

Verification Report

Reforestation of Austin's Parks and Riparian Zones Project

CFC Project Number 002

August 26, 2019

Dr. Qingfu Xiao

4216 Vistosa St

Davis, CA 95618

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1 INTRODUCTION

City Forest Credits engaged Dr. Qingfu Xiao (Dr. Xiao) to verify the Reforesting Austin's Parks and Riparian Zones Project (Project) for the reporting period January 1, 2018 – December 31, 2018. 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

TreeFolks has partnered with City of Austin's Watershed Protection Department and City of Austin's Parks and Recreation Department to create planting projects across the city. Through the efforts of our staff and our many volunteers, TreeFolks has made great strides in slowing the tide of deforestation in Austin, TX. Community members, from preschoolers to singles clubs, and boy scouts to park rangers, have been engaged as volunteer planters in our projects. Through the many benefits of reforestation and community involvement, we expect our plan to locally increase canopy cover and sequester carbon will be successful both in generating enough Carbon+ Credits to help meet Austin's 2020 Carbon Neutrality goals and creating a better city for current and future residents.

TreeFolks is submitting this application for the programmatic ability to use the Tree Planting Protocol developed by City Forest Credits in order to generate Carbon+ Credits. Proceeds from these Credits will go to fund project management and future expansion. This project will serve as a pilot for a carbon sequestration program covering 900 miles of creeks and streams in and around Austin, TX. Austin, TX is committed to the reforestation of the city and the surrounding areas through continued support of carbon sequestration projects with TreeFolks in order to generate local carbon credits and the myriad co-benefits available.

These planting projects serve to increase canopy cover and diversity in riparian zones and parklands around Austin, TX. Through increased diversity, these plantings will provide food and habitat for local wildlife and buffer against the possibility of a catastrophic loss of Austin's urban forest. Increased canopy cover and forest density will improve the functionality of the drainage basins and surrounding ecosystems along with ameliorating the urban area's heat island effects. These plantings also serve to engage local community members with their environment and beautify Austin's local streams by creating a lasting, impactful change for the better on the city landscape.

Through the proceeds from the sale of credits generated with these plantings, TreeFolks will be able to develop future planting projects. These initial plantings are intended to serve as a pilot program for a massive reforestation effort on 900 miles of creeks and streams in the watershed of the City of Austin and the surrounding area. We intend to bring the benefits of landscape scale reforestation efforts to the area in an effort to fight the loss of shade and greenery that is threatening nearly every major urban area in the United States.

CONTACT INFORMATION

Project Operator

TreeFolks, Inc.
P.O. Box 1395
Del Valle, TX 78617-1395
Contact: Thais Perkins, ED

Verification Body

Dr. Qingfu Xiao
4216 Vistosa St
Davis, CA 95618

1.2 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 CFC Protocol, and that the Project is in compliance with all CFC requirements relating to eligibility, accounting and documentation.

2 VERIFICATION CRITERIA

2.1 PROTOCOL

The verification was conducted to the City Forest Credits Tree Planting Protocol, version 6, August 11, 2018.

2.2 LEVEL OF ASSURANCE

This verification was conducted to a reasonable level of assurance.

3 SCOPE OF VERIFICATION

- The Project encompasses land in Austin, TX, specifically described in the Project Design Document.
- Onion Creek Riparian Canopy Planting Project Scope:

Onion Creek saw 1250 trees planted as a canopy planting. Our long-term maintenance plan for this site is for WPD to discontinue all mowing and let the trees grow. Survival rates of canopy

plantings are low (25% expected, 29-31% actual) but we expect full canopy regeneration through a combination of surviving trees and natural regeneration. We do not plan on replacing lost trees. At Onion Creek the most commonly planted trees were *Sophora secundiflora*, *Frangula caroliniana*, *Acacia berlanderi*, and *Acacia farnesiana*. Onion Creek is 4.3 acres with approximately 291 trees planted per acre.

The total budget for the project was Onion Creek to \$14,439.63.

- Davis White & Patterson Single Tree Planting Project Scope:

TreeFolks completed this project with help from the Friends of Patterson Park and many volunteer groups. Davis White and Patterson saw 47 trees planted at the parks as single tree plantings. We do not anticipate losing any of these trees, and replacements would need to be coordinated with the parks. Friends of Patterson Park is providing tree maintenance at Patterson Park while PARD watering trucks are providing tree maintenance at Davis White.

The total budget for the Davis White and Patterson single tree planting projects is \$10,293.67 (Davis White was budgeted out to \$5,334.44 and Patterson to \$4,959.23).

- Reporting Period is January 1, 2018 – December 31, 2018
- The verification includes review of documents, data, imagery and other evidence provided by the Project Operator; independent checking of selected data; checking of calculations for accuracy and conformance with the Protocol.

4 VERIFICATION PROCESS

4.1 VERIFICATION ACTIVITIES

The verification process consisted of the following activities:

- Dr. Xiao reviewed the credit calculations
- Dr. Xiao checked all requirements in the Protocol, and 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
- Dr. Xiao independently checked project location and at least selected data or calculated values in each stage of calculations
- Dr. Xiao submitted to the Project Operator requests for clarifications and corrections, as issues came to light, and reviewed revised and corrected documents and calculations

4.2 CFC TREE PLANTING PROTOCOL REQUIREMENTS

4.2.1 VERIFICATION OF ISSUANCE OF CREDITS

Dr. Xiao reviewed the Project against all CFC Tree Planting Protocol requirements and confirmed the following:

1. Project Operator (PO) Identity
2. Project Implementation Agreement (PIA)
3. Location
4. Right to Receive Credits
5. Commencement
6. Project Documentation
7. Project Duration
8. For Single Tree Credit Quant, after planting, Yr 4, and Yr 6; PO's Credit Mortality and Verif. Assessment:
 - a. After Planting:
 - i. Imaging, or PO Decl. of Planting and Decl. Of Peer Verifier
 - b. Field Data and Inputs into Spreadsheets:
 - i. Data from sampled trees
 - ii. Data Input accuracy
9. For Canopy Credit Quant:
 - a. After Planting:
 - i. Imaging, or PO Decl. of Planting and Decl. Of Peer Verifier
10. PO's Project Design Document

5 VERIFICATION FINDINGS

All issues raised by Dr. Xiao were clarified or corrected by the Project Operator and all issues were closed by appropriate responses by TreeFolks or City of Austin.

6 VERIFICATION RESULTS AND CONCLUSION

This verification of the Reforesting Austin's Parks and Riparian Zones Project for the reporting period January 1, 2018 to December 31, 2018 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.

**Onion Creek Riparian Canopy Planting Co-Benefits
per year after 25 years**

Ecosystem Services	Resource Units Totals	Res Unit/site	Total \$	\$/site
Rain Interception (m3/yr)	432.78	0.35	\$1,131.97	\$0.91
CO2 Avoided (t, \$20/t/yr)	9.38	0.01	\$187.67	\$0.150
Air Quality (t/yr)				
O3	0.0537	0.0000	\$159.57	\$0.128
NOx	0.0133	0.0000	\$39.62	\$0.032
PM10	0.0290	0.0000	\$32.75	\$0.026
Net VOCs	0.0006	0.0000	\$1.58	\$0.001
Air Quality Total	0.0966	0.0001	\$233.52	\$0.19
Energy (kWh/yr & kBtu/yr)				
Cooling - Elec.	22,016.39	17.61	\$1,671.04	\$1.34
Heating - Nat. Gas	11,548.44	9.24	\$119.99	\$0.10
Energy Total (\$/yr)			\$1,791.04	\$1.43
Grand Total (\$/yr)			\$3,344.20	\$2.68

Co-Benefits per year after 25 years (all live trees, includes tree losses)

Ecosystem Services	Res Units Totals	Res Unit/site	Total \$	\$/site
Rain Interception (m3/yr)	498.48	10.61	\$1,303.67	\$27.738
CO2 Avoided (t, \$20/t/yr)	1.50	0.03	\$29.95	\$0.637
Air Quality (t/yr)				
O3	0.0031	0.0001	\$44.33	\$0.943
NOx	0.0013	0.0000	\$18.83	\$0.401
PM10	0.0032	0.0001	\$17.64	\$0.375
Net VOCs	-0.0218	-0.0005	-\$300.57	-\$6.395
Air Quality Total	-0.0142	-0.0003	-\$219.78	-\$4.68
Energy (kWh/yr & kBtu/yr)				
Cooling - Elec.	3,906.02	83.11	\$296.47	\$6.31
Heating - Nat. Gas	15,005.24	319.26	\$155.91	\$3.32
Energy Total (\$/yr)			\$452.38	\$9.63
Grand Total (\$/yr)			\$1,566.21	\$33.32

Site	Vintage	GHG Reductions (mtCO ₂ e)	GHG Removals Mortality (20%) and Risk Buffer (5%) (mtCO ₂ e)	Credits to Be Issued After Planting (10%)
Onion Creek	2018	459	436	44
Davis White & Patterson	2018	136	103	10

Lead Verifier Signature



Dr. Qingfu Xiao