Verification of
California Climate Action Registry
Conservation-Based Forest Management Project

for

The Conservation Fund
Garcia River Forest Project

Period:

January 2007 to December 2007

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1 Summary

This report presents the findings of the 2008 verification evaluation of The Conservation Fund's (TCF) Garcia River Forest conservation-based forest management project greenhouse gas emissions data reported to the California Climate Action Registry (CCAR). The evaluation follows upon the prior verification of the 2005 and 2006 emission reductions generated by the Garcia River Forest project (conducted in 2007) and was undertaken to assess and review the reported data and confirm whether the compiled data continues to conform to the CCAR Forest Project Protocol v2.1.

Please note that CCAR is in the process of updating the terminology used in their protocols to be in agreement with generally accepted national and international terminology. To date, Registry protocols have used the term "certification" to represent the activity of verifying that GHG emissions data submitted to the Registry has been collected and quantified in accordance with the guidelines put forth in the Registry protocols. The Registry has begun to shift the terminology from "certification" and "certifier" to more widely accepted "verification" and "verifier". In an effort to conform to this shift, this report shall use the term "verification" and "verifier" where previous reports referred to "certification" or "certifier". The terms may be considered to be interchangeable for the purposes of this report.

The evaluation was undertaken using SGS/SCS's verification methodology developed for verification of forestry offset projects registered under the CCAR. The standard used for verification is the CCAR's Forest Certification Protocol v2.0 (May 2007).

The verification evaluation, that is reported herein, identified a number of needed clarifications and corrective actions that had to be undertaken by the project developer in order for SGS/SCS to be able to issue an opinion that the conservation-based forest management project conforms to the CCAR protocols. The verification process and findings are detailed, below.

SGS/SCS was able to reach a decision on the initial project summary worksheet presented by the project developer and SGS/SCS confirms the adequacy of the information provided in the project description.

2 Introduction

While verification is not required every year by the CCAR protocol, TCF elected to contract with SGS/SCS to perform a verification audit of their Garcia River Forest conservation-based forest management project for the year 2007. Without this verification, TCF would be unable to market the 2007 emission reductions associated

with the Garcia River project. This report covers the verification and subsequent certification of the information provided in the Garcia River Forest Summary Worksheet and the calculation of carbon stocks for the year 2007.

This report presents the findings of the assessment and provides justification for the verification process and the certification opinion.

Additionally, during the final stages of verification, it was noted that the application of Confidence Level adjustments for year 2005 and 2006 had been incorrectly tabulated. The California Climate Action Registry has determined not to revise the tonnes issued to date as the Garcia River Forest Project has improved its confidence in 2007 (i.e. additional plot data had been collected in 2007 and, as a result, the standard error of the estimated reductions for 2007 was lowered below the threshold that requires, per the CCAR protocol, a confidence deduction.) As such, CCAR has determined the tonnes issued are real and additional. Therefore, to reconcile the cumulative reductions for the project to date, an additional 17,174 tonnes CO_2e reductions have been added to the 2007 vintage for a total of 143,343 tonnes.

SGS has reviewed the and verified the confidence adjustment of 17,174 tonnes. Therefore, the following is noted:

Year 2007: 126,169 tCO2e emission reductions
Plus CCAR adjustment of 17,174
Total issued for year 2007 = 143,343 tonnes CO_2e

These revised stated tons of CO2e emission reductions are confirmed by SGS to be consistent with the adjusted totals in the Reserve software. Refer to page 13-15 of this report for full quantitative analysis.

3 Objectives

The purposes of this verification exercise are to review and confirm:

- entity and project eligibility
- general verification elements submitted via CARROT
- inventory projections of entity baseline
- forest carbon inventory documentation
- inventory projection of project activity and project baseline
- calculation of carbon stock change, emissions and emissions reductions
- data reported is accurate, complete, transparent, and free of material misstatement

- that the data conform to the CCAR Forest Project Protocols v2.1, dated September 2007.

4 Scope and Project Description

The scope of this evaluation is the Garcia River Forest conservation-based forest management project. The 2007 emission reductions related to the project have been confirmed and verified according to the CCAR Forest Certification Protocol v2.0.

The project is a conservation-based forest management project on land owned by The Conservation Fund in the state of California. The project area constitutes a portion of the TCF-owned forestlands in Northern California; TCF's Northern California timberlands not associated with the Garcia River Project are incorporated into the Big River and Salmon Creek CCAR Forestry Project that is addressed in a separate verification report. The Garcia River Forest (GRF) project is 24,000 acre forest located in Mendocino, CA and is dominated by redwood, Douglas-fir and tanoak and is generally considered to have Class III growing conditions. The property has been extensively high-graded in the past and what remains is on average 45-60 year old stands of pole and sawtimber with unnaturally high concentrations of tanoak.

Under the project management, there are two harvest management regimes – one each for the reserve and non-reserve portions of the property. The reserve stands account for approximately 35% of the total forest acreage (8046 acres). The reserve area may be harvested but only for the explicit goal of speeding a given location's return to late seral (i.e., climax) conditions. In most cases, this will mean little or no harvest in reserve areas. If harvesting were to occur in the reserve areas, successive target residual basal area retentions will be 200, 240, and 280 ft^2 over time with no more than three entries with a minimum of at least 20 years between harvest entries.

The remaining portion of the GRF will be managed using an uneven-age selection silviculture regime. For the "project activity" as distinct from the "baseline activity," slightly larger riparian buffers are used to better reflect The Conservation Fund's management objectives. These objectives include restoring and conserving biodiversity and increasing the carbon storage in the forest. In some non-reserve areas of GRF, harvest prescriptions will include a hardwood competition reduction treatment that is designed to reduce the prevalence of tanoak trees. This treatment will be applied to stands that, at the time of the first scheduled harvest, have more than 50 ft^2 basal area of tanoak per acre. This harvest treatment will occur only in stands with more than 10 mbf per acre in 2006 and will thin based on spacing to a target basal area of 170 ft^2. Reentry into these stands will occur every 20 years. With each entry the target basal area retention will increase until the ultimate goal of 270 ft^2 per acre is achieved. All of these harvest treatments are incorporated into the GRF carbon calculations.

The baseline projection of harvesting allowed pursuant to the Maximum Sustained Production "Option C" rules of the California Forest Practice Rules would result in harvesting in all forested stands outside of required buffers. At the time of baseline initiation, there were no mandatory land use statutes or regulation that would require the conservation-based forest management to be implemented as the project activity.

The Garcia River Forest has been inventoried several times by different groups, although the data collected and the sampling procedures used were not the same across these different inventories. Notably, additional inventory plots were established and measured since the 2007 CCAR verification activities undertaken by SGS/SCS. These additional inventory plots have resulted in an improved standard error, as is discussed later in this report as it relates to confidence deductions.

A system of 56 permanent plots were established by Coastal Forest Lands in 1994-5, using 1/5 acre fixed radius plots with all conifers greater than 10" dbh tagged and a 1/250th acre understory vegetation plot.

As part of the CCAR project development, The Conservation Fund commissioned the forestry consulting firm, Terra Verde, to conduct a stratified inventory was conducted by Terra Verde. Twenty-three stands covering 5125 acres were randomly selected for sampling based on their size and type. Within stands sampled there was approximately 1 plot for every 5 acres (most plots were on a 6 chain by 8 chain grid), unless the stand was less than 30 acres. Each plot center was marked with a numbered plastic stake and identified with flagging. The cruisers recorded GPS locations for most of the plots. Despite this, the SGS/SCS auditors were able to locate all plots randomly selected for on-site verification during both the 2007 and 2008 field work.

In conclusion, the strata sampled represent a total of 22,583 acres and the stands sampled sum to 14,893 acres out of a total of 23,781 acres. This represents 95% of the strata and 63% of the total area sampled. The inventory had an overall carbon sampling accuracy of 9% at the 90% confidence level weighted by the area of each strata.

The baseline and project activity were modeled over a 100-year horizon to quantify GHG emission reductions associated with the project. The existing carbon stocks were projected using the Forest Projection System (FPS) growth model subject to harvesting scenarios defined by the project description and baseline assumptions consistent with the California Forest Practice Rules.

5 Verification Team

H. Dru Krupinsky, **Lead SGS Assessor**. Dru is the Lead Environmental Auditor for the SGS North America Climate Change Program. He is accredited to act as Lead Assessor having undertaken training by the CCAR for the GRP and Power Utility Protocol; as well as completing training for ISO 14064 parts 1 and 2. Dru is responsible for the delivery of Climate Change Program services in the USA and Canada; and has served as assessor for verifications of a number of CCAR emissions reports, and CCX offset projects in USA, Canada, and South America.

Dr. Robert J. Hrubes, Lead SCS Assessor: Dr. Hrubes is Senior Vice-President of Scientific Certification Systems. He is a Registered Professional Forester (RPF #2228) and forest economist with 30 years of professional experience in both public and private forest management issues. Dr. Hrubes worked in collaboration with SCS to develop the programmatic protocol that guide all SCS Forest Conservation Program evaluations.

Sterling Griffin, Assessor[1]: Sterling Griffin is the SCS GHG Program Manager. He is a Registered Professional Forester (RPF #2805) in the State of California with 10 years of professional experience in private and public land forest management. Prior to joining SCS, he was the founder of a private consulting firm in Northern California specializing in sustained yield management, fuel reduction prescriptions, and forest health management.

Irma Lubrecht, Technical Reviewer: Irma Lubrecht holds an engineering degree in Forestry from the Agricultural University Wageningen, the Netherlands. She is a lead assessor and technical reviewer for the Climate Change Programme. Irma has extensive experience in the validation and verification of emission reduction and sequestration projects, especially (biomass) fuel switch, landfill gas and LULUCF projects.
Irma brings international expertise in a wide array of offset projects to the team.

6 Itinerary

To execute its verification activities pursuant to the CCAR Forest Certification Protocol, the auditors began the evaluation by conducting a desk review of all submittals prepared by the project developer, which in this case is The Conservation Fund. Following the desk review of available data and supporting materials, a three-day site visit on August 5-7, 2008 for verification of the CCAR project data. The site

[1]Mr. Griffin led the field audit components of the verification evaluation and wrote the first draft of this report. He is no longer employed by SCS.

visit was used to review project records, CCAR submittals, discuss methodologies used to calculate carbon pools, application of growth models, visit random portions of the ownership, inspect the recent harvest areas, and to conduct a field review of the updated inventory sampling.

A second review, conducted at the SCS offices in Pt. Richmond, California, of revised data was conducted August 14, 2008. Following the receipt of additional written materials that were submitted by the project proponents in response to requests generated during the initial site visit (when NIR/CARs were issued) as well as the August 14th meeting, the auditors conducted additional office-based review and assessment during the last week of August, 2008.

7 Verification Process Summary

The verification process is a four-step process.

Step 1
In the first step, SGS/SCS received and reviewed the Project Summary Worksheet (a standardized CCAR form required to be submitted by the project developer) to assess initial conformance with the data requirements of the CCAR Forest Project Protocol. Key factors that impact the reported emissions reductions were identified and an Audit Plan was created to focus on the critical elements presenting potential risk for errors in reported data. These elements included inventory data collection and handling, assumptions underlying the project and baseline characterizations, application of the growth model, and compliance with the California Forest Practice Rules.

Step 2
The site visit was used to review project records, review CCAR submittals, discuss methodologies used to calculate carbon pools and growth models, visit random portions of the ownership in order to acquire a familiarity with the property and to assess the appropriateness of the vegetative stratification, and to conduct a field review of the sampling methodology including check cruises of a random sample of the project developer's inventory plots.

Step 3
The second review was used to receive a briefing by the project developer on the newly submitted data in response to requests generated during the initial site visit.

Step 4
The final step in the verification process is final review of the submitted data, analysis of raw data collected during the check cruise, completion of the certification activities log, and drafting of the certification opinion and final report.

A draft certification opinion and report is completed based on the findings of the verification. The draft report is then presented to an internal SGS/SCS Technical Reviewer who decides whether the opinion rendered is justified in light of the evidence presented. If the Technical Reviewer's response is positive, a final opinion and report is sanctioned.

8 Results

The Conservation Fund presented a project description for the Garcia River Forest conservation-based forest management project in order to register the associated data (including emission reductions) with the California Climate Action Registry. Based on the data, SGS/SCS is able to reach a conclusion on the data quality and issue a certification opinion to accompany this report. A more detailed discussion of the findings and conclusions is described below.

8.1 Document Review

The description of the Garcia River forestry project presented in the initial project summary worksheet was reviewed by the auditors and found to provide adequate documentation to proceed with the site visit. As a result of the document review, the following issue was identified:

NIR 01: Project proponent has not uploaded documents in Climate Action Reserve Database. The project documents must be uploaded as required by the Reserve.

Close out details: Closed – Downloaded documents match the Verified CRT (tons) reductions found in this report and other supporting documents.

8.2 Site Visit Assessment

The site visit was used to review project records, CCAR submittals, discuss methodologies used to calculate carbon pools, application of growth models, visit random portions of the ownership, and to conduct a field review of the sampling methodology. During the site visit, the auditors conducted a reconnaissance tour of the project area with a particular focus on the effects of wildfires that had occurred since the 2007 verification work. Additionally, inventory plots #225081, 255081512, and 255081513 were re-measured by the audit team. Based upon their general reconnaissance of the project area, the SCS auditors determined that they were satisfied that these selected

inventory plots are appropriately representative, both in number and in location, of the project area. The collected data confirmed proper field measurement techniques were used by the contract inventory crews to conduct post-harvest inventory sampling. Stand typing and general descriptions of the forested area were also confirmed. The following issues were raised during and as a result of the site visit and were conveyed in the form of Corrective Action Requests (CARs) to the project developer shortly following the site visit:

CAR 01/2008: Provide summary analysis of changes resulting from corrected application of the Below-ground Biomass equation found in the Protocol.
Close out details: The analysis provided showed an insignificant difference in the way the below-ground biomass equation was applied. The reported carbon stocks reflect an improved application of the below-ground biomass equation.
CAR 01/2008 was closed.

CAR 02/2008: The reported project reductions are significantly higher than the projected amount. To help explain the difference, TCF shall provide a summary table of projected acres to be harvested, treated for tanoak, and thinned versus actual treatment acres by year. The summary table shall reflect acres, board foot volume (where applicable), and tons CO2e for each year.
Close out details: TCF has provided a thorough analysis of the effect of reduced harvest intensity and tanoak treatments (see discussion, above) over the projected project activity. These differences account for the increase in project carbon stocks above the projected levels.
CAR 02/2008 was closed.

CAR 03/2008: TCF shall adjust the use of the below ground biomass equation to use only live standing and dead standing biomass as input variables in the below ground biomass equation.
Close out details: The application of below ground biomass equation was examined and found to be correctly applied.
CAR 03/2008 was closed.

CAR 04/2008: TCF shall apply the statistical confidence equation supplied by CCAR. The resulting standard error and deductions shall be updated in project reporting forms.
Close out details: The statistical confidence was calculated according to an approved CCAR equation. Notably, the additional inventory plots established since the 2007 verification have resulted in a statistical precision for the inventory that no longer requires confidence deductions.
CAR 04/2008 was closed.

8.3 Corrective Action Requests

All corrective action requests issued by the audit team during the course of the evaluation, and discussed above have been closed out.

8.4 Eligibility

As confirmed during the 2007 verification evaluation, the Garcia River Forest project is in compliance with the CCAR project eligibility requirements set forth in Part II, Section E of the CCAR Forest Project Protocol. That is, the project area is within the State of California, uses native species, and is secured by a perpetual conservation easement. The Garcia River Forest project has been defined as a conservation-based forest management project that is intended to create additional carbon stocks in the forested area through modifications of harvest and regeneration practices, relative to baseline practices, as defined in the CCAR Forest Project Protocol.

8.5 Long-Term Commitments

The purpose of the perpetual conservation easement requirement, according the CCAR protocol, is to act as a legal guarantee that a project's existing and additional carbon stocks can remain protected in perpetuity by requiring forest practices that protect and encourage additional carbon stocks. Section 4 (b and c) of the Garcia River Forest conservation easement states that all forest management be undertaken to maintain and restore the complex native coastal redwood ecosystem.

8.6 Included Carbon Pools

The project, and the verification activities reported here, entail the assessment of the three carbon pools deemed mandatory for reporting by the CCAR Forest Project Protocol:

- above and below ground living biomass
- standing dead biomass
- lying dead biomass carbon pools.

No optional carbon pools have been reported by the project developer.

8.7 Annual Reports Signed Attestation

The project developer has submitted project and entity Biological Emissions/Carbon Stock Annual Reports for reporting year 2007.

8.8 Observations

There are no additional observations to report.

8.9 Confirmation of Data Verified

SGS/SCS confirms the data regarding project eligibility, inventory procedures, baseline and project characterization, and methods of calculating carbon stock change, emissions and emission reductions for the Garcia River conservation-based forest management project.

The following data was verified:

Year 2007: 126,169 tCO2e emission reductions
Plus CCAR adjustment of 17,174
Total issued for year 2007 = 143,343 tonnes CO_2e

	Garcia River Reconciliation Annual On-Site Reductions Accounting Example - Metric Tons CO2					
		Year				
Rows 1 - 6 demonstrate the proper accounting for the Garcia River Project to date per the CCAR Forest Protocols Version 2.1. Rows 7-9 display how The Registry is reconciling the error associated with incorrect calculation of confidence deductions.						
ROW		2004	2005	2006	2007	**Notes**
1	Project Activity Tons	0.0	4,482,159	4,629,427	4,450,793	This is the net carbon for all reporting pools on site in the project area. The project should always report the project activity tons as the best annual estimate of the project, despite any concerns about confidence.

2	Confidence Deduction	0%	10%	10%	0%		The confidence deduction is based on the sampling error of the combined carbon pools quantified in the project, as described in the quantification section. The confidence deduction is applied annually to the annual monitoring reports. This value is calculated using the table (Table 9.1) above.	
3	Project Activity Tons(adjusted for confidence for determination of reductions)	0.0	4,033,943	4,166,484	4,450,793		The project activity tons are reduced based on confidence only for the determination of reportable reductions. Reportable reductions can change in the year that the confidence is improved (or worsens). In the year that the confidence adjustment changes,	
4	Baseline Tons	0.0	4,396,542	4,458,194	4,153,370		The baseline tons are not affected by the confidence deduction. The baseline incorporates the initial mean and is modeled thereafter. It is considered correct and remains so unless altered from a significant disturbance or justified through an inventory	
5	Total reductions discounted (for confidence)	0.0	0.0	0.0	297,423		The discount is intended to provide a conservative estimate of the allowable reductions to report and sell. A confidence deduction that results in negative reductions (emissions) is reported as zero.	Total Reductions Summed
6	Total annual reductions (new tons by vintage year)	0.0	0.0	0.0	297,423		New annual reductions (emmissions) are the net value of total reductions in current year minus net reductions from the previous year.	297,423
			Annual Tons Credited (Reported and Verified) Prematurely due to Error in Reporting Forms					
7	Reported Tons	0.0	77,040	77,040	126,169		These tons were incorrectly credited (verified) due to an incorrect calculation of	280,249

							the confidence deduction.	
Adjustments								
8	Adjustment	0.0	0.0	0.0	17,174		The error in calculation prevented the adjustment from being calculated as reduction credits.	17,174
9	Reconciled Vintage Reductions	0.0	77,040	77,040	143,343		The Registry accepts the reported tons in the vintage years as reported. The improved confidence in the inventory demonstrates that the reductions reported in earlier years were not over-stated.	297,423

9 Conclusion on Data Quality and Decision on Materiality

The project developer has supplied all the evidence requested in order to enable SGS/SCS to arrive at an opinion. The information presented in the final version of the Project Summary Worksheet is considered to comply with the requirements described in the CCAR Forest Project Protocol v2.1. The data is considered accurate, complete, transparent, and free of material misstatement.

10 Verification Recommendation

The verification Lead Assessor recommends the SGS/SCS issue a verification and certification opinion.

Name and address of Participant	The Conservation Fund 14951 "A" Caspar Road, Box 50 Caspar, CA 95420
Scope of verification	The scope of this evaluation covers the verification of the Garcia River conservation-based forest management project according to the CCAR Forest Project Protocol v2.1.
Emission Reductions	2007: 126,169 t CO2e emission reductions Plus confidence adjustment of 17,174 **Total emissions reductions issued for year 2007 = 143,343 tonnes CO_2e**
Protocol used	California Climate Action Registry's Forest Project Protocol v2.1, September 2007.
Certification opinion with regard to data quality and materiality	The data presented in the project summary worksheet is considered accurate, complete, transparent, and free of material misstatements
Applicable years	2007
Dated and signed on behalf of the verification body by authorized signatory (Lead Assessor)	H. Dru Krupinsky 12-11-08
Dated and signed on behalf of the verification body by authorized signatory	Irma Lubrecht Technical Review 11-12-2008

References:

Key reference documents

/1/ The Garcia River Forest Project Summary Worksheet

/2/ Garcia River Overview for the California Climate Action Registry Biological Certification Carbon Stock and Flux Certification Methods

/3/ The Conservation Fund (GRF) Audit Plan

/4/ Garcia River Forest Conservation Easement

/5/ Garcia River Forest CAR/NIR

/6/ California Climate Action Registry Forest Certification Protocol v2.0, May 2007

/7/ California Climate Action Registry Forest Project Protocol v2.1, September, 2007