

VERIFICATION REPORT FOR THE “USAL REDWOOD FOREST” PROJECT



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Summary:

This report describes the verification audit of the Usal Redwood Forest project ("the project"), an improved forest management project located in Northern California, which was conducted by SCS Global Services (SCS). The purpose of the verification audit was to assess the conformance of the project with the verification criteria during the reporting period (13 June 2007 to 31 December 2014). The verification audit was performed through a combination of document review, interviews with relevant personnel and on-site inspections. The project complied with all of the verification criteria for the duration of the reporting period, and the assessment team has no restrictions or uncertainties with respect to the compliance of the project with the verification criteria. The audit team has confirmed, with reasonable assurance, that the project has resulted in a total of 3,918,782 metric tonnes of CO₂-equivalent over the reporting period, as quantified in accordance with the verification criteria.

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1 INTRODUCTION

1.1 Objective

The purpose of the verification audit activity was to conduct an independent assessment of the Usal Redwood Forest project (“the project”) to determine whether the project complies with the verification criteria, as set out in the guidance documents listed in Section 1.2 of this report.

1.2 Scope and Criteria

In accordance with Section 4.3.4 of ISO 14064-3:2006, the scope was defined as follows:

- The project and its baseline scenarios;
- The physical infrastructure, activities, technologies and processes of the project;
- The GHG sources, sinks and/or reservoirs that are applicable to the project;
- The types of GHGs that are applicable to the project; and
- The reporting period, as discussed in Section 3.1.4 of this report.

The criteria for verification were contained within the following guidance documents of the Climate Action Reserve (“the Reserve”):

- Forest Project Protocol Version 3.2 (“Forest Project Protocol”; 31 August 2010)
- Climate Action Reserve Program Manual (1 September 2015)
- Climate Action Reserve Verification Program Manual (December 2010)
- Updated Guidance for Verification of Sampled Pools for Forest Projects (3 July 2012)
- Forest Project Protocol Version 3.2 Errata and Clarifications (29 October 2014)
- Any stated requirements on Climate Action Reserve website

1.3 Level of assurance

The level of assurance of this report is reasonable.

1.4 Treatment of Materiality

In accordance with Section 1.6.4 of the Verification Program Manual, a quantitative materiality threshold of 1% was applied, given the quantity of emission reductions and removals reported for the project. In accordance with Section 1.6.5 of the Verification Program Manual, any instance of non-conformance related to a prescriptive requirement outlined in the Forest Project Protocol was considered a material misstatement.

1.5 Summary Description of the Project

As reported in the Project Design Document for the project (see Section 2.2 below for more information regarding this document):

- The project is an improved forest management project located in Mendocino County in Northern California.
- The size of the project area is 47,981.54 acres.
- The previous and current land use is timber production.
- Major species in the project area are Douglas-fir, coast redwood, and tanoak, with a smaller component of madrone and various other softwood and hardwood species.
- Slopes are generally moderate to steep.

2 VERIFICATION PROCESS

2.1 Method and Criteria

Prior to commencement of verification services, a project-specific Notification of Verification Activities and Conflict of Interest (NOVA/COI) Form was submitted to the Reserve in accordance with the Verification Program Manual. The NOVA/COI Form was initially submitted on 20 August 2014 and, after submission of a revision dated 9 September 2014, approval of the NOVA/COI Form was conveyed by Reserve personnel on 11 September 2014.

The verification was performed 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, the project was assessed for conformance to the criteria described in Section 1.2 of this report. As discussed in Section 2.5, findings were issued to ensure that the project was in full conformance to all requirements.

2.2 Document Review

The Project Design Description (PDD) for the project was the major document that was reviewed to ensure conformance of the project to the verification criteria. The most up-to-date version of the PDD, which complies with the verification criteria set out in Section 1.2 of this report, has been uploaded to the Climate Action Reserve's APX website on 21 September 2015 at 10:09 PM (according to the time stated on the website) with the file name "CAR 730 Usal Redwood Forest PDD V3 9-17-2015".

Additional documents (e.g., reports, memos, land deeds and titles) were reviewed to ensure conformance of the project to the verification criteria. A complete list of documents received and reviewed by the verification team may be found within SCS' internal working papers.

2.3 Interviews

Interviews constituted an important component of the audit process. The following personnel associated with the project developer and/or implementing partners were interviewed. The phrase "throughout audit" under "Date Interviewed" indicates that the individual in question was interviewed on multiple occasions throughout the audit process.

Individual	Affiliation	Date Interviewed
Tabi Bolton	Campbell Global	11 November 2014
Mike Tadlock	Campbell Global	11 November 2014, 18 June 2015
Joe Sutphin	Campbell Global	16 June 2015
Mark Welther	Redwood Forest Foundation, Inc	11 November 2014
Greg Fullem	Schwabe, Williamson & Wyatt	11 November 2014
Jim Clark	North Coast Resource Management	Throughout audit
Tom Tuchmann	US Forest Capital	Throughout audit

The following personnel not associated with the project developer and/or implementing partners were interviewed.

Individual	Affiliation and Role	Date Interviewed
Anthony Lukacic	Cal Fire	31 July 2015

2.4 Site Inspections

The objectives of the on-site inspections performed were to:

- Ensure that the geographic area of the project, as reported in the project documentation, conforms to Section 3.1.6 of the Program Manual;
- Select samples of data from on-the-ground measurements for verification in order to meet a reasonable level of assurance and to meet the materiality requirements of the project;
- Perform a risk-based review of the project area to ensure that the project is in conformance the eligibility requirements of the verification criteria; and
- Confirm the appropriateness of the methodologies for monitoring and measurement of the quantified GHG emission reductions.

In fulfilment of the above objectives, the audit team performed an on-site inspection of the project area during the periods 11-13 November 2014, 16-20 March 2015, 23-27 March 2015 and 2-3 June 2015. The primary activities undertaken during this visit were as follows:

- Interview project personnel regarding acquisition of the project area, forest inventory protocols employed in the quantification of baseline and project emissions, project management activities, determination of ownership over the project area and eligibility of the project under the Forest Project Protocol; and
- Re-measure, in the manner required by the Section 10 of the Forest Project Protocol, a total of 27 inventory plots.

In accordance with Section 10 of the Forest Project Verification Protocol, the minimum quantity of inventory plots to be re-measured was determined on the basis of a project area greater than 25,000 acres and a “strong attestation” for all of the verification criteria set out in Table 10.5.

2.5 Resolution of Any Material Discrepancy

Any potential or actual material discrepancies identified during the assessment process were resolved through the issuance of findings. The types of findings issued by SCS were characterized as follows:

Non-Conformity Report (NCR): An NCR signified a material 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 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 verification statement.

Opportunity for Improvement (OFI): An OFI indicated an area that should be monitored or ideally, improved upon. OFI's were considered to be an indication of something that could become a non-conformity if not given proper attention, and were sometimes issued in the case that a non-material discrepancy was identified. OFIs were considered to be closed upon issuance.

All findings issued by the audit team during the verification process have been closed. In accordance with Section 3.6 of the Verification Program Manual, all findings issued during the verification process, and the impetus for their closure, are described in a separate List of Findings that is a private document.

3 VERIFICATION FINDINGS

A detailed discussion of how the project was found to conform to each applicable requirement of the Forest Project Protocol may be found in the internal working papers of the audit team, which are available to the Climate Action Reserve upon request. However, a high-level summary of the most important determinations made by the audit team can be found below.

3.1 Project Design

3.1.1 *Project scope, type, technologies and measures implemented, and eligibility of the project*

The project is an improved forest management project, as defined within Section 2.1.2 of the Forest Project Protocol. The audit team's findings with respect to the specific eligibility criteria for improved forest management projects, as set out by the Forest Project Protocol, are stated below. Unless otherwise indicated, the audit team can confirm the project's eligibility with respect to each condition.

Criterion	Verification Findings
"The project takes place on land that has greater than 10 percent tree canopy cover."	The audit team can confirm, on the basis of observation of the project area through the Google Earth software and during on-site audit activities, that average canopy cover in the project area is far greater than 10 percent.
"The project employs natural forest management practices, as defined in Section 3 of this protocol."	The project employs natural forest management practices. The adherence of the project to these practices is further discussed in Section 3.1.5 of this report.
"The project does not employ broadcast fertilization."	Absence of broadcast fertilization was confirmed with project management personnel during the site visit and the audit team is unaware of any circumstances of such fertilization being applied in the North Coast region in recent memory; furthermore, no evidence of such fertilization was observed during the site visit.
"The project does not take place on land that was part of a previously registered Forest Project, unless the previous Forest Project was terminated due to an Unavoidable Reversal (see Section 7)."	On the basis of personal knowledge of every forest project that has been registered under the American Carbon Registry, Climate Action Reserve or Air Resources Board programs to date, the audit team can affirm that no such project including any portion of the project has been previously registered.

3.1.2 *Project Developer*

The project developer, which is also the forest owner, is Usal Redwood Forest Company, LLC. Through review of a certificate of formation for the project developer, the audit team confirmed that this entity is a legitimate limited liability company.

3.1.3 Project start date

As indicated within Section 2.2 of the PDD, the project start date is 13 June 2007. Through review of the relevant grant deed, the audit team can confirm that this is the date of recordation of the deed granting the real property containing the project area to the forest owner. As the date of property transfer is one of the options for denoting project start date explicitly set out in the Forest Project Protocol, the audit team agrees that 13 June 2007 was appropriately determined to be the project start date.

3.1.4 Reporting period

The initial reporting period is 13 June 2007 - 31 December 2014. The reporting period complies with the verification criteria identified in Section 1.2 of this report.

3.1.5 Project activities

The activities undertaken by the project thus far, and to be undertaken in the future, are described in Section 2.4 of the PDD. The audit team agrees that, if management activities are undertaken in accordance with the above document, maintenance or increase in standing live carbon stocks over the project lifetime, as required by Section 3.10.3 of the Forest Project protocol, is likely to result. However, it will be the responsibility of future audit teams to ensure that the requirements of Section 3.10.3 of the Forest Project Protocol are met throughout the project lifetime.

Since the project start date, uneven-aged silvicultural practices have been employed, as confirmed by the audit team through review of approved timber harvest plan documents and on-site observation of prior timber harvests. The prevailing silvicultural prescriptions employed to date are selection, group selection, transition and variable retention. All of these can justifiably be termed “uneven-aged” prescriptions. The audit team is unaware of any circumstances whereby the forest owner would practice traditional even-aged management.

The audit team was provided with an analysis whereby it was demonstrated that no 20-acre polygon containing less than 40% canopy cover exists within any forest landholdings owned by the forest owner. The audit team reviewed this analysis and found it adequate and appropriate.

Therefore, the audit team agrees that the project has demonstrated sustainable harvesting practices as set out under Option 3 of Section 3.10.1 of the Forest Project Protocol.

The project complies with all requirements for natural forest management, as set out in Section 3.10.2. The specific findings of the audit team with respect to each requirement, where not addressed above, are set out below.

Requirement	Verification Findings
“Project consists of at least 95% native species based on the sum of carbon in the standing live pool...”	The audit team can confirm that all species listed within Table 2.1 of the PDD are native to region within which project is located, and the audit team did not encounter any other species in review of the inventory data. In addition, the audit team

Requirement	Verification Findings
	encountered no non-native woody species during on-site audit activities.
“Where the Project Area naturally consists of a mixed species distribution, no single species’ prevalence, measured as the percent of the basal area of all live trees in the Project Area, exceeds the percentage value of standing live carbon shown under the heading ‘Composition of Native Species’ in Appendix F.”	The audit team examined the calculations undertaken to produce the information presented in Table 2.1 of the PDD and no errors were detected. The information in Table 2.1 of the PDD is consistent with the observations of the audit team during the on-site audit activities. The project area is clearly a mixed-species area that is quite diverse. The audit team agrees that Northern California Coast Redwood/Douglas-fir Mixed Conifer Assessment Area is the appropriate assessment area on which to base the assessment, and the maximum basal area threshold value that is reported within the PDD is consistent with that found by the audit team.
“On a watershed scale up to 10,000 acres (or the project area, whichever is smaller), all projects must maintain, or make progress toward maintaining, no more than 40 percent of their forested acres in ages less than 20 years...”	The analysis reported in Table 2.2 of the PDD adequately demonstrates conformance with the requirement. The project team examined the underlying calculations and no errors were detected.
“Forest Owners must ensure that lying dead wood is retained in sufficient quantities...”	During on-site audit activities, the audit team observed no evidence that salvage harvesting has been undertaken since the project start date. The audit team also found no evidence that lying dead wood has been actively removed, and it is not likely that such wood would be actively removed. Based on on-site observations and prior experience, the audit team can confirm that the reported values for carbon stocks in dead wood are reasonable, and that these reported values indicate that the project area currently contains standing dead wood that is in excess of both one metric ton of carbon per acre and 1% of standing live carbon stocks.

3.1.6 *Project location*

The project area is located on private land within the state of California, and thus complies with the requirements for project location as set out in Section 3.8 of the Forest Project Protocol.

3.1.7 Project compliance with applicable laws, statutes and other regulatory frameworks

As the primary project activity during the reporting period has been timber harvesting, potential violations of the California Forest Practice Rules and associated requirements were identified by the audit team as having the greatest potential impact on the overall risk of unreported noncompliance. Through correspondence with Cal Fire representative Anthony Lukacic (via email dated 31 July 2015), the audit team confirmed that Cal Fire has no records of any violations having been committed by the project developer during the reporting period.

In addition, the audit team confirmed that the Attestation of Regulatory Compliance, attesting that the project has been in full compliance with all laws for the duration of the reporting period, has been properly executed by an appropriate representative of the project developer. The form is signed by Mark Welther, President & CEO of Redwood Forest Foundation, Inc. While the project developer, as discussed in Section 3.1.2 above, is Usal Redwood Forest Company, LLC (and this entity is also indicated to be the project developer on the Reserve website), the audit team received a limited liability company agreement for Usal Redwood Forest Company LLC as evidence that Redwood Forest Foundation, Inc. is the sole member of Usal Redwood Forest Company LLC. Therefore, the audit team agrees that Mr. Welther has legal authority to bind Usal Redwood Forest Company, LLC and, therefore, to execute the Attestation form.

3.1.8 Ownership

As discussed in Section 3.1.3 of this report, the audit team confirmed, through review of the grant deed conveying ownership of the real property involved in the project, that the project area is now owned in fee by the project developer. During the on-site audit activities and various follow-up meetings, the audit team discussed the systems were used to accurately determine the project area acreage. The audit team confirmed ownership of the entire area, as displayed in the maps shown in the PDD and is used to expand per-acre carbon stock values to totals, through the following checks:

- Review of the grant deed and title insurance documentation
- Review of the process used to determine that no exception/exclusion, as noted in title insurance documentation, threatens the ability of the forest owner to be considered the sole forest owner of the project
- Checks of the project boundary against the information contained within official Mendocino County parcel information
- Checks on the process for transferring information on monumented property corners into the project GIS system, for purposes of identifying the project boundary

The audit team confirmed that the Attestation of Title, attesting that the project developer holds appropriate title over the project area, has been properly executed by an appropriate representative of the project developer. The identity of the signatory to this form is the same as for the Attestation of Regulatory Compliance form, and the appropriateness of this signatory is discussed in Section 3.1.7 of this report.

3.1.9 Project Implementation Agreement

The verifier confirms that a conformed copy of the Project Implementation Agreement was emailed to the audit team on 19 October 2015 and is identified by filename 'Certified Recorded copy of Restrictive Covenant and Project Implementation Agreement (1 of 3)'. The agreement bears the stamp of the Mendocino County Recorder, serial number 2015-13952, dated 14 October 2015. The agreement is titled 'Restrictive Covenant and Project Implementation Agreement' and was executed 8 October 2015, signed by Climate Action Reserve and Usal Redwood Forest Company, LLC.

3.1.10 Qualified Conservation Easement

A qualified conservation easement has not been employed. The audit team understands that a conservation easement was entered into by and between the Usal Redwood Forest Company, LLC and The Conservation Fund. The grant deed conveying the easement was recorded on 27 October 2011 in the official records of Mendocino County, California with the document ID 2011-15146. In the understanding of the audit team, this easement is not considered a qualified conservation easement.

3.2 Application of Protocol

3.2.1 Title and Reference

The Forest Project Protocol Version 3.2 was used by the project developer.

3.2.2 GHG Assessment Boundary

The sources, sinks and reservoirs included within the project's GHG assessment boundary are set out in 3.1 of the PDD. The determination of the project's GHG assessment boundary is consistent with the requirements for required sources, sinks and reservoirs as set out in Section 5.2 of the Forest Project Protocol. The project does not include an optional sources, sinks or reservoirs.

3.2.3 Baseline Scenario

The identification of the baseline scenario conforms to the requirements of Sections 6.2.1.1 and 6.2.1.2 of the Forest Project Protocol. The identification of this scenario is discussed in detail and reported in the PDD.

The regimes modeled in the baseline scenario are described in Attachment C to the PDD. As discussed with the audit team and as presented in the PDD, the baseline modeling has been appropriately constrained by the California Forest Practice Rules and associated requirements. Through review of Attachment C and data checks on the baseline modeling the audit team has been able to confirm the following:

- All of the regimes described in Attachment C have been designed to ensure conformance to the Forest Practice Rules as implemented using option "c" to demonstrate maximum sustained production of high-quality timber products, including the following:
 - o rules for retention of basal area in Group A species and in certain size classes, as set out in the Forest Practice Rules
 - o requirements that Group A species may not be reduced relative to Group B species

- o requirements for residual stocking in group selection areas
- The watershed and lake protection zone (WLPZ) buffering described in Attachment C is fully consistent with the requirements that existed at the time of the project start date, as set out in the 2007 version of the Forest Practice Rules (noting that the requirements have changed in subsequent versions of the Forest Practice Rules)
- Given the presence of multiple spotted owl activity centers within the project area, the regimes used to comply with spotted owl habitat requirements are compliant with the requirements for the respective habitat types as set out in the document "Northern Spotted Owl Take Avoidance Analysis and Guidance For California Coast Forest District" (issued on 15 March 2011 as Attachment A to a memo issued on the same day by Nancy Finler, Field Supervisor of the Arcata Fish and Wildlife Office of the USFWS), and the allocation of area to each respective regime has been carried out in full respect of the requirements for area retention as set out in that document
 - o The Forest Project Protocol requires that "for Forest Projects located in California, the baseline must be modeled to reflect all silvicultural treatments associated with timber harvest plans (THPs) active within the Project Area at the time of the project's initiation". Accordingly, the audit team performed audit checks to confirm that the following THPs were active at the time of the project's initiation (the completion date for each THP, per the records of Cal Fire, is indicated in parentheses): 1-04-135-MEN (15 August 2007) and 1-06-058-MEN (14 June 2007). In correspondence with project personnel, it was indicated to the audit team that the only work remaining to be completed under these THPs, as of the project start date, was additional mapping work (for 1-04-135-MEN) and additional treatment of hardwoods to meet stocking requirements (for 1-06-058-MEN). These assertions were substantiated with documentation provided to the audit team. The additional mapping work required under THP 1-04-135-MEN is obviously not a "silvicultural treatment", and so THP 1-04-135-MEN is not relevant for purposes of this discussion. While treatment of hardwoods is a silvicultural treatment, the audit team notes that this treatment has been inherently reflected in baseline modeling, as the input to baseline modeling was inventory data acquired in early 2015 (after hardwood treatments had occurred), as grown back to the project start date and, therefore, this inventory reflects the hardwood treatments that were undertaken (i.e., the absence of hardwoods that were removed in 2007 is reflected in the inventory data that were collected in early 2015). Therefore, the audit team agrees that the baseline modeling implicitly, but unequivocally, reflects the silvicultural treatments associated with THP 1-06-058-MEN.

The conformance of the baseline scenario to Section 6.2.1.3 of the Forest Project Protocol is discussed in Section 8 and Attachment D of the PDD. The conformance to these requirements has been satisfied through the second option of Section 6.2.1.3, which requires "A financial analysis of the anticipated growth and harvesting regime that captures all relevant costs and returns, taking into consideration all legal, physical, and biological constraints." The audit team can confirm that cost and revenue variables in the financial analysis are based on regional norms or on documented costs and returns for the project area or other properties in the project's assessment area, and that the outcome of the analysis is not unduly sensitive to changes in the input values (i.e., the baseline scenario can be shown to be financial feasible across a broad range of alternative inputs). Furthermore, on the basis of professional expertise, the audit team can affirm the financial feasibility of the baseline scenario.

3.2.4 Additionality

The GHG reductions occurring as a result of the project activity exceed the GHG reductions that would occur as a result of the baseline scenario discussed in Section 3.2.4 of this report. While some timber harvest has occurred since the project start date, and actual onsite carbon stocks have not declined since the project start date, and thus, the project is already resulting in GHG removals in excess of those that would occur as a result of the baseline scenario. In addition, the proposed management activity to occur as part of the project, as described in Section 2.4 of the PDD, is highly likely to result in GHG reductions in excess of those that would occur as a result of the baseline scenario. Thus, the project meets the legal requirement test. In addition, as an improved forest management project, the project automatically meets the performance test, as set out in Section 3.1.2.2 of the Forest Project Protocol.

Finally, the audit team confirmed that the Attestation of Voluntary Implementation, attesting that the project has been voluntarily implemented for the duration of the reporting period, has been properly executed by an appropriate representative of the project developer. The identity of the signatory to this form is the same as for the Attestation of Regulatory Compliance form, and the appropriateness of this signatory is discussed in Section 3.1.7 of this report.

3.2.5 Quantification of Project GHG Emission Reductions and Removals

Section 9.1 of the Forest Project Protocol requires that “All reports that reference carbon stocks must be submitted with the oversight of a Professional Forester.” The audit team confirmed that the information in the PDD that references carbon stocks was submitted with the oversight of a California registered professional forester (Jim Clark, #2528 confirmed to hold valid credentials through via information downloaded from the California Board of Forestry website on 16 Jul 2015).

The following GHG sources, sinks, and reservoirs (SSRs) were directly assessed by the audit team through checks on the quantification of GHG emission reductions and removals:

- IFM-1
- IFM-3
- IFM-7
- IFM-8
- IFM-14
- IFM-17

3.2.5.1 Quantification of baseline emissions

Baseline emissions were modeled using the FORSEE. As set out in Appendix B.1 of the Forest Project Protocol, FORSEE is considered to be an approved model for the state of California.

The source data for quantification of baseline emissions is derived from a forest inventory installed in early 2015. The audit team can confirm that the inventory design conforms to all requirements of Appendix A of the Forest Project Protocol. In addition, from interviews with personnel responsible for planning and implementation of the inventory, the audit team learned of the process for collecting and compiling data. It should be noted that, as all inventory plots installed as part of the inventory could be readily re-located by the audit team, the audit team was able to confirm the quality of the inventory systems via a comparative t-test analysis of 27 paired plots, using the procedure required by Section

10.3.5 of the Forest Project Protocol, and confirmed that no difference between the project inventory data and the audit team's inventory data was identified at the 80% confidence interval (i.e., the p-value resulting from the analysis was >0.2).

As part of fieldwork, the audit team cored site trees within the project area, which allowed for an independent check on the site indices as used in the modeling, as well as the acreage of the project area that falls within high and low site classes. When compared with data collected by the audit team, the reported acreage of the project area that falls within high and low site classes was shown to be conservative (i.e., it resulted in a higher common practice statistic than would have been computed using data collected by the audit team). In addition, based on the data collected by the audit team, the project area appears to be Site Class III or Site Class IV, on average (based on the site class breaks specified in the Forest Practice Rules), so the audit team agrees that it is conservative to assume that the project area is entirely Site Class III for purposes of compliance with the Forest Practice Rules. The site index data used by the project for baseline modeling also seemed reasonable, when compared to data collected by the audit team.

On the basis of professional judgment, the audit team agrees that the process for growing the inventory data backward to the project start date, as described in Attachment C to the PDD, is appropriate and consistent with best practices for such work. The correct implementation of the approach described in Attachment C was confirmed through replication of modeling on a sample of data.

Through risk-based review of scripts used to perform baseline modeling and through replication of modeling on a sample of data, the audit team has been able to conclude that the modeling has been implemented correctly and in the manner described in Attachment C to the PDD. The audit team also reviewed the assignment of areas to different regimes to account for spatial constraints and confirmed, through data checks on a sample of data, that it is correct. On this basis, the audit team can confirm the validity of the spatial analysis undertaken to assign area to different regimes.

Through review of Attachment B to the PDD, review of stratum boundaries against aerial photography, interviews with project personnel and on-the-ground assessment of the stratification procedures employed for the project (including on-the-ground comparison of stratum boundaries and labels to visually observed conditions), the audit team confirmed that the stratification procedure is generally appropriate to the project circumstances. No errors in the stratification process were detected through the audit team's independent checks.

As discussed in Attachment C to the PDD, growth and yield for the project area was modeled over the 100-year modeling period. Through interviews with project personnel and thorough review of model output, the audit team has reached a reasonable level of assurance that the modeling was performed correctly and in a manner consistent with the baseline scenario discussed in Section 3.2.4 of this report. The audit team can confirm that the output values are within the range of expected growth patterns for the project area.

Through interviews with project personnel, review of the grant deed conveying the real property involved in the project and checks of the legal description contained therein against the spatial boundaries of the project, the audit team confirmed that Usal Redwood Forest Company, LLC has no affiliates and that the area forested area described in the grant deed comprises all of the area in which Usal Redwood Forest Company, LLC either owns in fee or holds timber rights on. Therefore, the audit team agrees that the only

area outside of the project that needed to be included in the same logical management unit for purposes of calculation of the minimum baseline level is the “approximately 54 net acres of timberland for which URFC owns the timber rights”, as described in the PDD. The audit team found the calculation of the minimum baseline level to be correctly undertaken. On the basis of this calculation, the audit team agrees that the minimum baseline level has been correctly set to equal the common practice statistic. Through checks on the calculation stream, the audit team confirmed that the above-ground live carbon stocks did not fall below this value.

Through data testing on the quantification of carbon stock in harvested wood products in-use and in landfills, the audit team confirmed that it conformed to the instructions of the “Harvested Wood Products Calculation Worksheet” (22 January 2013), which the audit team understands to be required by the Climate Action Reserve. (Where relevant, the quantification also conformed to the requirements of Appendix C of the Forest Project Protocol, although in some cases the guidance of the instructions of the “Harvested Wood Products Calculation Worksheet” has superseded the guidance in Appendix C of the Forest Project Protocol.) The audit team traced the inputs to this quantification to cubic-foot volumes as output from FORSEE.

Finally, the audit team reviewed and tested all high-level calculations of baseline onsite carbon stocks and baseline carbon stocks in harvested wood products. All such calculations were found to be without material error. The audit team’s confirmation of the correct use of equations as prescribed by the Forest Project Protocol is described in Section 3.2.5.2 below.

3.2.5.2 Quantification of project emissions

The inventory data described in Section 3.2.5.1 above represent the carbon stocking on the project area as of the end of the reporting period. Through recalculation of reported results, the audit team confirmed the correctness of the reported confidence deduction and the reported actual onsite carbon stocks as of the end of the reporting period.

As required by Section 10.3.5 of the Forest Project Protocol, the audit team conducted a “verification plot” exercise to confirm the correctness of the carbon stock estimates. In this case, the “verification plot” consisted of the complete treelist from the project inventory as of the end of the reporting period. Through recalculation of carbon stocking for each tree in the inventory, the audit team confirmed appropriate implementation of the volume and biomass equations permitted for use by the Climate Action Reserve (in this case, the equations dated 13 May 2009 on the Climate Action Reserve website).

The same inventory data used as an input to the baseline modeling (as discussed in Section 3.2.5.1 above) also represent the carbon stocking on the project area as of the beginning of the reporting period. The audit team agrees that the procedures employed are appropriate for adjusting the inventory data to the project start date, given the presence of timber harvest on the project area. While fire burned a portion of the project area during the reporting period, it is the understanding of the audit team that the fire had minimal impact on onsite carbon stocks and, in any case, the impact of the fire was inherently captured by the inventory data that were acquired in early 2015.

Similarly, the same stratum boundaries and labels used in the quantification of baseline emissions (as discussed in Section 3.2.5.1 above) were also used in the quantification of project emissions, as confirmed by the audit team through the application of independent checks.

Through recalculation and other data testing procedures, the audit team confirmed the correctness of the quantification of actual onsite carbon stocks as of the beginning and end of the reporting period. The audit team also confirmed, on the basis of professional judgment, the appropriateness of the procedure used to quantify the actual on-site carbon stocks in each year of the reporting period.

Through data testing on the quantification of carbon stock in harvested wood products in-use and in landfills, the audit team confirmed that it conformed to the instructions of the “Harvested Wood Products Calculation Worksheet” (see comments in Section 3.2.5.1 above regarding this work product). The audit team traced the inputs to this quantification to harvested volumes as reported by the timber harvest reporting system operated by project personnel. Through interviews with project personnel and cross-checks against information reported to the California Board of Equalization, the audit team was able to confirm the appropriateness of the process.

3.2.5.3 Quantification of secondary effects emissions

Through recalculation and other data testing procedures, the audit team confirmed that the average amount of carbon in standing live carbon stocks harvested in the baseline (prior to delivery to a mill) was correctly calculated using the same biomass equations used to calculate biomass in live trees. The corresponding quantity has been correctly calculated, for years in which harvest took place during the reporting period, using a ratio estimator as is implemented in the “Harvested Wood Products Calculation Worksheet”. On the basis of these inputs, secondary effects have been quantified in accordance with Equation 6.5 of the Forest Project Protocol. The audit team confirmed, through recalculation, that the equation was appropriately implemented.

3.2.5.4 Summary of GHG emission reductions or removals

Through recalculation, the audit team confirmed that Equation 6.1 of the Forest Project Protocol was correctly implemented, and that the resulting value of GHG emission reductions or removals (3,918,782 metric tonnes of CO₂-equivalent), as reported in the PDD, has been quantified without material error.

3.2.6 Quantification of Project Reversal Risk Rating

The project’s reversal risk rating has been appropriately calculated using the default values (as are appropriate to the circumstances of the project) sourced from Appendix D. Through recalculation, the audit team confirmed that the reversal risk rating specified in the PDD (19.2%) conforms the requirements of Appendix D of the Forest Project Protocol and that the number of CRTs to be contributed to the buffer pool (752,410 CRTs), as reported in the PDD, has been quantified according to the guidance of Section 7.2.1 of the Forest Project Protocol.

4 VERIFICATION CONCLUSION

The audit team affirms, with a reasonable level of assurance, that the project has resulted in a total of 3,918,782 metric tonnes of CO₂-equivalent over the reporting period, as quantified in accordance with the verification criteria. This quantity is separated by period, for the convenience of the reader, in the below table (the below values are a duplicate of the quantities stated in Calc Row 37 of Attachment F to the PDD).

Period Start	Period End	Quantity of GHG Emission Reductions/Removals (tCO ₂ e)
13 June 2007	31 December 2007	1,801,449
1 January 2008	31 December 2008	270,507
1 January 2009	31 December 2009	280,060
1 January 2010	31 December 2010	289,883
1 January 2011	31 December 2011	299,983
1 January 2012	31 December 2012	313,477
1 January 2013	31 December 2013	324,298
1 January 2014	31 December 2014	339,125

Furthermore, the audit team affirms, with a reasonable level of assurance, that the project was in compliance with the verification criteria for the duration of the reporting period described in Section 3.1.4 of this report.