



Reforestation of Austin's Parks and Riparian Zones Validation Report

Year 4

Document Prepared by City Forest Credits

February 8, 2023

PROJECT OVERVIEW

<i>Project Name</i>	Reforesting Austin’s Parks and Riparian Zones
<i>Project Registry Number</i>	002
<i>Project Type</i>	Tree Planting
<i>City Forest Credits Protocol Version</i>	Version 6, August 11, 2018
<i>Project Start Date</i>	3/31/2018
<i>Project Location</i>	Austin, TX
<i>Project Operator</i>	TreeFolks

SUMMARY

State what stage of crediting this Validation Report applies to (i.e. after planting, Year 4, 6, or after Year 25). Provide a few sentences about the overall project. Include the Planting Design and Quantification Method.

In March 2018, TreeFolks planted 47 trees at two sites, Davis White and Patterson Parks, in the City of Austin using the Single Tree planting design and quantification method. TreeFolks also planted 1,250 trees in 2018 at a third City of Austin site, Onion Creek, using the Canopy planting design and quantification method.

For the Year 4 credit issuance, the Project Operator TreeFolks conducted tree sampling and imaging-based tree canopy assessments to evaluate growth and survival at the planting sites.

ELIGIBILITY

Additionality (Section 2)

Criteria

The City Forest Credits Standard and Tree Planting Protocol ensure additionality for every carbon project. A project activity is additional if it can be demonstrated that the activity results in emission reductions or removals that are in excess of what would be achieved under a “business as usual” scenario and the activity would not have occurred in the absence of the incentive period provided by the carbon markets.

Issue Validated

Project Operator signed an Attestation of Additionality on November 3, 2022 that confirms that the trees were not planted due to an enacted ordinance or law, as well as stating that Project Operator used the Registry’s performance standard baseline in adherence with the WRI GHG Protocol, that the Project Operator signed a Project Implementation Agreement with the Registry for a 25-year Project Duration, that the 25-year Project Duration is in addition to and longer than any commitment the Project Operator makes to non-carbon project tree plantings, and that trees were not planted on sites that were forested and then cleared of healthy trees.

No Double Counting and No Net Harm

Criteria

The City Forest Credits Standard describes prevention of double-counting in Section 5.1 and safeguards and the “No Net Harm” Principle in Section 5.2. Project activities shall not cause net harm to the environment or urban communities. Project Operator must sign an Attestation of No Double Counting of Credits and No Net Harm.

Issue Validated

Project Operator has submitted an Attestation of No Double Counting of Credits and No Net Harm, signed November 3, 2022.

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

Single Tree Planting – Davis White & Patterson Parks

Project Operator planted 47 trees in Davis White Park and Patterson Park using the Single Tree planting design and quantification method. Between March 2018 and May 2022, Project Operator and their partner, the City of Austin, replaced three trees with new species after the original species died.

Per Protocol sampling requirements in Appendix B, Project Operator visited all planting sites to assess tree status (Alive, Dead, or Vacant). As of sampling on October 3, 2022, 39 of the 47 trees planted were alive, and 8 were dead or vacant and had not been replaced. As supporting documentation, Project Operator provided sampling data with tree status recorded for each planting site, geocoded photos, and a GIS-based database tracking each planting site location and tree status over four years of monitoring.

The Observed Mortality Rate was 17.05%, which is less than the Anticipated Mortality Deduction of 20% at Initial Crediting. Therefore, the 20% Anticipated Mortality Deduction was used for the Year 4 quantification.

The Project’s total GHG emissions mitigation was revised to 102 credits from the 103 credits projected during Initial Crediting. The revised quantification is due to the species change of the three replacement trees compared to the original trees planted. Two of the oak trees originally planted were replaced with smaller species.

The Carbon Quantification Summary is as follows:

Total number of trees planted	47
Project area (acres), if applicable	N/A
Total number of trees per acre, if applicable	N/A
Total number of planting sites alive (as of Year 4 sampling)	39
Credits attributed to the project (tCO ₂ e)	134
Credits after mortality deduction (default is 20%)	107
Contribution to Registry Reversal Pool Account (5%) (tCO ₂ e)	5
Total credits to be issued to the Project Operator (tCO₂e)	102
Total credits requested to be issued in Year 4 (40% of above)	41

GHG Assertion: Project Operator asserts that the Project results in GHG emissions mitigation of 102 tons CO₂e over the 25-year Project Duration. Project Operator asserts that the Project results in GHG emissions mitigation of 41 tons CO₂e at Year 4.

Additional Info

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

Single Tree Plantings	Projection at Initial Crediting	Projection accounting for replacement trees
Total credits issued at Initial Crediting (10% CO ₂ (t))	10	10
Total credits to be issued At Year 4 (40% CO ₂ (t))	41	41
Total credits to be issued At Year 6 (30% CO ₂ (t))	31	31
Total credits to be issued after Year 25 (20% CO ₂ (t))	21	20
Total credits to be issued (tCO₂e)	103	102

Canopy Planting – Onion Creek

Project Operator planted 1,250 trees in Onion Creek using the Canopy planting design and quantification method. During initial planting, the Project Area was scoped at 4.3 acres.

Per Protocol sampling requirements in Appendix B, Project Operator conducted imaging-based canopy assessments using iTree Canopy to analyze tree growth in the Project Area. The iTree Canopy report, along with historical imagery from 2018, identified a 0.45-acre section of the Project Area with full canopy prior to Project planting. The Project Area was adjusted to exclude the 0.45-acre portion with pre-existing, mature canopy growth, for a new Project Area of 3.85 acres. The Project Operator provided maps, GIS shape files of the Project Area, and iTree Canopy reports as supporting documentation for the adjustment.

With the Project Area boundary adjustment to 3.85 acres, the iTree analysis was repeated. New growth trees comprised 13.33% (±1.96) of canopy cover in the Project Area, which exceeds the 2.8% canopy threshold required at Year 4.

Due to the Project Area adjustment, the Project’s total GHG emissions mitigation was revised to 390 credits from the 436 credits projected during Initial Crediting.

The Carbon Quantification Summary is as follows:

Total number of trees planted	1,250
Project area (acres), if applicable	3.85
Total number of trees per acre, if applicable	324
CO2 index, tCO ₂ e/acre	106.7
Credits attributed to the project (tCO ₂ e)	411
Credits after mortality deduction (default is 20%)	N/A
Contribution to Registry Reversal Pool Account (5%) (tCO ₂ e)	21
Total credits to be issued to the Project Operator (tCO₂e)	390
Total credits requested to be issued in Year 4 (40% of above)	156

GHG Assertion: Project Operator asserts that the Project results in GHG emissions mitigation of 390 tons CO₂e over the 25-year Project Duration. Project Operator asserts that the Project results in GHG emissions mitigation of 156 tons CO₂e at Year 4.

Additional Info

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

Canopy Planting	Projection at Initial Crediting	Projection accounting for replacement trees
Total credits issued at Initial Crediting (10% CO ₂ (t))	44	44
Total credits to be issued At Year 4 (40% CO ₂ (t))	174	156
Total credits to be issued At Year 6 (30% CO ₂ (t))	131	117
Total credits to be issued after Year 25 (20% CO ₂ (t))	87	73
Total credits to be issued (tCO₂e)	436	390

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.

Davis White & Patterson Single Tree Plantings – Single Tree

<i>Ecosystem Services</i>	<i>Resource Units</i>	<i>Value</i>
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

The Single Tree Co-Benefits estimates have been revised to reflect the updated planting list that includes the three replacement trees.

Onion Creek Riparian Canopy Planting – Area Reforestation

<i>Ecosystem Services</i>	<i>Resource Units</i>	<i>Value</i>
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 February 8, 2023 by VVB Dan Hintz to ensure it accurately reflects the documentation contained in the Year 4 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.

Approved by City Forest Credits on February 8 in 2023.