has enrolled all of its forested landholdings, owned and under management control, within the project. As described to the audit team during a conference call held on 27 April 2020, the project proponent possesses various other holdings. Although the audit team received the impression that most of the other holdings in question are not forestland, it was not completely clear to the audit team that none of the other holdings are forestland.
Please clarify whether any forestlands, owned and under management control by the project proponent, exist outside the project boundaries. If asserting in the negative, please provide documentary evidence or a formal attestation by management to support any claims made.
Project Personnel Response 2: PSE has provided an attestation to the verification body via email that confirms the project proponent has enrolled all of its forested landholdings, owned and under management control, within the project.
Auditor Response 2: The declaration provided in response to the finding, "Forest Carbon Project Real Estate Declaration - SIGNED (2020-09-15)", was reviewed by the audit team. The declaration states that “PSE represents and warrants that the Company does not own or manage any property or timber rights for commercial timber harvest other than the properties included in the Project". The declaration does not specifically assert that no forestlands, owned and under management control by the project proponent, exist outside the project boundaries. Therefore, the declaration does not specifically address the criterion set out in the Errata & Clarification that, if satisfied, would permit a waiver of the requirements set out in Section D6 of the methodology. Therefore, the information request has not been satisfied.
Project Personnel Response 3: PSE revised its forestland owner attestation to meet the requirements stated in ACR's Errat & Clarification issued July 27, 2020. The revised attestation documment named "Attestation of Property RIghts - SIGNED (2020-09-30).pdf" was submitted by email to the audit team on October 1, 2020.
Auditor Response 3: As indicated, the document "Attestation of Property RIghts - SIGNED (2020-09-30)" provides a clear attestation that “PSE represents and warrants that all of the Company's forestland holdings, owned or under management, are enrolled in the Baker-White River Forest Carbon Offset Project”. This attestation has been supported by information provided by project personnel in interviews, in which the extent of the ownership of real property by the project proponent was discussed. Given that, by definition, the landholdings of the project proponent are primarily related to energy supply and distribution infrastructure, the likelihood that unreported forested landholdings outside of the project area are owned by the project proponent is relatively low, and so the audit team has reasonable assurance regarding the assertion discussed above. Therefore, the information request has been satisfied.

NCR 18 Dated 22 May 2020
Standard Reference: ACR Standard, Appendix A, Section A.3.3
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Section A3
Finding: The ACR Standard requires the following: "Table 4 details unique eligibility criteria for AFOLU carbon projects, provides a definition of each criterion, and articulates ACR requirements specific to AFOLU project types. Project Proponents must also refer to Chapter 3 of the ACR Standard for additional requirements that apply to all project types. GHG Project Plans shall address each of these criteria."
In review of Section A3 of the GHG project plan, the audit team has identified the following discrepancies in terms of whether and how each of the eligibility criteria are addressed.
1. Under "Project Start Date", it is stated that "Project start date is February 4, 2020, which is the date that the project was submitted for listing review, as per ACR Standard, Version 6.0, Appendix A." The audit team has found that the listing documentation was not submitted for listing review until 26 February 2020 (see also NIR 2).
2. Under "Ownership Type", it is stated that the project meets the requirement by "Provid[ing] copies of the full interest fee simple land titles for all tax parcels within the Project Area to demonstrate ownership is non-federally owned forestland within the United States". However, the "full interest fee simple land titles for all tax parcels within the Project Area" have not been provided; only a sample of ownership documentation has been provided to the audit team.
3. Under "Permanent", it is not clarified whether the project proponent has or will "enter into a legally binding Reversal Risk Mitigation Agreement with ACR/Winrock that details the risk mitigation option selected and the requirements for reporting and compensating reversals", as required under Table 4.
4. As far as the audit team can tell, the ""Regulatory Compliance" criterion from Table 2 in Chapter 3 of the ACR Standard is not included.
Project Personnel Response: Section A3 of the GHG Plan has been revised as follows:

1) The Project Start Date as been revised as per response to Finding Number 2.

2) The "Method to Meet Requirement" of Ownership was revised to clarify the information provided to meet this eligibility requirement. To meet this requirement for the initial reporting period, in addition to providing all available title reports, a declaration from PSE stating that all the parcels in the project boundary are owned and timber rights are controlled by PSE will be provided. PSE staff is conducting a search of tax parcel ownership available on the relevant county websites to demonstrate county records confirm PSE ownership of all parcels within the project boundary. This information will be provided to ACR prior to final approval of the initial project validation.

3) PSE will enter into a legally binding Reversal Risk Management Agreement with ACR prior to the completion of the initial reporting period validation/verification.

4) A regulatory compliance row was added to the Table 1.

Auditor Response: The audit team reviewed Section A3 of the revised GHG project plan, entitled "PSE_Baker White River_GHG Plan_v2_ 01July2020_Final", to see whether the finding could be closed. The audit team's feedback regarding the responses, provided in the same order as the items listed in the original finding, is as follows:
1. As indicated in resolution to NIR 2, the project start date has changed, and the information provided regarding the project start date in Section A3 is now accurate. Therefore, the non-conformity has been resolved.
2. The suggestion that "full interest fee simple land titles for all tax parcels within the Project Area" have been provided has removed, and the revised text accurately characterizes actions taken to date. The audit team sought guidance from ACR regarding this matter and received the following in email from ACR personnel dated 27 May 2020: "Due to the unique nature of this situation (deeds dating back to the early 1900's), ACR is comfortable with PSE demonstrating proof of title for the parcels in question via a county assessors database search coupled with an attestation of land/offset title. My understanding is this can be completed prior to finalizing the RP1 validation/verification so a deviation wouldn't be warranted." However, this is consistent with the description as currently provided in the GHG project plan. However, the GHG project plan is unclear on when "a declaration from PSE stating that all the parcels in the project boundary are owned and timber rights are controlled by PSE will be provided", and the guidance from ACR suggests that such documentation must be provided "prior to finalizing the RP1 validation/verification" (i.e., prior to issuance of a validation and verification opinion). Because such documentation has not yet been provided to the audit team, this particular item cannot be closed.
3. Under "Permanent", it is still not clarified within the GHG project plan whether the project proponent has or will "enter into a legally binding Reversal Risk Mitigation Agreement with ACR/Winrock that details the risk mitigation option selected and the requirements for reporting and compensating reversals", as required under Table 4. Therefore, this particular item cannot be closed.
4. An entry for "Regulatory Compliance" has now been included in Section A3 that appropriately details actions that will be taken to meet this criterion.
Because items 2 and 4 have not yet been fully addressed, this finding must remain open.
Project Personnel Response 2: Response to items:

2) The GHG plan Table 1 - "Ownership Type" has been revised to state:
a) declaration from PSE stating that all the parcels in the project boundary are owned and timber rights are controlled by PSE will be provided to the Verification Body prior to finalization of the RP1 validation/verification; and
b) PSE staff is also conducting a search of tax parcel ownership available on the relevant county websites to demonstrate county records confirm PSE ownership of all parcels within the project boundary. This information will be provided to the Verification Body prior to finalization of the RP1 validation/verification.

3) The GHG plan Table 1 - "Permanent" has been revised to state:
The project proponent will enter into a legally binding Reversal Risk Mitigation Agreement with ACR/Winrock that details the risk mitigation option selected and the requirements for reporting and compensating reversals prior to finalization of the RP1 validation/verification.

Auditor Response 2: Through review of Section A3 of the revised GHG project plan, entitled "PSE_Baker White River_GHG Plan_v3_ 23Aug2020", the audit team can confirm that the items have been addressed or are no longer applicable, as follows:
2. Under "Ownership Type", it is now made clear that the actions described will be undertaken "prior to finalization of the RP1 validation /verification". This is sufficient to address this item.
3. Under "Permanent", it is now clarified that the project proponent will enter into a legally binding Reversal Risk Mitigation Agreement with ACR/Winrock that details the risk mitigation option selected and the requirements for reporting and compensating reversals.
Because all of the items have been addressed, the non-conformity has been resolved.

NCR 19 Dated 22 May 2020
Standard Reference: ACR Standard, Section 6.B
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Section A6
Finding: Section 6.B of the ACR Standard requires the following: "A GHG Project Plan is a document that describes the Project Activity; addresses ACR eligibility requirements; identifies sources and sinks of GHG emissions; establishes project boundaries; describes the baseline scenario; defines how GHG quantification will be done and what methodologies, assumptions, and data will be used; and provides details on the project's monitoring, reporting, and verification procedures. The GHG Project Plan shall use the ACR template and include the following information... Physical conditions prior to project initiation" and "Project technologies, products, services, and expected level of activity". The GHG project plan does not include this information in Section A6, the location required by the ACR template for inclusion of the information.
Project Personnel Response: The GHG Plan has been revised to include the physical condition prior to project initiation and the project technologies, products, services and expected level of activity in Section A6.
Auditor Response: Through review of Section A6 of the revised GHG project plan, entitled "PSE_Baker White River_GHG Plan_v2_ 01July2020_Final", the audit team can confirm that the "Physical conditions prior to project initiation" and "Project technologies, products, services, and expected level of activity" are adequately described. Therefore, the non-conformity has been resolved.

NCR 20 Dated 22 May 2020
Standard Reference: ACR Standard, Section 6.B
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Section B2
Finding: Section 6.B of the ACR Standard requires the following: "Project Proponents shall use the GHG Project Plan template available at www.americancarbonregistry.org." The GHG project plan template requires the following in Section B2: "Describe why the chosen methodology is the most appropriate methodology for the project." Section B2 of the GHG project plan provides a helpful description of why the methodology was chosen, including a justification that the project meets all of the eligibility requirements of the methodology. However, this does not specifically constitute a description of why the methodology is the most appropriate methodology for the project (i.e., why there is not another methodology approved by ACR that would be more appropriate to the project).
Project Personnel Response: The GHG Plan was revised to state in Section B2 3.4. that the Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal U.S. Forestlands, Version 1.3, April 2018 was chosen because it is the only ACR IFM methodology approved for use for forestlands in the U.S.

Auditor Response: Through review of Section B2 of the revised GHG project plan, entitled "PSE_Baker White River_GHG Plan_v2_ 01July2020_Final", the audit team can confirm that the GHG project plan now states that the methodology in use "was chosen because it is the only ACR IFM methodology approved for
use for forestlands in the U.S." A review of the webpage https://americancarbonregistry.org/carbon-accounting/standards-methodologies on ACR's website on 20 July 2020 confirms that the statement in the GHG project plan is accurate. Therefore, the non-conformity has been resolved.

NCR 21 Dated 22 May 2020
Standard Reference: ACR Standard, Section 6.B
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Section B5
Finding: Section 6.B of the ACR Standard requires the following: "Project Proponents shall use the GHG Project Plan template available at www.americancarbonregistry.org." The GHG project plan template requires the following in Section B5: "Describe the baseline scenario, how the baseline was identified and chosen, and why it is the most appropriate baseline for the project. " The GHG project plan template includes information on the baseline scenario and how the baseline was identified and chosen, but does not specifically describe why the selected baseline scenario is the most appropriate baseline for the project.
Project Personnel Response: The GHG Plan Section B5 was revised to include a statement as to why the selected baseline scenario is the most appropriate for the project.
Auditor Response: Through review of Section B5 of the revised GHG project plan, entitled "PSE_Baker White River_GHG Plan_v2_ 01July2020_Final", the audit team can confirm that a description of why the selected baseline scenario is the most appropriate baseline for the project has now been provided. Therefore, the non-conformity has been resolved.

NCR 22 Dated 22 May 2020
Standard Reference: ACR Standard, Section 6.B
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Section B8
Finding: Section 6.B of the ACR Standard requires the following: "Project Proponents shall use the GHG Project Plan template available at www.americancarbonregistry.org." The GHG project plan template requires the following in Section B8: "Demonstrate whether the project offsets face any risk of reversal by identifying any risks that may substantially affect the project's GHG emission reductions or removal enhancements." The GHG project plan does not identify risks that may substantially affect the project's GHG emission reductions or removal enhancements.
Project Personnel Response: The GHG Plan Section B8 was revised to address potential risks of reversals that may affect the project's emission reductions or removal enhancements.
Auditor Response: Through review of Section B8 of the revised GHG project plan, entitled "PSE_Baker White River_GHG Plan_v2_ 01July2020_Final", the audit team can confirm that risks that may substantially affect the project's GHG emission reductions or removal enhancements have been identified, and an assessment of whether the project offsets face any risk of reversal has been provided. Therefore, the non-conformity has been resolved.

NCR 23 Dated 22 May 2020
Standard Reference: ACR Standard, Section 6.B
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Section C1
Finding: Section 6.B of the ACR Standard requires the following: "Project Proponents shall use the GHG Project Plan template available at www.americancarbonregistry.org." The GHG project plan template requires the following in Section C1: "Demonstrate how the project passes the regulatory surplus additionality test described in the ACR Standard v2.0. Include a summary and references to any relevant local laws and regulations related to the project and provide of demonstration of compliance with them." The audit team has identified the following discrepancies regarding the demonstration of regulatory surplus as documented in Section C1 of the GHG project plan:
1. The GHG project plan states the following: "The State of Washington Practices Act and the administrative Practices Rules regarding riparian management areas (surrounding stream courses and waterbodies) do not affect the Project Area, as all riparian management areas are excluded from the Project Area." This is not an accurate statement. It was clarified to the audit team during the conference call held on 24 April 2020 that riparian management zones are, in many cases, included in the project area.
2. Section C1 of the GHG project plan contains references to the "State of Washington Practices Act" and the "Washington State Practices Rules". It is understood that these references are intended to be to the Forest Practices Act and the Washington State Forest Practices Rules, respectively.
3. Section 4.A.1 of the ACR Standard requires that "The regulatory surplus test requires the Project Proponent to evaluate existing laws, regulations, statutes, legal rulings, or other regulatory frameworks that directly or indirectly affect GHG emissions associated with a project action or its baseline candidates, and which require technical, performance, or management actions." As documented in NIR 1, the project proponent has entered into a settlement agreement that seems to directly or indirectly affect GHG emissions associated with a project action or its baseline candidates and require technical, performance, or management actions. An evaluation of this agreement, and the extent to which the project activities is surplus to the actions mandated in the agreement, is not included in the GHG project plan.
Project Personnel Response: Section CI. Of the GHG Plan has been revised as follows:

1) state that riparian management zones are relevant to management of the Project Boundary.

2) corrected references to the State of Washington Forest Practices Act and Washington Forest Practices Rules.

3) included references to relevant federal laws and the relevant FERC License Settlement Agreement Articles.

Auditor Response: The audit team reviewed Section C1 of the revised GHG project plan, entitled "PSE_Baker White River_GHG Plan_v2_ 01July2020_Final", to see whether the finding could be closed. The audit team's feedback regarding the responses, provided in the same order as the items listed in the original finding, is as follows:
1. This item has been resolved through the removal, from the GHG project plan, the suggestion that "all riparian management areas are excluded from the Project Area".
2. This item has been resolved through the provision of correct references to the relevant pieces of regulation.
3. This item has been resolved through a clear reference to the settlement agreement discussed in NIR 1, as well as a brief reference to how it has been determined that the project passes the legal requirement test in respect of this agreement.
Therefore, the non-conformity has been resolved.

NCR 24 Dated 22 May 2020
Standard Reference: Methodology, Section D6
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Section D1
Finding: The methodology requires in Section D6, for quantification of the parameter BS(P,t), that "Carbon stock calculation for logging slash burned shall use the method described in Section 3.1.1 for bark, tops and branches…" Section 3.1.1 of the methodology sets out the required procedure for quantification of carbon stock in live trees (e.g., using the component ratios from Jenkins et al (2003) Table 6). Section D1 of the GHG project plan provides a procedure for estimation of the parameter BS(P,t) that is based on visual estimation of the size of burn piles and is not consistent with the method described in Section 3.1.1 of the methodology.
Project Personnel Response: Section D1. of the GHG Plan has been revised to be consistent with the Methodology requirements for quantification of the parameter BS (P,t).
Auditor Response: Through review of Section D1 of the revised GHG project plan, entitled "PSE_Baker White River_GHG Plan_v2_ 01July2020_Final", the audit team can confirm that the description of the process for monitoring the parameter BS(P,t) is now consistent with the requirements of the methodology. The non-conformity has been resolved.

NCR 25 Dated 22 May 2020
Standard Reference: ACR Standard, Section 6.B
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Section E2
Finding: Section 6.B of the ACR Standard requires the following: "Project Proponents shall use the GHG Project Plan template available at www.americancarbonregistry.org." The GHG project plan template requires the following in Section E2: "Detail the GHG quantification methodology for the project scenario including all relevant emissions or removals. Provide sample calculations wherever possible.
Project Personnel Response: Section E2. of the GHG Plan contains the Methodology equations used calculate the relevant emissions and removals. During the initial reporting period we did not model any stock growth, as no tree growth occurred during this period due to the trees being dormant during the short initial reporting period. There also was not tree harvest or slash burning during this period. Thus, no ERTs are reported or claimed over the initial reporting period.

Auditor Response: It appears that this finding is incomplete. As the concern of the audit team in the writing the finding is unclear, the finding will be withdrawn with the apologies of the audit team.

NCR 26 Dated 22 May 2020
Standard Reference: ACR Standard, Section 8.A
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Section F1
Finding: Section 8.A of the ACR Standard requires the following: "As part of the GHG Plan, ACR requires all projects to prepare and disclose an environmental and community impact assessment. ACR does not require that a particular process or tool be used for the impact assessments as long as basic requirements are addressed, as detailed below." It is then stated that "The assessment should include the following:
1. An overview of the Project Activity and geographic location.
2. Applicable laws, regulations, rules, and procedures and the associated oversight institutions.
3. A description of the process to identify community(ies) and other stakeholders affected by the project and, as applicable, the community consultation and communications plan.
4. An assessment of the project's environmental risks and impacts, including factors such as climate change mitigation and adaptation, biodiversity, air quality, water quality, soil quality, and ozone quality, as well as the protection, conservation, or restoration of natural habitats such as forests, grasslands, and wetlands. The assessment shall: 1) identify each risk/impact; 2) categorize the risk/impact as positive, negative, or neutral and substantiate the risk category; 3) describe how any negative impacts will be avoided, reduced, mitigated, or compensated; 4) detail how risks and impacts will be monitored, and how often and by whom; and 5) describe how positive impacts contribute to sustainable development goals."
While some of the required information is included in Section F1 of the GHG project plan, much of it is missing. For example, a description of the process to identify community(ies) and other stakeholders affected by the project and, as applicable, the community consultation and communications plan is not included.
Project Personnel Response: The GHG Plan was revised to include an environmental and community impact assessment as required under Section 8.A of the ACR Standard Version 6.0.
Auditor Response: The audit team reviewed Section F1 of the revised GHG project plan, entitled "PSE_Baker White River_GHG Plan_v2_ 01July2020_Final", to see whether the finding could be closed. The section has been largely re-written, and the resulting environmental and community impact assessment specifically meets each requirement of the ACR Standard. Therefore, the non-conformity has been resolved.

NCR 27 Dated 22 May 2020
Standard Reference: ACR Standard, Section 6.B
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Section G3
Finding: Section 6.B of the ACR Standard requires the following: "Project Proponents shall use the GHG Project Plan template available at www.americancarbonregistry.org." The GHG project plan template requires the following in Section G3: "Describe whether or not the project proponent has applied for GHG emission reduction or removal credits for this project through any other GHG emissions trading system or program and the success of any of these applications." The GHG project plan states the following in Section G3: "The project proponent, Puget Sound Energy, has never submitted an IFM project to or had an IFM project rejected under any other greenhouse gas program on any lands it owns in the United States." This does not exactly provide a description of "whether or not the project proponent has applied for GHG emission reduction or removal credits for this project through any other GHG emissions trading system or program", as required under the template.
Project Personnel Response: The GHG Plan has been updated to clarify that state that the project proponent has never applied for GHG emission or removal credits for this project through any other GHG emissions trading system or program.
Auditor Response: Through review of Section G3 of the revised GHG project plan, entitled "PSE_Baker White River_GHG Plan_v2_ 01July2020_Final", the audit team can confirm that the verbatim declaration requested by the template has now been provided. Therefore, the non-conformity has been resolved.

NCR 28 Dated 22 May 2020
Standard Reference: ACR Standard, Section 6.B
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Sections H1 and H2
Finding: Section 6.B of the ACR Standard requires the following: "Project Proponents shall use the GHG Project Plan template available at www.americancarbonregistry.org." The GHG project plan template requires the following in Section H1: "Provide the project start date, and describe how it was determined and why it is appropriate and consistent with the requirements of the ACR Standard v2.0, any relevant ACR sector standard, and the chosen methodology." The GHG project plan states that the project start date was "the date the Project Offset Listing Form was submitted to ACR" in Section H1 and makes a similar claim in Section H2. This is not an accurate statement (see NCR 18).
Project Personnel Response: The GHG Plan has been updated to state the revised Project Start Date.
Auditor Response: Through review of Sections H1 and H2 of the revised GHG project plan, entitled "PSE_Baker White River_GHG Plan_v2_ 01July2020_Final", the audit team can confirm that the project start date has been revised (see resolution to NIR 2). Therefore, Sections H1 and H2 no longer contain inaccurate statements, and the non-conformity has been resolved.

NCR 29 Dated 22 May 2020
Standard Reference: ACR Standard, Section 6.E
Document Reference: PSE_Baker-White River_Initial Monitoring Report_24March2020, Section 4
Finding: Section 6.E of the ACR Standard requires the following: "Project monitoring reports shall be completed for each verified reporting period using the template for Project Monitoring Report available at www.americancarbonregistry.org." The monitoring report template requires the following in Section 4: "Project Proponents are required to provide a regulatory compliance attestation to a verification body at each verification. This attestation must disclose all violations or other instances of noncompliance with laws, regulations, or other legally binding mandates directly related to project activities and state whether all regulatory requirements were completed at required intervals. Please provide the required regulatory compliance attestation below." The required attestation is not included in Section 4 of the monitoring report.
Project Personnel Response: PSE will provide to the audit team the required attestation prior to completion of the audit.
Auditor Response: In response to this finding, the audit team was provided with the following guidance from ACR personnel in an email dated 25 June 2020: "[Version 2 of the monitoring report template] went live on April 24th. Use of the newest monitoring report is not required, if you've already filled out the older version." As the date-stamp on the filename for the originally submitted monitoring report indicates it was completed on 24 March 2020 and the audit team can attest that this document was submitted well before 24 April 2020, it appears that use of Version 1 of the monitoring report is permitted in this instance.
Version 1 of the monitoring report does not require the "Please provide the required regulatory compliance attestation" to be provided within the monitoring report. Therefore, this finding is not applicable and will be withdrawn, noting that NIR 9 has been issued regarding the regulatory compliance attestation.

NCR 30 Dated 22 May 2020
Standard Reference: ACR Standard, Section 6.E
Document Reference: PSE_Baker-White River_Initial Monitoring Report_24March2020, Section 5
Finding: Section 6.E of the ACR Standard requires the following: "Project monitoring reports shall be completed for each verified reporting period using the template for Project Monitoring Report available at www.americancarbonregistry.org." The monitoring report template requires the following in Section III(5):
"Instructions (per 8.A 4 of the ACR Standard):

- Projects must prepare and disclose an assessment of the project's environmental risks and impacts.
- The assessment must describe the safeguard measures in place to avoid, mitigate, or compensate for potential negative impacts, and how such impacts will be reported, monitored and enforced.
- The assessment must identify and describe sustainable development goals to which the impacts are aligned and positively contribute.
- ACR does not require a particular criteria or tool be used for impact evaluation. Contributions to UN Sustainable Development Goals or other internationally recognized assessment criteria may be cited."

The required Section 5 is completely omitted from the monitoring report.
Project Personnel Response: Version 1 of the Monitoring Report Template was used because it was the only version available at the time the Monitoring Report was completed and submitted to the ACR Registry (25 March 2020). According to ACR - see mail from Kurt Krapfl dated June 25, 2020 forwarded to you via email - the Version 2 Template was not released and made available online until 24 April 2020. ACR has informed us that the use of the newest monitoring report is not required, if the older version was already filled out. However, ACR informed us that we will need to include a reference to the Sustainable Development Goals somewhere in Version 1 - see Section III 4. of the Monitoring Report.

The GHG Plan, Section F1. contains the environmental risks and impacts assessment.

Auditor Response: In response to this finding, the audit team was provided with the following guidance from ACR personnel in an email dated 25 June 2020: "[Version 2 of the monitoring report template] went live on April 24th. Use of the newest monitoring report is not required, if you've already filled out the older version." As the date-stamp on the filename for the originally submitted monitoring report indicates it was completed on 24 March 2020 and the audit team can attest that this document was submitted well before 24 April 2020, it appears that use of Version 1 of the monitoring report is permitted in this instance.
As this finding pertained solely to Version 2 of the monitoring report, it is not applicable and will be withdrawn.

NCR 31 Dated 22 May 2020
Standard Reference: ACR Standard, Section 6.E
Document Reference: PSE_Baker-White River_Initial Monitoring Report_24March2020
Finding: Section 6.E of the ACR Standard requires the following: "Project monitoring reports shall be completed for each verified reporting period using the template for Project Monitoring Report available at www.americancarbonregistry.org." The monitoring report template currently available at www.americancarbonregistry.org, as of the date of issuance of this finding, is Version 2. It appears that Version 1 of the monitoring report template has been used to produce the monitoring report. In addition, the following specific discrepancies have been identified between the requirements of the monitoring report template and the information contained in the monitoring report:
1. Section IV(3) of the monitoring report template requires that the following information be provided: "State whether the project is using the original inventory". A specific statement to this effect is not included.
2. The monitoring report template requires that the following information be provided in Section V(2): "Provide a description of the GHG management system employed including... The location and recordkeeping/retention requirements for all stored data... Methods used to generate data... Transfer points and methods of non-automated transfer of data" and "Describe the internal audit and other quality assurance/quality control procedures". This information is not provided in respect of the carbon stock data used to quantify the parameter C(P,TREE,t).
3. The monitoring report template requires that the following information be provided in Section VI(5): "State the net GHG emission reductions; provide a summary calculation showing the net GHG emission reduction/removal calculation as required by the relevant methodology". The net GHG emission reductions have been stated, but the summary calculation showing the net GHG emission reduction/removal calculation as required by the relevant methodology has not been provided. Please note that, unlike Sections VI(1)-(4), this requirement cannot be satisfied through incorporation of a spreadsheet appendix.
4. The monitoring report template requires that the following information be provided in Section VII(1): "State whether the project is undergoing a full site visit verification or a desk review". It is not clarified in the monitoring report that the project is undergoing a full site visit verification.
5. The project proponent signature is missing from the end of the monitoring report.

Project Personnel Response: Version 1 of the Monitoring Report Template was used because it was the only version available at the time the Monitoring Report was completed and submitted to the ACR Registry (25 March 2020). According to ACR - see mail from Kurt Krapfl dated June 25, 2020 forwarded to you via email - the Version 2 Template was not released and made available online until 24 April 2020. ACR has informed us that the use of the newest monitoring report is not required, if the older version was already filled out.

1) Included the statement in Section IV(3), "Thus, this is the project's original inventory."

2) During this initial Reporting Period, no harvest occurred, no slash was burned, and no growth modeling occurred because there was no measurable tree growth during the short initial Reporting Period. Thus, no records or data were generated during the initial Reporting Period. Also, no internal audit, other quality assurance/quality control procedures, or sampling methods were used during the initial Reporting Period. Quantification of parameter C(P,TREE,t) did not change during the initial Reporting Period, thus there is nothing to report.

3) Since no changes in carbon stocks occurred during the initial Reporting Period, no calculations were required to show "0 mt CO2" of net GHG emission reductions.

4) Added a statement to Section VII(1) referencing a full site visit.

5) Version 1 of the Monitoring Report does not require a signature.

Auditor Response: In response to this finding, the audit team was provided with the following guidance from ACR personnel in an email dated 25 June 2020: "[Version 2 of the monitoring report template] went live on April 24th. Use of the newest monitoring report is not required, if you've already filled out the older version." As the date-stamp on the filename for the originally submitted monitoring report indicates it was completed on 24 March 2020 and the audit team can attest that this document was submitted well before 24 April 2020, it appears that use of Version 1 of the monitoring report is permitted in this instance.
In addition, the audit team reviewed the revised monitoring report, entitled "PSE_Baker-White River_Initial Monitoring Report_V2_01July2020_Final", to see whether the finding could be closed. The audit team concludes the following:
1. Section IV(3) now includes an affirmative statement regarding whether the project is using the original inventory. This item has been resolved.
2. The audit team understands that, given the short reporting period, there is very little to monitor. The audit team had envisioned that the procedures for measuring and calculating the parameter C(P,TREE,t) should be included. However, it is unclear that this is really a "monitored" parameter under the current circumstances. The audit team appreciates that at least an explanation of the situation is provided in Section V(2). This item has been resolved.
3. The audit team does not agree that there is no need to "provide a summary calculation showing the net GHG emission reduction/removal calculation as required by the relevant methodology" just because the net GHG emission reductions/removals are quantified as 0 tCO2e. It would be very simple to include, at least, a summary calculation of Equation 20 of the methodology, and there is not reason this cannot be done. This item has not been resolved.
4. It is clarified in Section VII that the project is undergoing a full site visit verification. This item has been resolved.
5. The audit team agrees that Version 1 of the monitoring report template does not require a signature. This item has been resolved.
This finding remains open because item 3 has not been fully resolved.
Project Personnel Response 2: The Monitoring Report Section VI.5. was revised to include the calculation of Equation 20.
Auditor Response 2: Through review of the revised monitoring report, entitled "PSE_Baker-White River_Initial Monitoring Report_V3_23August2020", the audit team can confirm that "a summary calculation showing the net GHG emission reduction/removal calculation as required by the relevant methodology" has been provided in Section VI.6. Therefore, the non-conformity has been fully resolved.

NIR 32 Dated 21 Jul 2020
Standard Reference: Methodology, Section C1
Document Reference: FVS_PSEb_Hwd.key
Finding: The methodology states the following in Section C.1: "The IFM baseline is the legally permissible harvest scenario that would maximize NPV of perpetual wood products harvests." The reforestation standards west of the Cascades summit are provided in WAC 222-34-010(2) as follows: "A harvested area is reforested when that area contains an average of 190 or more vigorous, undamaged commercial species seedlings per acre that have survived on the site for at least 1 growing season."
Review of the "FVS_PSEb_Hwd.key" FVS file indicates that, in the "HWD" prescription, a clearcut is followed by sprouting of 95 seedlings per acre of bigleaf maple and black cottonwood each.
A definition of "commercial species" does not seem to be provided by the Forest Practices Rules or the Forest Practices Act. However, it is not intuitively clear that bigleaf maple and black cottonwood are "commercial species", as they are not among the species that have historically been managed for commercial timber production in western Washington. Therefore, please provide evidence that bigleaf maple and black cottonwood can be considered commercial species.
Project Personnel Response: The Audit Team is correct that a definition of "commercial species" is not stated in the Forest Practices Rules or Forest Practices Act. This is in part because wood products markets evolve over time and new commercial uses for the range of tree species across Washington will continue to expand and change (i.e. cross laminated timber and mass panels).

Replacing softwood species with plantings of bigleaf maple and black cottonwood is included in the project activities to create habitat suitable to specific bird species. This activity is proposed on about 155 acres, about 3 percent of the project area. Harvest of these hardwood species will occur at some point in the future, likely in 100 to 150 years after planting.

Specifically, the Audit Team requested evidence that bigleaf maple and black cottonwood can be considered commercial species.

Bigleaf Maple - Northwest Hardwoods, headquartered in Tacoma, Washington, considers bigleaf maple a commercial species. The company buys, mills, and sells bigleaf maple within its mix of “Pacific Coast Maple” – see https://northwesthardwoods.com/products/western/pacific-coast-maple/. Also Cascade Hardwood buys, mills, and sells bigleaf maple.

Black Cottonwood – USDA-NRCS states in its national plant guide that “Black cottonwood is a commercially valuable tree. Primary products include particle board, plywood, veneer, and lumber. The wood is light colored and light in weight; it is diffuse-porous (indistinct growth rings), with a fine, even texture. The light weight, good nailing characteristics, and light color of the lumber are ideal for manufacture of pallets, boxes, and crates. It also is used in concealed parts of furniture. The fibers are short and fine, making the wood useful in production of pulp for tissues and high-grade book and magazine paper”. See: https://plants.usda.gov/plantguide/pdf/cs_pobat.pdf.

Cascade Hardwood Group considers black cottonwood a commercial species. It buys, mills, and sells black cottonwood lumber. See: https://cascadehardwood.com/products/. Depending on market condition, black cottonwood is pealed and used as inner core in plywood products, as well as chipped and used in pulp mills for tissue production and other paper products.

Auditor Response: The audit team reviewed the websites referenced in response to this finding (accessed 25 August 2020) and was able to confirm that bigleaf maple and black cottonwood are considered commercial species by the respective referenced sources. The audit team agrees that this provides adequate evidence that these species are merchandized and bought and sold in the marketplace and, therefore, that they can be considered "commercial species". Therefore, the information request has been satisfied.

NIR 33 Dated 21 Jul 2020
Standard Reference: Methodology, Section C1
Document Reference: PSE_Baker White River_GHG Plan_v1_ 24March2020, Section E1.1
Finding: The methodology states the following in Section C1: "The baseline management scenario shall be based on silvicultural prescriptions recommended by published state or federal agencies to perpetuate existing onsite timber producing species while fully utilizing available growing space." Please provide a justification for how the "ELK" and "HWD" silvicultural prescriptions are based on silvicultural prescriptions recommended by published state or federal agencies to perpetuate existing onsite timber producing species while fully utilizing available growing space. The audit team notes that the "ELK" and "HWD" prescriptions appear to involve stocking at a level below the level that fully utilizes available growing species, while the "HWD" prescription appears to not perpetuate existing onsite timber producing species.
Project Personnel Response: The “ELK” and “HWD” silvicultural prescriptions are based on management constraints specified in the FERC Settlement Agreement articles 502 – Deciduous Forest Bird Habitat and 503 – Elk Habitat. Since the FERC Settlement Agreement articles are legally binding, the Project Proponent must maintain compliance with the Agreement articles as required by the American Carbon Standard Version 6.0 - Table 2 “Regulatory Compliance” which states that “Adherence to all laws, regulations, and other legally binding mandates directly related to Project Activities”. Federal and Washington state agencies are signatories to the FERC Settlement Agreement; thus, the silvicultural guidance in the articles are recommendations by both federal and state agencies. See FERC Articles_Baseline Rxs_21August2020_Final which contain a summary of the FERC Settlement Agreement articles management constraint.
Auditor Response: The audit team reviewed the information provided to see whether this finding could be closed. Given the response to NIR 32, the audit team can confirm that bigleaf maple and black cottonwood can be considered " timber producing species", and both species are present in the project inventory, so they can be considered "existing onsite timber producing species". The audit team agrees that the Settlement Agreement is legally binding, and that, to the extent any silvicultural prescriptions are specifically contained within that agreement, those prescription could be considered "recommended by published state or federal agencies" (the Federal Energy Regulatory Comission being a federal agency). However, nothing in Articles 502 or 503 of the Settlement Agreement appear to prescribe or recommend any specific silvicultural prescriptions, so the audit team still has not been provided with justification that the "ELK" and "HWD" prescriptions have been "based on recommended by published state or federal agencies to perpetuate existing onsite timber producing species while fully utilizing available growing space". Therefore, the information request has not been satisfied.

Project Personnel Response 2: PSE consulted with ACR on this finding. On September 8, 2020, Andrew Taylor of ACR sent an email to PSE and SCS (Zane Haxtema) stating:

"We find ACR539's proposed baseline modeling scenarios for the acres referred to by the Settlement Agreement Articles 502 and 503 meet the intent of the ACR Standard and IFM Methodology. While the proposed prescriptions are not published recommendations by a state or federal agency, the prescriptions are based on an agreement with terms set by the Federal Energy Regulatory Commission; this implies that the forest structure requirements in Articles 502 and 503 are approved by a federal agency, specific for these sites. Additionally, since the agreement is legally binding, we agree that the baseline scenario should be modeled to meet the goals and habitat requirements set forth in the articles. This results in a more realistic baseline scenario. ACR acknowledges there may be instances when published silvicultural prescriptions do not exist for a particular habitat restoration activity, and when trained foresters must make site-level recommendations. Provided the verification team agrees that the modeled silvicultural prescriptions would accomplish the goals set forth in Articles 502 and 503 in a reasonable and logical way, we find them acceptable. If the proposed prescriptions accomplish the goals of the articles but also unnecessarily cause a large effect on the site's carbon stocks, particularly in a non-conservative way, we would require justification for the exact formulation of the prescription and might request it be changed to mitigate the effect. As we see it in this case, selective harvesting and hardwood retention in the Forest Habitat per Article 502 would likely increase baseline carbon stocks relative to a clear-cut/softwood planting scenario. While understocking the Elk Foraging Habitat per Article 503 would likely lower baseline carbon stocks relative to a full replanting scenario (and thus not be conservative), Article 503 is prescriptive that the replanting density following a clear-cut be at the minimum density allowed by WA law."

Based on this email, PSE believes that the silvicultural prescriptions used in the baseline scenario meet the intent of the ACR Standard and IFM Methodology while accomplishing the goals set forth in Articles 502 and 503 of the Settlement Agreement in a reasonable and logical matter. Further, we agree with ACR that since the prescriptions are based on an agreement with terms set by the Federal Energy Regulatory Commission; this implies that the forest structure requirements in Articles 502 and 503 are approved by a federal agency, specific for these sites. Additionally, since the agreement is legally binding, we modeled the baseline scenario to meet the goals and habitat requirements set forth in the articles.

Deciduous Bird Habitat - We agree with ACR that selective harvesting and hardwood retention in the Forest Habitat per Article 502 would likely increase baseline carbon stocks relative to a clear-cut/softwood planting scenario. Therefore, this is a conservative approach.

Elk Habitat – As previously noted, the purpose of the silvicultural prescription is to create more open stand conditions to promote elk habitat. The proposed silvicultural prescriptions were specifically designed to meet the site-specific goals and habitat requirements of Article 503 of the legally binding Settlement Agreement, ultimately creating a realistic baseline scenario.

PSE evaluated several scenarios to ensure that its silvicultural prescription for elk habitat used in the baseline scenario does not unnecessarily cause a large effect on the site's carbon stocks, particularly in a non-conservative way. We evaluated changes to the 20-year average baseline stocks (CBSL,AVE) by comparing the elk habitat prescription to other scenarios.

Currently, the baseline elk habitat prescription limits clearcutting to 120 acres per year and plants 190 trees per acre to meet the minimum density required under the Washington Forest Practices Act. This results in a 20-year average baseline stocks (CBSL,AVE) of 335,728 t CO2.

If we applied the same elk habitat prescription which limits harvest to 120 acre per year and then planted 436 trees per acre (stand 10' by 10' spacing – common industrial practice), the 20-year average baseline stocks (CBSL,AVE) would be 337,680 t CO2 - a non-material increase of 0.58% as compared to planting 190 TPA. However, fully planting (436 TPA) on all harvested acres would violate the requirements of Article 503 of the Settlement Agreement.

If we treated the elk habitat acres the same as other acres and did not limit harvest to 120 acres per year and replanted to 436 TPA, the 20-year average baseline stocks (CBSL,AVE) would decrease to 334,974 t CO2 – a non-material decrease of 0.22% as compared to the currently elk habitat baseline management prescription. However, fully planting (436 TPA) on all harvested acres would violate the requirements of Article 503 of the Settlement Agreement.

Thus, the PSE evaluation demonstrates that the selected elk habitat silvicultural prescription used in the baseline scenario does not materially affect the project baseline carbon stocks as compared to alternative prescriptions that plant to a full stocking level (436 trees per acre).
Auditor Response 2: The audit team can confirm that the quoted email was received from ACR personnel on 8 September 2020. The email stated that "We find ACR539's proposed baseline modeling scenarios for the acres referred to by the Settlement Agreement Articles 502 and 503 meet the intent of the ACR Standard and IFM Methodology." In reviewing the description of "ACR539's proposed baseline modeling scenarios", as documented in the document "PSE_ACR Memo on Habitat Rx_3Sept2020" as submitted to ACR personnel, the audit team can confirm that this document described the baseline modeling scenarios that are also described in the document "FERC Articles_Baseline Rxs_01July2020_Final" which the audit team previously reviewed. Therefore, it seems that the baseline modeling prescriptions for lands covered by the settlement agreement have been reviewed by ACR personnel and that ACR personnel have determined that these prescriptions "meet the intent of the ACR Standard and IFM Methodology". Therefore, further review of whether the prescriptions in question are compliant with the methodology is no longer necessary, and the information request may be withdrawn.

NCR 34 Dated 21 Jul 2020
Standard Reference: ACR Standard, Section 6.E
Document Reference: PSE_Baker-White River_Initial Monitoring Report_V2_01July2020_Final
Finding: Section 6.E of the ACR Standard requires the following: "Project monitoring reports shall be completed for each verified reporting period using the template for Project Monitoring Report available at www.americancarbonregistry.org." Version 1 of the monitoring report template requires that the project crediting period be listed in Section II(6). The end date of the project crediting period (3 February 2039), as stated in Section II(6) of the monitoring report, is not consistent with the end date of the crediting period (25 February 2039) as indicated in Section B3.3 of the GHG project plan.
Project Personnel Response: Section II. 6. of the Monitoring Report was revised to correct the end date of the initial crediting period to match the GHG Plan Section B3.3.
Auditor Response: Through review of the revised monitoring report, entitled "PSE_Baker-White River_Initial Monitoring Report_V3_23August2020", the audit team can confirm that the indicated end date of the initial crediting period is now consistent with the date indicated in the GHG project plan. Therefore, the non-conformity has been resolved.

NCR 35 Dated 21 Jul 2020
Standard Reference: ACR Standard, Section 6.E
Document Reference: PSE_Baker-White River_Initial Monitoring Report_V2_01July2020_Final
Finding: Section 6.E of the ACR Standard requires the following: "Project monitoring reports shall be completed for each verified reporting period using the template for Project Monitoring Report available at www.americancarbonregistry.org." Version 1 of the monitoring report template requires the following in Section III(4): "State whether all regulatory requirements were completed at required intervals." The required statement is missing from Section III(4) of the monitoring report.

Project Personnel Response: The PP revised Section III.4 of the Monitoring Report to state that all regulatory requirements relevant to the GHG project were completed at the required interval, which in this case is during the initial reporting period.

See email correspondence below between Andrew Taylor of ACR and David Ford on behalf of PSE regarding this manner.

Taylor, Andrew
2:35 PM (2 hours ago)
to me, Molly, Kurt
Hi David,
That admittedly isn't the clearest wording. The Standard 6.0 (Table 2, pg. 24-25) has more language on what's required. The "required intervals" bit is more relevant to project types with continuous reporting requirements and less relevant for forestry in most cases. We previously required a separate attestation to be provided by the PP to the VB, attesting to regulatory compliance throughout the reporting period. In an effort to simplify things, we're now simply requesting that attestation on the Monitoring Report.
Here's the language from the Standard, so you don't have to go looking for it:

"Projects must maintain material regulatory compliance. To do this, a regulatory body/bodies must deem that a project is not out of compliance at any point during a reporting period. Projects deemed to be out of compliance with regulatory requirements are not eligible to earn ERTs during the period of non-compliance. Regulatory compliance violations related to administrative processes (e.g., missed application or reporting deadlines) or for issues unrelated to integrity of the GHG emissions reductions shall be treated on a case-by-case basis and may not disqualify a project from ERT issuance. Project Proponents are required to provide a regulatory compliance attestation to a verification body at each verification [Note the update to our process I mentioned above!]. This attestation must disclose all violations or other instances of non-compliance with laws, regulations, or other legally binding mandates directly related to Project Activities."

If that doesn't answer your question, let us know and we'll work to get you a clearer answer!

Andrew Taylor Forestry Program Officer
American Carbon Registry, an enterprise of Winrock International
201.819.7209 | Andrew.Taylor@winrock.org
www.winrock.org | www.americancarbonregistry.org

From: David Ford <davidford27@gmail.com>
Sent: Wednesday, August 19, 2020 8:43 PM
To: Krapfl, Kurt <Kurt.Krapfl@winrock.org>; Taylor, Andrew <andrew.taylor@winrock.org>
Cc: Middaugh, Molly <Molly.Middaugh@pse.com>
Subject: Request - ACR Monitoring Report - Section III.4.

Kurt and Andy:

The ACR Monitoring Report template - section III.4. states:

Projects must maintain material regulatory compliance. In order to maintain material regulatory compliance, a project must complete all regulatory requirements at required intervals.
It is unclear to me and PSE what ACR means by the statement "a project must complete all regulatory requirements at required intervals".
SCS Global is requesting that PSE includes a statement in the Monitoring Report Section III.4 that states that all regulatory requirements were completed at required intervals.
We are seeking clarification on what this actually means.
An explanation or guidance on this matter would be appreciated.
Thank you,
David
David A. Ford
Principal
L&C Carbon
a division of Jory Resources Inc.
710 SW Carmen Heights Drive
Dundee, OR 97115
Auditor Response: Through review of the revised monitoring report, entitled "PSE_Baker-White River_Initial Monitoring Report_V3_23August2020", the audit team can confirm that it is now clarified that all regulatory requirements were completed at the required interval. Therefore, the non-conformity has been resolved.

NIR 36 Dated 28 Aug 2020
Standard Reference: Methodology, Section A2
Document Reference: PSE_Baker White River_GHG Plan_v3_ 23Aug2020
Finding: The methodology states that "Project proponent must demonstrate its ownership or control of timber rights at the project start date". Section A3 of the GHG project plan states that "...a declaration from PSE stating that all the parcels in the project boundary are owned and timber rights are controlled by PSE will be provided to the Verification Body prior to finalization of the RP1 validation /verification". Please provide the declaration described in the GHG project plan.
Project Personnel Response: PSE has provided to the verification body via email a signed attestation stating that all the parcels in the project boundary are owned and timber rights are controlled by PSE.
Auditor Response: The audit team was provided with a signed declaration, entitled "Forest Carbon Project Real Estate Declaration - SIGNED (2020-09-15)", regarding ownership of the real property included in the project area. To summarize, the declaration warrants that both parcels for which title reports are in the project proponent's possession, as well as parcels for which the project proponent does not possess a title report, are owned by the project proponent, and that there are no restrictions that affect the project proponent's ownership and control of timber rights. Therefore, the documentation referenced by the GHG project plan has been provided to the audit team, and the information request has been satisfied.

NIR 37 Dated 28 Aug 2020
Standard Reference: ACR Standard, Table 2
Document Reference: PSE_Baker White River_GHG Plan_v3_ 23Aug2020
Finding: Table 2 of the ACR Standard requires the following: "AFOLU Project Proponents shall... enter into a legally binding Reversal Risk Mitigation Agreement with ACR/Winrock that details the risk mitigation option selected and the requirements for reporting and compensating reversals". Section A3 of the GHG project plan states that "Permanence is addressed by the project through... entering into a legally binding Reversal Risk Mitigation Agreement with ACR/Winrock that details the risk mitigation option selected and the requirements for reporting and compensating reversals prior to finalization of the RP1 validation/verification. Please provide the required Reversal Risk Mitigation Agreement for the audit team's review.
Project Personnel Response: PSE received an email from ACR on September 17, 2020 confirming receipt of PSE's signed Risk Management Agreement (RMA). Andrew Taylor of ACR noted that SCS Global should be satisfied since the RMA has been completed, signed, and submitted by PSE to ACR. ACR will add it signature to the RMA and make available on the Registry.
Auditor Response: The reversal risk mitigation agreement, entitled "PSE_ACR Risk Mitigation Agreement 2020" and executed by the project proponent, was provided for review by the audit team. The audit team confirmed with ACR personnel, in an email dated 1 October 2020, that execution by the project proponent was adequate for the audit team's review purposes. Therefore, the information request has been resolved.

NCR 38 Dated 17 Sep 2020
Standard Reference: ACR Standard, Section 6.E
Document Reference: PSE_Baker-White River_Initial Monitoring Report_V4_14Sept2020
Finding: Section 6.E of the ACR Standard requires the following: "Project monitoring reports shall be completed for each verified reporting period using the template for Project Monitoring Report available at www.americancarbonregistry.org." The version of the template for the Project Monitoring Report available at www.americancarbonregistry.org is Version 2. While the project proponent is not required to use Version 2 in this instance (see NCR 30), given that a voluntary decision has been made to use Version 2 of the template, the monitoring report will be audited against the requirements of Version 2.
Version 2 of the monitoring report template requires the following in Section V(1): "Populate the table below with each parameter monitored during the reporting period (adding tables for each parameter as necessary). Validated modeled parameters should also be reported using the below table."
Version 2 of the monitoring report makes clear that the specific tabular format specified in the monitoring report is to be used for reporting. This tabular format has not been exactly utilized in Section V(1) of the monitoring report. For example, there is a difference in how the data fields are described (e.g., "Data or Parameter Monitored" vs. "Parameter"). In addition, the tables in Version 2 of the monitoring report template clarify that the "Methodology Section" is to be referenced; the relevant methodology section is not clearly referenced in the tables in the monitoring report. The actual measured value (required under "Measurement") has not been reported either. Finally, while monitored parameters have been included in the monitoring report, "validated modeled parameters" (e.g., parameters pertaining to baseline quantification) have not been included.
Project Personnel Response: PSE has revised Section V of the initial Monitoring Report to comply with the ACR instructions regarding data field nomenclature and information/data reported for each field. During this process, PSE consulted with Andrew Taylor of ACR to confirm the revisions will meet the ARC requires.
Auditor Response: Through review of the revised monitoring report, entitled "PSE_Baker-White River_Initial Monitoring Report_V5.1_05Oct2020", the audit team can confirm that all requirements of Section V(1) of the template are now met. The parameter values are described using the tabular format required by the template, and validated parameters are included. The non-conformity has been resolved.

NIR 39 Dated 25 Sep 2020
Standard Reference: Methodology, Section C1
Document Reference: PSE Response to VB Questions_22Sept2020
Finding: The methodology states the following in Section C.1: "The IFM baseline is the legally permissible harvest scenario that would maximize NPV of perpetual wood products harvests." WAC 222-30-020(12)(b) states the following: "In Western Washington, for each acre harvested three wildlife reserve trees, two green recruitment trees, and two down logs shall be left." The document "PSE Response to VB Questions_22Sept2020" indicates the following regarding how this requirement has been complied with:
"We understand that WAC 222-30-020(12) requires 3 wildlife reserve trees (live or dead of >12”+ dbh and 10’+ ht), 2 green recruitment trees (live > 10”+ dbh an 30’+ ht), and two down logs are required to be left for each acre harvested.
The wildlife reserve tree (WT) and green recruitment tree (GT) requirements are met as follows:
The WT requirement is met by the 13,119 dead trees found in the inventory database meeting the WT specifications. These WT are assumed to be dispersed throughout the project area and should be more than enough to meet the WA Forest Practices Act (FPA) requirement stated in WAC 222-30-020(12).
The GT requirement will be met by leaving clumps in the various riparian zones, as allowed per WAC 222-30-020(12e). There is a total of 865.24 acres, containing 56,171 trees, that the NPV model never harvests in the Baseline. Most of these acres and trees are in the various riparian zones and eligible for use to meet the GT requirements of the other Baseline harvesting.
Further, the WAC 222-30-020(12e) requirement that “no point within the harvest unit shall be more than eight hundred feet from a wildlife reserve tree or green recruitment tree retention area” is met by the strategies described above. It is also my understanding, based on a conversation with a Port Blakely forester responsible for harvest unit layout in Washington state, that wildlife reserve trees and green recruitment trees on adjacent property, even if owned by a different entity, can be used to meet the above FPA requirement. This adds further assurance that the baseline scenario is compliant with the requirements of WAC 222-30-020 (12)."
The audit team agrees that it is reasonable to presume that three standing dead trees per acre meeting the wildlife reserve tree requirements, and two down logs per acre, could be left for each acre harvested. From the site inspections undertaken, it is clear that the project area is a mature forest with abundant quantities of dead wood, and it is reasonable to presume that at least the required quantities could be retained through careful logging operations. In addition, the audit team agrees WAC 222-30-020(12)(e) specifically identifies riparian management zones as among the areas that can be counted toward the relevant requirements. Through review of the areas protected through riparian buffers, it is clear that the requirement for two green recruitment trees per acre could easily be met throughout most of the project area, given that riparian management zones slice through most portions of the project area. However, the isolated area with an inverse stair-step appearance to the south of the main block of the White River tract is an exception, as that area is far from any riparian management zones. Likewise, there are a small number of isolated portions of the southern part of the Baker tract that are far from any riparian management zones. If these polygons, or subsets of them, were to be treated as separate harvest units under the Forest Practice Rules, it is unclear how the requirement that "...for each acre harvested... two green recruitment trees... shall be left" would be met. Please provide further demonstration as to how the green recruitment tree requirement of WAC 222-30-020(12)(b) would be complied with on such isolated portions of the project area.

Project Personnel Response: PSE completed a detailed project area review to determine if the two green recruitment trees per acre requirement could be met in areas not near riparian management zones. It was determined to set aside additional acres where no harvest would occur in the baseline scenario to ensure sufficient green recruitment trees would be protected in areas not near riparian management zones.

Baker – a conservative estimate indicated that 432 acres within the Baker complex is not served by the exiting RMZ buffers. Thus, 864 green recruitment trees (2 per acre harvested) need to be left unharvested in the baseline scenario. The Baker elk, bird, and wetland acres retain sufficient green trees to meet the recruitment requirements. The average green trees per acre that meet the minimum specifications were obtained from the FVS model by stratum. The value was used to determine the number of acres of each stratum to treat as no harvest in the baseline scenario. This resulted in 9.7 acres being moved from harvest to no harvest.

White River – PSE determined that the 97-acre isolated area with an inverse stair-step appearance to the south of the main block of the White River tract, along with an additional 4 acres of isolated parcels on the east side of white river, are not served by the CMZ/RMZ buffers. Thus, 202 green recruitment trees (2 per acre harvested) need to be left unharvested in the baseline scenario. The average green trees per acre that meet the minimum were obtained from the FVS model by stratum. The value was used to determine the number of acres of each stratum to treat as no harvest in the baseline scenario. This resulted in 2.2 acres being moved from harvest to no harvest.

The green tree recruitment acres were combined with the sliver acres in the NPV model. The parameter value data can be found in the “Data_PSE_Sep2020.gms” file. The linear program description files, “PSE_ACR_LP_Model_Oct2020.docx” and “PSE_LP Formula Explanation_2Oct2020.docx” were updated to reflect the change to LP Equation 10 to reflect that it now handles no-harvest restrictions for both sliver acres as well as green tree retention acres.

PSE will make available an Excel worksheet that contains the acre estimates used to determine the no harvest acres applied in its NPV model. Further, upon request, PSE will review the project area via a video call to identify the areas it determined would need no-harvest acres to meet the green recruitment tree requirements contained in WAC 222-30-020 (12).
Auditor Response: Through review of the analysis in the "Wildlife green recruitment trees calc_02Oct2020" workbook, the audit team confirmed that an appropriate number of acres was assigned a no-harvest classification to satisfy the requirement for green recruitment tree retention in WAC 222-30-020(12)(b). In additional checks on the modeling, the audit team was able to confirm that this classification was duly reflected in the calculation of baseline carbon stocks. Therefore, the information request has been satisfied. Additional detail is included in the audit team's internal working papers.

OBS 40 Dated 25 Sep 2020
Standard Reference: N/A
Document Reference: PSEb_Database; PSEwr_Database
Finding: As defined under SCS' quality system, "An OBS indicates an area where immaterial discrepancies exist between the observations, data testing results or professional judgment of the audit team and the information reported or utilized (or the methods used to acquire such information) within the GHG assertion. A root cause analysis and corrective action plan are not required, but highly recommended. Observations are considered by the audit team to be closed upon issuance, and a response to this type of finding is not necessary."
In conducting quantitative data checks, the audit team has observed evidence of an error in calculation of the "Tree_Count" field in the "FVS_TreeInit" tables in the "PSEb_Database" and "PSEwr_Database" files that are used as an input to the baseline and project modeling. Specifically, the calculation in the "Tree_Count" field does not appear to reflect the fact that certain trees in the inventory have a "walk-through" designation per the process described in pages 6-7 of the "Appendix B_Baker-White River Forest Carbon Project Inventory SOPs" document. For example, the 30.3" black cottonwood tree in plot WR15 has been inventoried as a walkthrough tree (there is a value of 2 in cell S416, worksheet "TREE" in the "PSE inventory 2019 calcs and stats_Final_Rev_08Apr2020" workbook). Therefore, given that there are 63 plots in the stratum within which plot WR15 falls (the MX stratum), one would expect the "Tree_Count" field to be calculated as follows:
=20/(0.005454*30.3^2)/63*2
The above calculation yields a value of 0.1268. This is approximately twice the value of 0.063398, as found in the "Tree_Count" field in the "FVS_TreeInit" table in the "PSEb_Database". Spot checks on other plots with walk-through trees suggest that the error in calculation of the "Tree_Count" values is systematic in nature, affecting both the "PSEb_Database" and "PSEwr_Database" databases.
The number of live trees that have been given a walk-through designation represent approximately 1.9% of the basal area in the project area (17 trees divided by a total of 887 qualifying live trees in the "TREE" worksheet). If the error is systematic, as presumed, the result is a 50% underestimation of carbon stocking across said 1.9% of basal area, leading to an overall estimated error of approximately 1.0% (1.9%*50%) as applied to the total onsite carbon stocking.
Per the audit team's understanding of the ACR requirements, materiality is not a consideration for validation engagements, so this error cannot be considered material. However, the assessment team is concerned that the correction of this error in future monitoring would have a non-conservative impact on quantification, as it would result in a differential between the baseline stocks and the project stocks that would be solely attributable to errors in calculation of the "Tree_Count" field for purposes of baseline quantification. Please note that, if a decision is made not to correct this error, the error and its impact will be reported in the validation report.

Project Personnel Response: PSE has decided not to correct this error as it is not material. In part, this decision is based on the conservativeness already attributed to actions taken by PSE during the project validation/verification. One example is the Nu Water buffers include 43.83 acres of no harvest. It is very likely that only a small percentage of these acres would actually require a no harvest buffer, as this designation in an unknow water type and based on discussion with several field natural resource professionals who are familiar with the general area where the project is located, their experiences indicate that most Nu designations are seasonal flowing waters which do not require a no harvest buffer. Another example is the several private roads that were included in the inventory sample frame; however, were removed from the project area to satisfy concerns raised during the validation/verification process. Again, this is a conservative approach. It is our assessment that the conservatism built into the project estimates significantly outweigh the non-material effects of a few walkthrough trees not included in the FVS modeling.
Auditor Response: A response to Observations is not a prerequisite for issuance of a positive validation/verification opinion. This finding is considered closed on issuance.
Project Personnel Response 2: Since PSE needed to rerun the models to address other findings, PSE revised the FVS input databases ("PSEb_Database_Oct2020.mdb" and "PSEwr_Database_Oct2020.mdb") to account for the 17 live trees that were walk throughs mentioned in this finding, as well as 3 dead trees; however, the dead trees are not used in the carbon calculations. The revision doubled the tree count (tree expansion factors) for 17 live trees. All project growth and yield modeling were rerun with these corrections.
Auditor Response 2: Through review of a sample of data in the revised databases ("PSEb_Database_Oct2020" and "PSEwr_Database_Oct2020"), the audit team has confirmed that the calculation in the "Tree_Count" field in the "FVS_StandInit" table have corrected to account for the walk-through status of relevant trees.

OBS 41 Dated 25 Sep 2020
Standard Reference: N/A
Document Reference: PSEb_Database; PSEwr_Database
Finding: As defined under SCS' quality system, "An OBS indicates an area where immaterial discrepancies exist between the observations, data testing results or professional judgment of the audit team and the information reported or utilized (or the methods used to acquire such information) within the GHG assertion. A root cause analysis and corrective action plan are not required, but highly recommended. Observations are considered by the audit team to be closed upon issuance, and a response to this type of finding is not necessary."
In conducting quantitative data checks, the audit team has observed the following issues that have affected the baseline modeling for this project:
1. In the "FVS_StandInit" table in both the "PSEb_Database" and "PSEwr_Database" databases, a location code of 605 is indicated across all strata. This location code is associated with the Mt. Baker - Snoqualmie National Forest in Table 3.1.1 of the WC Variant Overview, and the audit team agrees that said location code best represents the location of the Baker Tract. However, the location code of 605 is not listed in Table 3.1.1 of the PN Variant Overview. It is stated in the PN Variant Overview that "If the location code is missing or incorrect in the PN variant, a default forest code of 612 (Siuslaw National Forest) will be used". A location code of 612 does not accurately represent the location of the White River tract, as the Siuslaw National Forest is near the Oregon coast, hundreds of miles away from the White River tract. The audit team further notes that the following warning is provided in the .out files associated with the White River modeling:
******** FVS03 WARNING: FOREST CODE INDICATES THE GEOGRAPHIC LOCATION IS OUTSIDE THE RANGE OF THE MODEL. DEFAULT CODE IS USED.
FOREST CODE USED IN THIS PROJECTION IS 612
2. In review of the process used to calculate the site indexes used as an input to the baseline modeling process, in the "FVS_StandInit" of the "PSEb_Database" and "PSEwr_Database" databases, as documented in the "PSE_FVS_Site_Index Explanation", it appears that these site indexes were calculated using an out-of-date version of the strata shapefile. Because the change in strata areas has affected the weighted average site index for each stratum, the result is a slight error in the calculation of site index for each stratum.
Per the audit team's understanding of the ACR requirements, materiality is not a consideration for validation engagements, so these errors cannot be considered material. However, if a decision is made not to correct these errors, the errors and their impact will be reported in the validation report.
Project Personnel Response: 1. The audit team is correct that FVS used the default forest code for the PN variant. PSE reviewed the available forest codes for the PN variant and concluded none of the other available codes were any better or more appropriate than the default code. PSE concludes that the default forest code for White River is as appropriate as other choices available, so it used the default forest code.

2) PSE reviewed this issue and concluded that the difference in weighted average site index for each stratum would be result in a difference of .08 feet at 50 years and 0.10 feet at 100 years. We have provided an updated "Sheet1_wSI.xls" worksheet that has site index averaged over the original strata shapefile (the "Sheet1_wSI" sheet) and the final strata shapefile (the "Sheet2_wSI" sheet). We did not go back and rerun all growth and yield as the outcome would not comprise a material difference.
Auditor Response: A response to Observations is not a prerequisite for issuance of a positive validation/verification opinion. This finding is considered closed on issuance.

Project Personnel Response 2: PSE has revised the FVS input databases ("PSEb_Database_Oct2020.mdb" and "PSEwr_Database_Oct2020.mdb") to revise the FVS Location codes used in the growth and yield modeling. All location codes for the WC variant used in the Baker project area were set to Location 605 - Mt. Baker - Snoqualmie National Forest and all location codes for the PN variant used in the White River project area were set to Location 609 - Olympic National Forest, as these locations are more reflective of the geographic location of the project area.

The second part of this finding relates to strata-level site index estimated based on an out-of-date strata shapefile. All strata site indexes were recalculated using the latest strata shapefile following the original methodology and updated in the FVS input databases. All project growth and yield modeling were rerun with these corrections.
Auditor Response 2: Through review of a sample of data in the revised databases ("PSEb_Database_Oct2020" and "PSEwr_Database_Oct2020"), the audit team has confirmed that the location codes have been corrected as described. In addition, the site index calculations in the "Sheet1_wSI_Oct2020" workbook appear to have been corrected to reflect the final stratum areas.

NCR 42 Dated 25 Sep 2020
Standard Reference: Methodology, Section A1
Document Reference: PSE_Baseline_Sep2020.gms
Finding: The methodology states that "Biomass is converted to carbon by multiplying by 0.5 and then to CO2 by multiplying by the molecular weight ratio of CO2 to Carbon (3.664)". This is reinforced by equations in the various quantification sections requiring use of a factor of 3.664. The following code in the "PSE_Baseline_Sep2020" .gms file clarifies that a factor of (44/12), in place of the required 3.664 factor, in order to convert from carbon to carbon dioxide equivalent. This is a nonconformance with the prescriptive requirements of the methodology.

```
PSEVals(PSE_Zone,Period,'NPV_CO2')=(44/12)*(NPVMax_CARB(PSE_Zone,Period,'C_LT')+NPVMax_CARB(PSE_Zone,Period,'C_BG'));
PSEVals(PSE_Zone,Period,'NPV_HarvCSS')=(44/12)*Harvest_CSS(PSE_Zone,Period);
PSEVals(PSE_Zone,Period,'NPV_HarvCSP')=(44/12)*Harvest_CSP(PSE_Zone,Period);
PSEVals(PSE_Zone,Period,'NPV_HarvCHS')=(44/12)*Harvest_CHS(PSE_Zone,Period);
PSEVals(PSE_Zone,Period,'NPV_HarvCHP')=(44/12)*Harvest_CHP(PSE_Zone,Period);
PSEVals(PSE_Zone,Period,'RES_CO2')=(44/12)*(JustGrowCARB(PSE_Zone,Period,'C_LT')+JustGrowCARB(PSE_Zone,Period,'C_BG'));
```

Project Personnel Response: PSE corrected the conversion factor from 44/12 to 3.664 for converting carbon to CO2.
Auditor Response: Through review of the revised .gms file entitled "PSE_BaselineHWP_Sep2020", the audit team confirmed that the code, as shown below, had been revised to reference a factor of 3.664 instead of the (44/12) factor. Therefore, the non-conformity has been resolved.

```
PSEVals(PSE_Zone,Period,'NPV_CO2')=3.664*(NPVMax_CARB(PSE_Zone,Period,'C_LT')+NPVMax_CARB(PSE_Zone,Period,'C_BG'));
PSEVals(PSE_Zone,Period,'NPV_HarvCSS')=3.664*Harvest_CSS(PSE_Zone,Period);
PSEVals(PSE_Zone,Period,'NPV_HarvCSP')=3.664*Harvest_CSP(PSE_Zone,Period);
PSEVals(PSE_Zone,Period,'NPV_HarvCHS')=3.664*Harvest_CHS(PSE_Zone,Period);
PSEVals(PSE_Zone,Period,'NPV_HarvCHP')=3.664*Harvest_CHP(PSE_Zone,Period);
```

NIR 43 Dated 25 Sep 2020
Standard Reference: Methodology, Section C3
Document Reference: Data_PSE_XYield_Sep2020.gms; PSE_Baseline_Sep2020.lst
Finding: The methodology requires that the variable C(BSL,TREE,t) be calculated as "Change in the baseline value of carbon stored in above and below ground live
trees at the beginning of the year t (in metric tons CO2)".
The audit team has been able to replicate the quantification of C(BSL,TREE,t) where the only silvicultural prescription modeled has been clearcutting. However, the audit team has encountered difficulty in replicating this calculation where partial harvest activities have been modeled. Project personnel are requested to assist the audit team with understanding the calculation procedures where such harvests have been modeled.
Project Personnel Response: PSE provided information to the audit team to facilitate replicating the quantification of C(BSL,TREE,t) where partial harvest activities have been modeled. The pre-harvest value is the correct one to compare.
Auditor Response: Subsequent to this issuance of this NIR, various work products and other information were provided to assist the audit team in replicating the baseline carbon stocks for a sample of data. Therefore, the information request has been satisfied.

NCR 44 Dated 25 Sep 2020
Standard Reference: Methodology, Section C3.2
Document Reference: PSE Response to VB Questions_22Sept2020
Finding: Section C3.2 of the methodology has a very prescriptive set of instructions for calculating carbon in harvested wood products. Based on the information provided in the document "PSE Response to VB Questions_22Sept2020", it appears that there have been a number of nonconformities with respect to the prescriptive requirements of the methodology. Examples of non-conformance are provided below (this should not be considered an exhaustive list of all non-conformities).
1. It appears that the basic process involves taking the calculated "C_LT" and "C_REM" values, multiplying by (1-0.1) to account for defect and apportioning among product classes. This is certainly not compliant with the instructions in Step 1. The instructions in Step 1 can be bypassed in the case that “the biomass model” provides “metric tons carbon in the bole, without bark”. It does not seem that this information from the model is utilized.
2. Step 2 states “Multiply the total carbon weight (metric tons of carbon) for each group derived in Step 1 by the mill efficiency identified for the project’s mill location(s) in the Regional Mill Efficiency Database, found on the Reference documents section of this methodology’s website." This step does not appear to be implemented in the calculation flow.
3. Step 3 requires that a specific set of factors be used (“Thus, decay rates for each wood product class have been converted into “storage factors” in the table below"). It appears that a different set of factors is used in the “Harvested Wood Products Factors” sheet of the “Appendix E_Baker-White River Forest Carbon Project-ACR ERT Worksheet_20Sept2020” workbook.
Project Personnel Response: PSE has revised the HWP calculations to match the methodology. A description of the methods is provided in the “PSE_HWP_Explanation.docx” document.
Auditor Response: Through review of the revised calculation of harvested wood products, as contained in the workbook entitled "Appendix E_Baker-White River Forest Carbon Project-ACR ERT Worksheet_5Oct2020", the audit team was able to independently confirm that all relevant requirements of Section C3.2 of the methodology are now complied with in full. The non-conformity has been resolved.

NIR 45 Dated 7 Oct 2020
Standard Reference: ACR Standard, Section 2.A
Document Reference: Appendix E_Baker-White River Forest Carbon Project-ACR ERT Worksheet_5Oct2020
Finding: The ACR Standard states that "The accounting and data quality principles summarized here are designed to ensure that the assumptions, values, and procedures used by Project Proponents and VVBs result in a fair and true accounting of GHG emission reductions and removals." The principle of consistency is defined by the ACR Standard as follows: "Enable meaningful comparisons in GHG-related information. Use consistent methodologies for meaningful comparisons of emissions over time..."
The onsite carbon stocking values as of the project start date, as transcribed to cells C5 and C26, respectively, of the worksheet "PSE_Harvest_Schedule" in the "Appendix E_Baker-White River Forest Carbon Project-ACR ERT Worksheet_5Oct2020" workbook, differ significantly between the baseline and project scenarios. Given that the reported values are intended to indicate the carbon stocking as of the start of the project (i.e., prior to any modeled harvest activities), it seems that these values should be identical. In an email from project personnel dated 6 October 2020, it was explained that this difference is partly attributable to the circumstance "that 37 acres of unharvested Wetland outside of the FPA did not get counted in the Baseline stocks calculation". This seems to suggest that an area of approximately 37 acres falls within the project area and was accounted for in the calculation of carbon stocking under the project scenario but was excluded from the calculation of carbon stocking under the baseline scenario. If so, this would seem to constitute a violation of the principle of consistency, since it would result in changes between baseline and project carbon stocks that are not related to differences in management activities under the two scenarios and, as such, would interfere with meaningful comparisons in GHG-related information. However, the 37-acre area cannot, alone, explain the magnitude of the discrepancy observed (a discrepancy of approximately 45,500 tCO2e). Therefore, it is likely that there are other factors that have led to the discrepancy, and the audit team suspects that those factors may also relate to violations of the principle of consistency, as discussed above. Please provide (1) a clear explanation for the discrepancy described above and (2) a justification for why the principle of consistency has not been violated.
Project Personnel Response: This finding consists of two parts. The first relates to the 37 acres of unharvested wetland that was omitted from the baseline stock calculation. That error has been corrected in the NPV modeling files.

The second issue relates to a discrepancy between initial stocks between the baseline and project scenarios. This relates to Finding 43 regarding replicating initial stocks values. PSE reviewed the FVS output and noted that while volume statistics are provided preharvest, mass statistics are post-harvest. This led to the approximate 45,500 tCO2 discrepancy that the audit team noted. To address this issue, the post-harvest carbon stock value is replaced with a pre-harvest carbon stocking value prior to the inventory calculation routines in the NPV model. This resulted in the initial baseline and project stock values rounding to the identical value of 865,729 tCO2.
Auditor Response: Through detailed data checks on the "Appendix E_Baker-White River Forest Carbon Project-ACR ERT Worksheet_12Oct2020" workbook and upstream work products, the audit team can confirm that there is no longer a notable discrepancy between baseline and project scenario carbon stock values as of the project start date. Therefore, the information request is no longer relevant and the finding will be withdrawn.

NCR 46 Dated 7 Oct 2020
Standard Reference: Methodology, Section C3.1
Document Reference: Appendix E_Baker-White River Forest Carbon Project-ACR ERT Worksheet_5Oct2020
Finding: The methodology states in Section C3.1, regarding baseline quantification, that "The output of the models must include either projected total aboveground and below ground carbon per acre, volume in live aboveground tree biomass, or another appropriate unit by strata in the baseline… If the output for the tree is the volume, then this must be converted to biomass and carbon using equations in Section 3.1.1." The Errata & Clarification issued by ACR on 27 July 2020 clarifies that "the steps prescribed in Section 3.1.1 are not relevant where models output projected total aboveground and belowground biomass or carbon." The requirements in Section C3.1 are then referenced in Section D5 ("The following equations are used to construct the project stocking levels using models described in section 3.1...") such that they also apply to project quantification.
While output data on total aboveground and belowground carbon are available from the Forest Vegetation Simulator (FVS), the audit team confirmed, from review of cells D18 and D26 of the worksheet "Puget_Sound_Energy_ACR" of the workbook "Appendix E_Baker-White River Forest Carbon Project-ACR ERT Worksheet_5Oct2020", that the value of 858,212 tCO2e has been used to represent the carbon stocking as of the project start date, for both baseline and project quantification. This value is calculated in cell O141 of the "PIVOT LIVE" worksheet in the "PSE inventory 2019 calcs and stats_Final_Rev_13Sept2020", and the audit team has been able to recalculate it as well. In the understanding of the audit team, a significant reason for the difference between this value and the value calculated from model output (851,606 tCO2e, as pasted into cell C26 of the "PSE_Harvest_Schedule" worksheet in the same workbook), is that the FVS output does not take into due account the differences in the number of trees per acre represented by each tree identified as a "walkthrough tree" (see OBS 40). There may be some residual difference that is solely attributable to differences in terms of how the Jenkins equations are implemented by FVS.
In any case, the use of carbon stocking values that do not originate from FVS negates the "waiver" provided in the Errata & Clarification stating that "the steps prescribed in Section 3.1.1 are not relevant where models output projected total aboveground and belowground biomass or carbon." Therefore, if the FVS model output is not used, the requirements of Section 3.1.1 (e.g., the requirement to calculate carbon stock using the component ratio method) are applicable in full. These requirements have not been fully adhered to in calculation of the value 858,212 tCO2e value.
In summary, the FVS model output has not been used to calculate aboveground and belowground carbon stock as of the project start date, and neither have the steps set out in Section 3.1.1 been fully adhered to in such calculation. Therefore, the methodology has not been complied with.
Project Personnel Response: PSE has replaced the baseline and project scenario carbon stock values at the project start date with the FVS carbon output values (865,729 tCO2) so as to not violate the methodology requirements stated in Section 3.1.1. – see cells D18 and D26 on the “Puget Sound_Energy_ACR” worksheet of the ERT workbook.
Auditor Response: Through detailed data checks on the "Appendix E_Baker-White River Forest Carbon Project-ACR ERT Worksheet_12Oct2020" workbook and upstream work products, the audit team can confirm that the baseline and project scenario carbon stock values are drawn directly from FVS, and therefore the requirements of Section 3.1.1 in Section C3 of the methodology are not applicable. Therefore, the non-conformity has been resolved.