Reforesting Austin's Parks and Riparian Zones Validation Report

Year 6

Document Prepared by City Forest Credits

April 10, 2024

PROJECT OVERVIEW

Project Name	Reforesting Austin's Parks and Riparian Zones
Project Registry Number	002
Project Type	Tree Planting
City Forest Credits Protocol Version	Version 6, August 11, 2018
Project Start Date	March 31st, 2018
Project Location	Austin, Texas
Project Operator	TreeFolks

SUMMARY

State what stage of crediting this Validation Report applies to (i.e. after planting, Year 4, 6, or 26). Provide a few sentences about the overall project. Include the Planting Design and Quantification Method.

In March 2018, TreeFolks planted 47 trees at the Davis White and Patterson Parks in Austin, TX, using the single tree planting design and quantification method. TreeFolks also planted 1,250 trees in January 2018 at Onion Creek Park in Austin, TX, using the Area Reforestation planting design and quantification method (known under Protocol Version 6 as the Canopy method).

For the Year 6 credit issuance the Project Operator TreeFolks visited each of the 47 trees planted under the single tree design to assess survival. TreeFolks also conducted imaging-based tree canopy assessments to evaluate canopy growth on the Onion Creek site.

DATA COLLECTION AND CARBON QUANTIFICATION

Carbon Quantification (Section 9 and Appendix B)

Criteria
Project Operator must follow the data collection and quantification methods outlined in Appendix B of the Protocol.

Issue Validated
Project Operator used two planting designs within this project.

For the single tree planting design and quantification method, per Protocol criteria in Appendix B., the Project Operator visited all planting sites to determine tree status (Alive, Dead, or Vacant). As of sampling on July 6, 2023, 37 of the 47 trees planted were alive, and 10 were either dead or vacant. This represents two additional tree mortalities compared to the Year 4 sampling.

Because the Observed Mortality rate of 21.3% (10 of 47 trees) exceeded the standard deduction of 20% mortality, the Observed Mortality was used to re-calibrate the project's forecasted carbon storage. Observed Mortality was specifically calculated for each tree type, to account for the different observed

mortality rates across the tree types (i.e., the rate of mortality for small trees was 31% compared to 14% for large trees). The use of observed mortality rates, rather than the standard deduction of 20% across all tree types, led to a slight increase in the carbon forecasted from 102 credits in Year 4 to 106 credits.

The Carbon Quantification Summary is as follows:

Total number of trees planted	47
Credits attributed to the project (tCO2e)	134
Mortality Deduction	21.3%, adjusted by tree type
Credits after mortality deduction	112
Contribution to Registry Reversal Pool Account (5%) (tCO2e)	6
Total credits to be issued to the Project Operator (tCO2e)	106
Total credits requested to be issued in Year 6 (30% of above)	32

GHG Assertion: Project Operator asserts that the Project results in GHG emissions mitigation of 106 tons CO_2e over the 25-year Project Duration. Project Operator asserts that per Protocol guidelines, 30% of Project GHG emissions mitigation is issued at Year 6, or 32 tons CO_2e.

Additional Info
The updated CO2 stored and credit issuance over 25 years is outlined below:

Single Tree Plantings	Projection at Initial Crediting	Updated Projection at Year 4	Updated Projection at Year 6
Total credits issued at Initial Crediting (10% CO2 (t))	10	10	10
Total credits issued at Year 4 (40% CO2 (t))	41	41	41
Total credits to be issued at Year 6 (30% CO2 (t))	31	31	32
Total credits to be issued at Year 26 (20% CO2 (t))	21	20	23
Total credits to be issued (tCO2e)	**103**	**102**	**106**

For the area reforestation (canopy) planting design and quantification method, per Protocol criteria in Appendix B., the Project Operator conducted imaging-based canopy assessments using the i-Tree Canopy methodology to analyze tree growth across the Project Area. High-resolution leaf-on imagery was acquired from the Upstream Tech Lens imagery platform and analyzed using random point sampling on ArcGIS Pro. For the Year 6 imagery dated June 6, 2023, a canopy increase of 17.46% was observed compared to the new growth measured in the Year 4 sampling, and a canopy increase of 31.08% was observed compared to the 23.92% old growth baseline determined during the Year 4 canopy analysis. This growth meets the 11.5% threshold requirement for Year 6.

Although the observed growth meets the threshold requirements, the credit issuance was reduced to account for the baseline 23.92% canopy.

Total number of trees planted	1,250

Project Area Acres	3.85
Total number of trees per acre	324
Credits attributed to the project (tCO2e)	313
Contribution to Registry Reversal Pool Account (5%) (tCO2e)	16
Total credits to be issued to the Project Operator (tCO2e)	297
Total credits requested to be issued in Year 6 (30% of above)	58

GHG Assertion: Project Operator asserts that the Project results in GHG emissions mitigation of 297 tons CO_2e over the 25-year Project Duration. Project Operator asserts that per Protocol guidelines, 30% of Project GHG emissions mitigation is issued at Year 6, or 58 tons CO_2e (adjusted for credits already issued; see table below).

Additional Info
The updated CO2 stored and credit issuance over 25 years is outlined below:

Area Reforestation Plantings	Projection at Initial Crediting	Updated Projection at Year 4	Updated Projection at Year 6
Total credits issued at Initial Crediting (10% CO2 (t))	44	44	44
Total credits issued at Year 4 (40% CO2 (t))	174	156	156
Total credits to be issued at Year 6 (30% CO2 (t))	131	117	58
Total credits to be issued at Year 26 (20% CO2 (t))	87	73	39
Total credits to be issued (tCO2e)	**436**	**390**	**297**

Co-Benefits Quantification (Section 9 and Appendix B)

Criteria
Project Operator must follow the co-benefit quantification methods for rainfall interception, air quality, and energy savings.

Issue Validated
Project Operator has followed the co-benefits quantification method using the templates provided by City Forest Credits. The following table documents the quantified ecosystem services in resource units and avoided costs per year when Project Trees reach 25 years old.

Single Tree – Davis-White Park & Patterson Park – adjusted based on observed mortality per tree type.

Ecosystem Services	*Resource Units*	*Value*
Rainfall Interception (m3/yr)	468.28	$1,224.69
Air Quality (t/yr)	-0.0126	-$197.30
Cooling – Electricity (kWh/yr)	3,728.97	$283.03
Heating – Natural Gas (kBtu/yr)	14,455.96	$150.20
Grand Total ($/yr)	**-**	**$1,460.62**

Area Reforestation – Onion Creek Riparian Canopy Planting

Ecosystem Services	*Resource Units (Adjusted in Year 4, still valid)*	*Value (Adjusted in Year 4, still valid)*
Rainfall Interception (m3/yr)	387.49	$1,013.51
Air Quality (t/yr)	0.0865	$209.08
Cooling – Electricity (kWh/yr)	19,712.35	$1,496.17
Heating – Natural Gas (kBtu/yr)	10,339.88	$107.44
Grand Total ($/yr)	**-**	**$2,826.19**

VERIFICATION REPORT

CFC reviewed the Verification Report dated April 9, 2024 by Brian Goodall (a Validation and Verification Body) to ensure it accurately reflects the documentation contained in the Year 6 Project Design Document Amendment and supporting documents.

VALIDATION CONCLUSION

I attest that all the information provided in this validation report is free of material misstatement, to the best of my knowledge. The project complies with the validation criteria outlined in the City Forest Credits Standard and Tree Planting Protocol Version 6, dated August 11, 2018.

Approved by City Forest Credits on April 10 in 2024.