

# Verification Report

## Callen Property Project

City Forest Credits Project Number 053

June 24, 2024

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# TABLE OF CONTENTS

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1	INTRODUCTION .....	3
1.1	PROJECT BACKGROUND .....	3
1.2	CONTACT INFORMATION .....	3
1.3	OBJECTIVE .....	4
2	VERIFICATION CRITERIA.....	4
2.1	GENERAL .....	4
2.2	PROTOCOL.....	4
2.3	LEVEL OF ASSURANCE .....	4
3	SCOPE OF VERIFICATION .....	5
4	VERIFICATION PROCESS.....	5
4.1	VERIFICATION ACTIVITIES .....	5
4.2	CFC TREE PRESERVATION PROTOCOL REQUIREMENTS .....	6
4.2.1	Eligibility .....	6
4.2.2	Additionality.....	7
4.2.3	Permanence .....	7
4.2.4	Accounting .....	7
4.2.5	Leakage .....	9
5	VERIFICATION FINDINGS.....	10
6	VERIFICATION RESULTS AND CONCLUSION .....	10

# 1 INTRODUCTION

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City Forest Credits engaged Zachary Boerman (a Validation and Verification Body (VVB) acting as a third-party verifier) to verify the Callen Property Project (Project), Monongalia County, WV, for the reporting period April 23, 2024 through April 22, 2027. The goal of the verification is to ensure that the GHG assertion is materially correct, and that the assertions made by the project are well documented.

## 1.1 PROJECT BACKGROUND

West Virginia Land Trust (WVLT) is conserving 28.9 acres of forestland on the 36.56-acre Callen Property in Monongalia County, WV, as part of a carbon project. The property was donated in fee to the West Virginia Land Trust in October 2022 by the Callen family, well-known developers and land conservationists in West Virginia. Like much of unincorporated Monongalia County, the parcel is not zoned, and can be developed into any use; it is surrounded by industrial and residential development. Prior to the Project, it was entirely unencumbered, and had had a recent appraisal associated with the donation that estimated the current market value, based on potential residential development, at \$1.2 million.

The Project Area consists of a closed-canopy forest that is about 60 years old and is a mixture of red and sugar maple, tulip poplar, black cherry, northern red oak, sycamore, shagbark and bitternut hickory, American beech, and several other species. Preserving the property will provide important ecosystem services to the surrounding community and expand public access to nature-based recreation.

## 1.2 CONTACT INFORMATION

### Project Operator

West Virginia Land Trust  
1045 Bridge Rd.  
Charleston, WV 25314  
Rick Landenberger, Science and Management Specialist  
Office: 304-413-0945  
Cell: 304-692-6172  
Email: rick@wvlandtrust.org

### Verification Body

Zachary Boerman  
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### 1.3 OBJECTIVE

The goal of this GHG emission reduction verification is to ensure that the GHG assertion made by the Project is materially correct, that the assertions and assumptions used in the offset calculations are appropriate, that the offset calculations conform to the City Forest Credits (CFC) Protocol, and that the Project is in compliance with all CFC requirements relating to eligibility, accounting, and documentation.

## 2 VERIFICATION CRITERIA

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### 2.1 GENERAL

The Registry will accredit VVBs to act as third-party verifiers who meet the Registry's qualifications and complete training. Those accredited VVBs can then act to verify compliance with this Tree Preservation Protocol per International Standards Organization 14064-3. Specifically, the Registry adopts and utilizes the following standards from ISO 14064-3:

- Upon receiving a Project Design Document with data on eligibility, quantification of carbon and co-benefits, and a request for credits, the Registry will conduct a validation. If it validates the project at that stage, the Registry will retain a VVB to act as third-party verifier to verify compliance with this Protocol.
- The Registry requires a reasonable level of assurance in the accuracy the asserted GHG removals to a reasonable level.
- The verification items identified in the Tables 1 and 2 are all material elements, and any asserted GHG removals must be free of errors, misstatements, or omissions regarding those elements.
- The Registry will record, store, and track all quantification and verification data and either display it for public review or make it available for public review upon request.

### 2.2 PROTOCOL

The verification was conducted to the City Forest Credits Tree Preservation Protocol, version 12.40, February 22, 2023.

### 2.3 LEVEL OF ASSURANCE

This verification was conducted to a reasonable level of assurance. The Verification Report accurately reflects the documentation contained in the Project Design Document and supporting documents.

### 3 SCOPE OF VERIFICATION

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- The Project encompasses land in Monongalia County, WV, which is in an Urban Area as defined by the U.S. Census Bureau, within parcel 08 8002700020000, specifically described in the Project Design Document.
- The Project Operator acquired development rights to this parcel through a donation in October of 2022. They have agreed not to cut down, destroy, or remove trees located on the Property, except as necessary to control or prevent hazard, disease, or fire to improve forest health. The above preservation commitment is outlined in the associated declaration of development restrictions.
- The Project avoids emission of CO<sub>2</sub> from trees and soil, by avoiding conversion of forest to non-forest land cover and avoiding conversion of forest soil to impervious surface.
- The Project duration is 40 years, beginning April 23, 2024. The Project Operator commits to protecting the trees within the Project Area and monitoring the project carbon stocks for the entire Project duration.
- The verification includes a review of supporting documents, data, imagery and other evidence provided by the Project Operator; independent review of ownership records, tax maps, and subdivision regulations; analysis of stand delineation and forest composition reports as well as checking of calculations for accuracy and conformance with the Protocol. All forest carbon input values were independently checked and calculations were independently replicated.

### 4 VERIFICATION PROCESS

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#### 4.1 VERIFICATION ACTIVITIES

The verification process consisted of the following activities:

- Verifier checked all requirements in the Protocol (outlined in 4.2), confirmed that documentation satisfies the requirements of the Protocol, and that values extracted from the documents and conclusions drawn from the documents are accurate and appropriate
- Verifier independently checked mapping and calculated values in each stage of calculations
- Verifier reviewed the credit calculations. Verifier reviewed the Project Operator's assertion that the Project results in GHG emissions mitigation of 4,394 tons CO<sub>2</sub>e

## 4.2 CITY FOREST CREDITS TREE PRESERVATION PROTOCOL REQUIREMENTS

### 4.2.1 Eligibility

Verifier reviewed the Project against all CFC Tree Preservation Protocol requirements and confirmed the following:

- Project Operator Identity (Section 1.1): Verifier confirmed the Project Operators identity by reviewing the provided identity documents including the Certificate of Existence, West Virginia Land Trust Articles of Incorporation and 990 tax form. The Project Operators identity was further confirmed by reviewing the Project parcel deeds.
- Project Documentation (Section 3): Verifier reviewed and confirmed Project Documentation including Project Design Document is complete and accurate.
- Project Implementation Agreement (Section 1.2): Verifier reviewed and confirmed fully executed Project Implementation Agreement on file.
- Project Location (Section 1.3): Verifier reviewed the maps and shapefile provided by the Project Operator and confirmed that the data is geospatially accurate. Verifier also confirmed the Project Area is within the Morgantown, WV Urban Area as defined by the US Census Bureau. This satisfies section 1.3 D of the Protocol.
- Defining the Project Area (Section 1.4): Verifier confirmed that 93% of the Project Area is covered by tree canopy after reviewing the provided i-Tree Canopy report. This is above the 80% canopy threshold for locations that receive 20" of precipitation a year and satisfies Protocol section 1.4 C.
- Land Ownership or Right to Receive Credits (Section 1.5): Verifier confirmed that there is a clear title to carbon credits and the Project Operator has legal authority to create and dispose of greenhouse gas offsets generated on the project lands
- Demonstrating Preservation and Threat of Loss (Section 4):
  - Verifier confirmed that the Project Area falls outside of the West Run Planning District (the only area zoned by Monongalia County) and therefore, any development in the Project Area is regulated by the Monongalia County Subdivision Regulations.
  - Verifier confirmed no pre-existing encumbrance on the Project Area nor any overlay that would prohibit the conversion to a non-forest use.
  - Verifier confirmed that trees within the Project Area are now preserved from removal by a recorded declaration of development restrictions.
  - The Project Operator has committed to meeting the permanence requirements stated in the PIA
  - Prior to the Preservation Commitment action by the Project Operator there was threat of conversion of the project lands to non-forest cover as evidenced by 64% of the perimeter being adjacent to developed or improved uses.

- No Double Counting and No Net Harm (Section 5):
  - Verifier confirmed that Attestation of No Double Counting and No Net Harm is on file.
  - Verifier compared the Project geospatial data to the registered urban forest carbon preservation projects geospatial database using the ArcMap intersect tool and determined that there is no overlap with other registered carbon projects. The analysis returned an empty feature output which signifies there is no overlap between the project area and any other CFC forest preservation projects.
- Monitoring and Reporting (Section 8): Verifier confirmed that Project Operator has a plan for monitoring and reporting over the Project Duration, and the plan is plausible and reasonable.

#### 4.2.2 Additionality

Verifier reviewed and confirmed that Project lands met the additionality requirements of the Protocol:

- Prior to the Project, lands were not protected from conversion by easement, zoning, or other legal mechanism
- The most recent appraisal of the Callen property determined that it's highest and best use would be residential development. The applicable low-density residential subdivision development standards allow for the removal of existing trees.
- The trees in the Project Area face some risk of removal or conversion out of forest, demonstrated by 64% of the Project area's perimeter being adjacent to improved uses. This surpasses the 30% threshold outlined in Protocol Section 4.4 A.
- Project Operator signed an Attestation of Additionality on April 23, 2024.

#### 4.2.3 Permanence

The Project Operator has committed to CFC that the Project Operator will protect the trees on the Project Area for 40 years. The recorded declaration of development restrictions protecting the Project Trees and lands is permanent.

#### 4.2.4 Accounting

The Project Operator elected to follow Protocol Section 11.1 A to quantify the carbon stock present within the Project Area. The Project documents include a comprehensive Forest Composition Report provided by West Virginia Land Trust staff members Rick Landenberger and Kyle Johnson, which allowed the Project Operator to employ the following afforestation tables in their calculations: maple-beech-birch (Table B2) and oak-hickory (Table B3) in the Northeast climate zone from the US Forest Service General Technical Report (GTR) NE-343 document.

The Verifier confirmed that the cover types outlined above are present in the Project Area by reviewing the provided stand delineation map in conjunction with the species composition tables in the Forest Composition Report. Species composition tables were compiled using data from 13 basal area factor (BAF) sample plots.

Upon independent review of the provided aerial imagery, the Verifier confirmed that the Project Area showed continuous canopy cover dating back to 1938. A conservative stand age estimate of 60 years adequately accommodates the history of mining and logging on site in the 20<sup>th</sup> century that may have introduced canopy gaps. The 7 acres cleared during the 2018 subdivision development was also accurately removed from the Project Areas total acres.

The Verifier confirmed that the tC/ac of biomass calculated by the Project Operator is correct. This number was verified by repeating the calculation (biomass tC/ac = metric tons of carbon per stand/Project Area acres) where metric tons of carbon per stand is calculated using the appropriate reference GTR tables for total nonsoil tonnes of carbon per acre for each stand and then extrapolating that value out to each stands acreage. tCO<sub>2</sub>e/ac of biomass was then verified by dividing tC/ac by the ratio of the molecular weight of carbon dioxide to that of carbon (44/12). The Verifier confirmed that the measurement of 232.3 tCO<sub>2</sub>e/ac of biomass is correct for the Project Area using this method.

The Verifier confirmed that the Project Operator correctly measured percent canopy cover (with standard error below 10%) in accordance with Protocol Section 11.A. The percent canopy cover was then applied to the total tCO<sub>2</sub>e Project Stock calculation.

The applicable USFS GTR reference tables were used to estimate carbon stock therefore, a 20% deduction was made to the total Accounting Stock for non-soil carbon in accordance with Section 11.1.A. The Verifier confirmed that this resulted in an Accounting Stock of 4,996 tCO<sub>2</sub>e.

The Verifier confirmed that the Project Operator correctly used 90% for the fraction of Accounting Stock at risk of removal. Monongalia County Subdivision Regulations require a minimum lot area of .23 acres for lots served by public sewer and .46 acres for lots served by private sewers/septic systems. The equations below represent the fraction at risk of removal under these regulations.

Avoided biomass emissions for .23 acre minimum lot area  $4,996 * (((2 * 151) + ((34.9 - (2 * 151)) * 0.1)) / 34.9) = 39,408.28 \text{ tCO}_2\text{e}$

Avoided biomass emissions for .46 acre minimum lot area  $4,996 * (((2 * 75) + ((34.9 - (2 * 75)) * 0.1)) / 34.9) = 19,825.10 \text{ tCO}_2\text{e}$

In this case, 90% of the accounting stock, or 4,496.40 tCO<sub>2</sub>e, is the lesser of the two values and therefore used as the fraction of accounting stock at risk of removal in accordance with Section 11.2.B.

The Verifier confirmed that Monongalia County Subdivision Regulations do not specify a maximum fraction of parcel area that may be in impervious surface. However, they do specify minimum yard setbacks. Using the avoided impervious surface formula with the minimum yard setback specifications resulted in an output greater than the standard deduction of 50%. To be conservative, the Project Operator claimed the standard 50% avoided impervious surface deduction outlined in Protocol Section 11.3.B.



The Verifier confirmed that with 14.455 acres of avoided impervious surface in the Project Area, and the stipulation in section 11.4 of the Protocol that allows the Project to claim 120 metric tonnes of carbon dioxide equivalent of avoided soil carbon emissions per acre of net avoided impervious surface, the Project accounts for 1,753 tCO<sub>2</sub>e of avoided soil carbon emissions.

#### 4.2.5 Leakage

Offset accounting makes deductions for expected displacement of emissions following the requirements of the Protocol.

The Verifier confirmed that the Project Operator accurately followed Protocol section 11.5 A to determine that, of the total number of tonnes of avoided biomass emissions from within the Project Area, 18.3% are assumed to be emitted from development displaced from the Project Area. After repeating the calculations to remove the Displaced Biomass Emissions from the total Avoided Biomass Emissions, the Verifier confirmed the total Credits from Avoided Biomass Emissions (3,673 tCO<sub>2</sub>e) is correct.

The Verifier confirmed that the Project Operator accurately followed Protocol Section 11.5 B to determine that, of the total number of tonnes of Avoided Soil Carbon Emissions from within the Project Area, 30.3% are assumed to be emitted from development displaced from the Project Area. After repeating the calculations to remove the Displaced Soil Emissions from the total Avoided Soil Carbon Emissions, the Verifier confirmed the total Credits from Avoided Soil Emissions (1,209 tCO<sub>2</sub>e) is correct.

## 5 VERIFICATION FINDINGS

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The Project documents and data were reviewed, and the Verifier found that the emission reductions claimed are reasonable and in accordance with the Preservation Protocol. The Verifier makes no further recommendations.

## 6 VERIFICATION RESULTS AND CONCLUSION

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This verification of the Callen Property Project for the reporting period April 23, 2024 through April 22, 2027 was completed in a manner consistent with ISO 14064-3 and in conformance with relevant CFC standards and guidelines. The table below is a summary of the emission reduction or removals.

**Table 1. Project GHG Removals**

Project Name	Issuance Year	GHG Reductions and Removals Attributed to the Project (mtCO <sub>2</sub> e)	Reversal Pool Account (10%) (mtCO <sub>2</sub> e)	Emission Reductions to be Issued to Project (mtCO <sub>2</sub> e)
Callen Property Project	2024 (after verification)	4,882	488	4,394
Cumulative		4,882	488	4,394

The Project Operator calculated ecosystem co-benefits using the CFC tool to determine dollar values of other ecosystem services. The Verifier corroborated the CFC tool inputs and outputs to produce the values below. The Verifier does not make an assessment to the plausibility of these values.

**Table 2. Ecosystem Co-Benefits Per Year**

<i>Ecosystem Services</i>	<i>Resource Units</i>	<i>Value</i>
Rainfall Interception (m <sup>3</sup> /yr)	7,270.5	\$52,055.49
Air Quality (t/yr)	0.3043	\$458.17
Cooling – Electricity (kWh/yr)	57,233	\$4,343.97
Heating – Natural Gas (kBtu/yr)	1,070,154	\$10,417.71
<b>Grand Total (\$/yr)</b>		<b>\$67,275.33</b>

Because the project area is less than 50 acres, all credits will be issued in the first year.

**Verifier Signature**

A handwritten signature in black ink, appearing to read 'Zachary Boerman', with a stylized flourish at the end.

**Zachary Boerman**