



Wilson Family Forest Preservation Project Validation Report

Document Prepared by City Forest Credits

April 18, 2023

PROJECT OVERVIEW

<i>Project Name</i>	Wilson Family Forest Preservation Project
<i>Project Registry Number</i>	035
<i>Project Type</i>	Tree Preservation
<i>City Forest Credits Protocol Version</i>	Version 11.40, February 7, 2022
<i>Project Start Date</i>	January 5, 2023
<i>Project Location</i>	Virginia Beach, Virginia
<i>Project Operator</i>	Mosaic Carbon LLC

SUMMARY

Provide a few sentences about the overall project

The Wilson Family Forest is 24.29 acres of mixed pine and hardwood forest adjacent to residential development in Virginia Beach, VA. The aim of this project is to preserve remaining forestland in a rapidly developing area, providing health and environmental benefits to residents from air quality and increased shade to energy savings and reduced stormwater runoff.

Mosaic Carbon LLC is serving as the Project Operator for this project and recorded a restrictive covenant with the landowners, the Wilson family, to protect this forest from development for 40 years.

ELIGIBILITY

Project Operator Identity (Section 1.1)

Criteria

A Project requires at least one Project Operator (“PO”), an entity organized and licensed under the laws of its jurisdiction, or a governmental body, which undertakes a Project, registers it with the registry of City Forest Credits (the “Registry”), and is ultimately responsible for all aspects of the project and its reporting.

Issue Validated

Mosaic Carbon LLC is the Project Operator. To document that it is an entity organized and licensed under the laws of its jurisdiction, Mosaic Carbon provided City Forest Credits with a copy of their Articles of Organization and Certificate of Organization from the Virginia State Corporation Commission.

Permanence – Project Duration and Reversals

A. Project Duration (Section 1.2 and 2.2)

Criteria

Project Operator must sign a Project Implementation Agreement with the Registry setting forth the Project Operator’s obligation to comply with the protocol. Project Operator must monitor and report for 40 years.

Issue Validated

Mosaic Carbon and City Forest Credits signed a Project Implementation Agreement on August 16, 2022 for the Wilson Family Forest Preservation Project (Project Registry Number 035). The project has a 40-year duration under City Forest Credits Tree Preservation Protocol Version 11.40.

B. Reversals (Section 9)

Criteria

A “Reversal” is loss of stored carbon such that the remaining stored carbon within the Project Area is less than the amount of stored carbon for which Registry credits have been issued. The Registry will retain in a Reversal Pool account 10% of all credits issued to preservation projects. This Reversal Pool account shall be used to compensate for Unavoidable Reversals.

Issue Validated

The Project Design Document and request for credits based on GHG mitigation includes a 10% deduction for the Reversal Pool of credits. A total of 349 credits were contributed from this Project to the Registry Reversal Pool. The carbon quantification and Reversal Pool deduction were verified by the Validation and Verification Body, Todd Douglass.

Project Location (Section 1.3 and 1.4)

Criteria

Project Area must be located in parcels within or along the boundary of at least one of the urban area criteria. The Project Operator must specify the Project Area and provide an electronic map of the Project area with geospatial location.

Issue Validated

The Project is located within the limits of the City of Virginia Beach, an incorporated city, which meets Protocol criteria Section 1.3B. The Project Operator has provided maps as supporting evidence, including geospatial location, regional-scale, and project area maps.

The 24.29-acre Project Area lies within the parcel 1495-43-9093-0000.

Jurisdiction / Location	Parcel Number	Parcel Acreage	Description / Notes
Virginia Beach, VA	1495-43-9093-0000	24.9 acres	24.29 acres of the parcel is included in the Project Area
		Total	24.29 acres in the Project Area

The Project Area is in a location that receives more than 20 inches of precipitation per year and has more than 80% tree canopy, meeting protocol criteria Section 1.4 C. The Project Operator has provided an iTree report to demonstrate that the percentage of canopy cover for the Project Area is 100% canopy cover.

Ownership or Eligibility to Receive Potential Credits (Section 1.5)

Criteria

Project Operator must demonstrate ownership of potential credits or eligibility to receive potential credits.

Issue Validated

The Wilson Family is the landowner for the parcel containing the Project Area. The Wilson Family has granted the Project Operator the right to receive potential credits, meeting protocol criteria Section 1.5C. As supporting documentation, the Project Operator provided a deed (Attachment 4) and an Agreement to Transfer Credits (Attachment 5), signed by the Wilson Family and Mosaic Carbon on January 5, 2023.

Per Protocol Section 1.5C, notice of the Agreement to Transfer Credits was included as Section 4 of the restrictive covenant protecting the trees (Attachment 6), which was recorded on January 6, 2023.

Demonstration of Threat of Loss (Section 4.2, 4.3, 4.4)

Criteria

Project Operator must demonstrate that prior to the Preservation Commitment, the project trees were not preserved from removal. The Project Area must be in a land use designation that allows for at least one non-forest use and is not in an overlay zone that prohibits all development. The Project Area must also meet one of three conditions that demonstrate threat of loss as described in Section 4.4 A, B, or C such as surrounding developed or improved uses, per acre value, or fair market value.

Issue Validated

The Project Operator signed an Attestation of Additionality on December 13, 2022 stating that prior to the start of the Project, the trees in the Project Area were not protected by easement, recorded encumbrance, or protected zoning status.

The Project Area is zoned Agricultural District 1 (AG-1) and Agricultural District 2 (AG-2). Permitted uses per the AG-1 and AG-2 zoning regulations include agricultural and low-density residential development. A Naval Airspace Easement on the property permits agricultural but not residential development. The Project Operator provided zoning maps and copies of the relevant zoning regulations as supporting documentation, as well as a copy of the Naval Airspace Easement.

There is a Variable width drainage, impoundment, and maintenance easement on the property held by the City of Virginia Beach that covers 1.53 acres of the Project Area. The easement does not restrict the removal of trees. Should the easement be enforced by the City, the Project Operator would compensate for any reversal that might occur as a result.

The Project meets Tree Preservation Protocol Criteria 4.4A, as 36% of the property perimeter is surrounded by non-forest, developed, or improved uses, primarily residential lots. The Project Operator provided a map showing the developed uses around the Project Area perimeter as supporting documentation.

Portions of the Project Area are located within floodplain zones regulated by the City of Virginia Beach Southern Rivers Watershed Management Plan and Floodplain Ordinances. Project Operator submitted documentation confirming that neither ordinance restricted the removal of trees or agricultural activity involving tillage of the soil.

About 62% of the property is designated national wetlands, under the jurisdiction of the US Army Corps of Engineers (USACE). A Clean Water Act Section 404 permit is required to convert the forestland into agricultural use; however, no Section 404 permit is required to harvest the trees. The Project Operator provided a copy of communications with the USACE Norfolk District confirming that no permit is required to harvest the trees.

Tree Preservation Commitment (Section 4.1)

Criteria

Project Operator must demonstrate that trees in the Project Area are preserved for at least 40 years.

Issue Validated

The Project Operator and the Wilson family signed a restrictive covenant on January 5, 2023 to protect the trees from removal for 40 years. The covenant grants the Project Operator the right to access the property and enforce compliance, and was recorded on January 6, 2023. Specific language in the covenant that protects the trees includes:

Section 1. Removal of Trees. The Owner shall not cut down, destroy, or remove trees located within the Forested Areas, except as necessary to a) control or prevent hazard, disease, or fire, or b) improve forest health, or c) comply with application laws, the Protocol, or any Registry requirements.

Section 2. Surface Alteration. The Owner shall not alter the surface of the Forested Areas or place trash or debris within the Forested Areas, including, without limitation, the excavation or removal of trees, soil, sand, gravel, rock, peat, or sod except as necessary to promote or maintain forest or river health, fish habitat, or forest or land restoration projects, including without limitation the removal of noxious or invasive species, or b) promote or maintain the health and safety of the community such as to prevent landslides or hill collapse

The project meets protocol criteria Section 4.1.

Project Submittal Dates (Section 2.1, 2.3)

Criteria

Project must submit applications to the Registry within two years of the date of the Preservation Commitment. The Preservation Commitment must be recorded no later than 6 months after Registry Approval of the Project Application. Projects whose Preservation Commitment dates from prior to November 1, 2017 are not eligible.

Issue Validated

The Preservation Commitment was signed on January 5, 2023. Project Operator submitted the application on July 14, 2022, which is within two years of the date of the Preservation Commitment, which meets protocol criteria Section 2.1 and 2.3.

Carbon Quantification (Section 11)

Criteria

Project Operator must follow the carbon stock and soil carbon quantification methods outlined in Section 11 of the Protocol.

Issue Validated

Project Operator used the US Forest Service General Technical Report NE-343 table B43 Oak Gum Cypress to determine accounting stock, per protocol criteria Section 11.1.A. The tree canopy percentage was measured using i-Tree Canopy.

Historical aerial imagery spanning 1937 to 2015 was provided as supporting documentation to establish forest age. Two stands were identified: Stand 1 was shown to have last been cleared for agricultural use in 1982, with the next available imagery in 1994 and onward showing natural regeneration. The stand was therefore estimated at 30 years old. Stand 2 had no evidence of clearing in any of the photos and was estimated at 90 years old.

A forest composition report based on three site visits and ten forty-foot transects was also provided to confirm the forest age, document the main species, forest health, and tree size and density, and delineate the forest stands within the Project Area. The site visit confirmed two Stands based on forest age and species composition.

The Project Area was zoned Agricultural-1 (AG-1) and Agricultural-2 (AG-2). A Naval Airspace Easement on the property allows for agricultural uses but excludes residential development. No permit is required to harvest the trees under the Clean Water Act Section 404. Per Protocol Section 11.2.A, for agricultural zoning, 90% of Accounting Stock is at risk of conversion. The Project Operator provided relevant sections of the zoning regulations, a zoning map, a copy of communications with the USACE District office confirming no harvest permit requirements, and a copy of the Naval Airspace Easement as supporting documentation.

Project Operator quantified the avoidance of emissions from soil carbon caused by conversion of soils to impervious surfaces under Protocol Section 11.4. Zoning regulations for AG-1 and AG-2 zoning do not limit impervious surfaces. In addition, the relevant Floodplain Ordinances and Southern Rivers Watershed Management Plan does not restrict the tillage of soil, which would release soil carbon. Per 11.4.A, 90% of the Project Area is allowable in an agricultural zone as eligible for conversion. Under the Clean Water Act Section 404, a permit is required to convert existing forestland to new agricultural use. To be conservative, the Project Operator excluded the wetlands from the soil carbon quantification.

A deduction of 18.3% for displaced development was included in carbon quantification, per Protocol Section 11.5.

The Carbon Quantification Summary is as follows:

Project Area (acres)	24.29
Does carbon quantification use stratification (yes or no)	No
Percent tree canopy cover within Project Area	100%
Project stock (tCO ₂ e)	4,753
Accounting Stock (tCO ₂ e)	3,802

On-site avoided biomass emissions (tCO ₂ e)	3,422
On-site avoided soil carbon emissions (tCO ₂ e)	993
Deduction for displaced biomass emissions (tCO ₂ e)	626
Deduction for displaced soil emissions (tCO ₂ e)	301
Credits from avoided biomass emissions (tCO ₂ e)	2,796
Credits from avoided soil emissions (tCO ₂ e)	692
Total credits from avoided biomass and soil emissions (tCO ₂ e)	3,487
Credits attributed to the project (tCO ₂ e), excluding future growth	3,487
Contribution to Registry Reversal Pool Account	349
Total credits to be issued to the Project Operator (tCO₂e) <i>(excluding future growth)</i>	3,139

GHG Assertion:

Project Operator asserts that the Project results in GHG emissions mitigation of 3,139 tons CO₂e issued to the Project.

Co-Benefits Quantification (Section 11.6)

Criteria

Project Operator follows co-benefit quantification for rainfall interception, air quality, and energy savings, per protocol criteria Section 11.6.

Issue Validated

Project Operator has followed the co-benefits quantification method using the templates provided by City Forest Credits. Project Operator used a canopy cover of 100% for the 24.29-acre Project Area based on the i-Tree Canopy analysis, including 70% deciduous, and 30% coniferous based on the forest composition determined via site visits. The following table documents the quantified ecosystem services in resource units and avoided costs.

<i>Ecosystem Services</i>	<i>Resource Units</i>	<i>Value</i>
Rainfall Interception (m ³ /yr)	5,944.9	\$15,549.49
Air Quality (t/yr)	0.6865	\$1,538.67
Cooling – Electricity (kWh/yr)	38,654	\$2,933.82
Heating – Natural Gas (kBtu/yr)	16,528	\$171.73
Grand Total (\$/yr)		\$20,193.72

Additionality (Section 6)

Criteria

The City Forest Credits Standard and Tree Preservation Protocol (Section 6) 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.

Projects must demonstrate the following:

- Prior to the start of the project, the trees in the project area cannot be protected via easement or recorded encumbrance or in a protected zoning status that preserves the trees.
- The zoning in the project area must currently allow for a non-forest use.
- The trees in the project area face some risk of removal or conversion out of forest.

The Tree Preservation Protocol sets out three tests to determine whether the trees or forest in a project area face a threat or risk of tree removal or conversion out of a forested use, as described in Section 4.4. Taken together, these elements allow crediting only for unprotected trees, at risk of removal, which are then protected by a project action of preservation, providing additional avoided GHG emissions.

Additionality is embedded also in the quantification methodology. Projects cannot receive credits for trees that would have remained had development occurred, nor can they receive soil carbon credits for soil that would have been undisturbed had development occurred.

Project Operator must sign an Attestation of Additionality.

Issue Validated

Project Operator has demonstrated that prior to the start of the project the trees were not protected, the zoning allows for a non-forest use, and the trees are at risk of removal or conversion out of forest. Project Operator has followed the carbon quantification methodology to demonstrate how the number of credits to be issued. Project Operator signed the Attestation of Additionality on December 13, 2022.

No Double Counting of Credits and No Net Harm (Section 5)

Criteria

The City Forest Credits Standard describes safeguards and the “No Net Harm” Principle in Section 5. Project activities shall not cause net harm to the environment or urban communities. Project Operator must sign an Attestation of No Net Harm.

The City Forest Credits Standard describes prevention of double-counting in Section 5. Project Operator must sign an Attestation of No Double Counting of Credits.

Issue Validated

Project Operator has submitted a signed Attestation of No Double Counting and No Net Harm on November 16, 2022, and the Registry sees no evidence of net harm from this project. The Registry has reviewed the records of prior projects to confirm that the Project Area for this project has not already received credits under the CFC standard.

Monitoring and Reporting (Section 8)

Criteria

Project Operator must report on tree conditions across the Project Area for the Project Duration. Reports must be submitted no less frequently than on the triennial anniversary of the date of the first Verification Report.

Issue Validated

The Project Operator will monitor the Project Area for forest health and submit triannual monitoring reports utilizing aerial imagery to the Registry for the 40-year Project Duration, as specified in the Preservation Protocol. Project Operator does not intend to claim credits for future growth. The Landowner has expressed an interest in transferring ownership of the property to the City of Virginia Beach. In the event that this transfer occurs, Mosaic Carbon would continue to steward and monitor the Project Area, as well as enforce the restrictive covenant.

The Naval Airspace Easement also restricts the height of the trees to 130 feet. There is no evidence that this has ever been enforced to date based on historical imagery or site visits to the forest. In addition, 130 feet is taller than the predicted maximum height of the dominant species on the property. But should this easement be enforced to reduce the tree height, this may be considered an avoidable reversal under the Preservation Protocol. In such cases, per Protocol Section 9.1A, the Project Operator will deliver written notice to the Registry within 60 days of the potential Reversal. The Registry shall determine the number of credits reversed and require the Project Operator to provide replacement credits.

The City of Virginia Beach also holds a Variable Width Drainage, Impoundment, and Maintenance Easement on 1.53 acres, or 6.3% of the Project Area. There is no evidence that this has ever been enforced to date based on historical imagery or site visits to the forest. Should this easement be enforced, it would be covered by the 10% reversal pool deduction.

Social Impacts (Section 12)

Criteria

Project Operator shall use the Carbon Project Social Impact template to evaluate the SDGs to determine how a Project provides social impacts that contribute towards achievement of the global goals, as described in Section 12.

Issue Validated

Project Operator has submitted a completed Carbon Project Social Impact document. The project meets protocol criteria Section 12.

VERIFICATION REPORT

CFC reviewed the Verification Report to ensure it accurately reflects the documentation contained in the Project Design Document and supporting documents.

VALIDATION CONCLUSION

All the information provided in this validation report is free of material misstatement, to the best of our knowledge. The project complies with the validation criteria outlined in the City Forest Credits Standard and Tree Preservation Protocol Version 11.40.

Approved by City Forest Credits on April 18 in 2023.