



Twinsburg Heights Preserve Validation Report

Document Prepared by City Forest Credits

April 16, 2024

PROJECT OVERVIEW

<i>Project Name</i>	Twinsburg Heights Preserve
<i>Project Registry Number</i>	50
<i>Project Type</i>	Tree Preservation
<i>City Forest Credits Protocol Version</i>	Version 12.40, February 22, 2023
<i>Project Start Date</i>	September 6, 2022
<i>Project Location</i>	City of Twinsburg and Twinsburg Heights, OH
<i>Project Operator</i>	West Creek Conservancy

SUMMARY

Provide a few sentences about the overall project

The Twinsburg Heights Preserve carbon project includes 49.3-acres of forest within a larger 76-acre property purchased and protected by West Creek Conservancy in September 2022. The forest, which spans the City of Twinsburg and Twinsburg Township, OH, lies along a major interstate highway and was zoned for residential and commercial development. It is dominated by red and sugar maples, black cherry, and American Beech.

By opening up the forest to the public for passive recreation, the project is promoting equitable greenspace access for adjacent communities that have a history of disinvestment and high environmental burden.

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

The West Creek Conservancy provided documentation, including an IRS letter confirming 501c3 tax exempt status, to City Forest Credits.

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

Project Operator submitted the Project Application on November 1, 2023. The Preservation Commitment recordation date is September 6, 2022, which is less than 2 years from the application date, thereby meeting protocol criteria Section 2.1 and 2.3. All project documents were submitted by March 5, 2024, which is within six months of the Application Approval date.

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

The West Creek Conservancy and City Forest Credits signed a Project Implementation Agreement on November 9, 2023 for the Twinsburg Heights Preserve Project (Project Registry Number 50). The project has a 40-year duration under City Forest Credits Tree Preservation Protocol Version 12.40.

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. 594 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 comprised of multiple contiguous parcels that are located in and along the boundary of the City of Twinsburg, OH, 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 49.3-acre Project Area includes 10 parcels, described below:

Municipality	Parcel Number	Notes <i>Include total acres and acres included in Project Area</i>
Twinsburg Twp	62-00695	15.28 total acres, 9.16 acres in Project Area
Twinsburg Twp	62-00607	0.21 total acres, 0.21 acres in Project Area
Twinsburg Twp	62-00609	10.31 total acres, 2.91 acres in Project Area
City of Twinsburg	64-01498	5.23 total acres, 5.23 acres in Project Area
City of Twinsburg	64-00992	0.04 total acres, 0.04 acres in Project Area
City of Twinsburg	64-01269	4.76 total acres, 4.76 acres in Project Area
City of Twinsburg	64-00627	10.64 total acres, 9.35 acres in Project Area
City of Twinsburg	64-01270	0.45 total acres, 0.45 acres in Project Area
City of Twinsburg	64-01271	14.19 total acres, 10.28 acres in Project Area
City of Twinsburg	64-09071	12.32 total acres, 6.91 acres in Project Area
	Total Project Area	49.30 acres

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 provided an i-Tree Eco Forest Composition Report, based on data from a plot sample inventory, demonstrating the percent canopy cover of 93%.

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 Project Operator, West Creek Conservancy, is the landowner for the Twinsburg Heights Preserve Project, meeting protocol criteria Section 1.5A. The Project Operator provided a copy of the executed deed as supporting documentation.

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

Project Operator recorded a Declaration of Restrictions on September 6, 2022, protecting the property in perpetuity. The project meets protocol criteria Section 4.1.

Specific language protecting the trees is found in Section 1h: “Except as may be required in the course of any activity permitted herein [control or prevention of imminent hazard, disease, or fire; to remove dead or dying or diseased trees; elimination of invasive species; wildlife habitat enhancement;

maintenance of existing facilities], there shall be no removal or destruction of native growth, nor the cutting of trees, shrubs, or other vegetation on the Property.”

Section 1m of the deed restriction does allow the construction of trail amenities, superseding Section 1h. However, the Project Operator documented its intent in the Project Design Document to build only outside of the Project Area, recognizing that any construction within the Project Area could result in an Avoidable Reversal that would need to be compensated for per Section 9 of the Protocol.

The deed restriction will ensure effective protection for the Project Area in perpetuity, which satisfies protocol criteria Section 4.1.

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 March 5, 2024, 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 for at least one non-forest use: parcels within the City of Twinsburg are zoned C3: Interchange Business District, which allows for commercial development, while those within Twinsburg Township are currently zoned R3 Single Family High Density Residential District (during acquisition, the township parcels were zoned interchange mixed use; however, that zoning category has since been repealed by the Township).

Critical areas, including wetlands, riparian setbacks, and lakes, were all removed from the Project Area.

The Project Area is surrounded by development on over two-thirds of its perimeter (67.7%), meeting the Threat of Loss test Section 4.4A. The Project Operator provided a map demonstrating the developed uses around the property.

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. Per Section 5.2 of the Tree Preservation Protocol, the Project Operator must submit documentation showing no overlap of Project Area with any other registered urban forest carbon project. As part of Validation, the Registry shall use the appropriate

tool on GIS software (such as the Intersect tool on ArcGIS) to independently investigate whether there is any overlap between the Project Area and other registered urban forest carbon projects.

Issue Validated

Project Operator has submitted a signed Attestation of No Double Counting and No Net Harm on March 5, 2024, and the Registry sees no evidence of net harm from this project. The Registry has analyzed geospatial data of the Project Area against that of all other registered urban forest carbon preservation projects to confirm that the Project Area for this project has not already received credits under the CFC standard.

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, that the trees are at risk of removal or conversion out of forest, and that carbon revenues are additional. 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 March 5, 2024.

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 engaged an independent consultant, Legacy Forestry Consulting, to perform on-site assessment of the carbon stock, per protocol criteria Section 11.1B. Legacy Forestry Consulting conducted a plot-sample forest assessment adhering to the standards set in CFC Tree Preservation Protocol Section 11.1.B. Legacy Forestry Consulting established 22 sample plots sized at 1/10th-acre. Within every plot, each live tree was inventoried that was at least 5” in diameter at 4.5’ above ground, where the height above ground is measured on the uphill side of the tree. The plot data was used as input for iTree Eco to quantify the carbon biomass across the entire Project Area.

Forest composition from the plot-sample inventory was provided as supporting documentation, but forest age was not necessary for carbon quantification for this project.

The Fraction at Risk of Tree Removal, or “Avoided Biomass Emissions”, was 90% for the Project Area:

- The City of Twinsburg parcels (37.02 acres) are zoned commercial (C3: Interchange Business District). Protocol Section 11.2A allows 90% of accounting stock to be claimed as “Avoided Biomass Emissions”.
- The Twinsburg Township parcels (12.28 acres) are zoned residential (R3 Single Family High Density Residential District). Protocol Section 11.1.B allows the smaller of 90% or the rate of estimated clearing (calculated per Protocol Section 11.1.B.ii) to be claimed as “Avoided Biomass Emissions.” Because the rate of estimated clearing under the R3 zoning class (which has a minimum lot size of 8,800 sq ft) was larger than 90%, 90% was claimed as “Avoided Biomass Emissions”.

Project Operator quantified the avoidance of emissions from soil carbon caused by conversion of soils to impervious surfaces under Protocol Section 11.3.

- The City of Twinsburg parcels (37.02 acres) are zoned commercial (C3: Interchange Business District). The Project Operator claimed 70% as the avoided impervious surface per guidance from the City’s Planning Division.
- The Twinsburg Township parcels (12.28 acres) are zoned residential (R3 Single Family High Density Residential District). The Project Operator claimed 50% as the avoided impervious surface, per Protocol Section 11.3.B, because the ordinance did not limit impervious surface for R3 zoning, and using the minimum setbacks to calculate impervious surface was less conservative than the standard 50% allowance.

A deduction of 18.3% for displaced development was included in carbon quantification, per Protocol Section 11.4.

The Carbon Quantification Summary is as follows:

Project Area (acres)	49.3
Does carbon quantification use stratification (yes or no)	No
Percent tree canopy cover within Project Area	93%
Accounting Stock (tCO ₂ e)	4,432
On-site avoided biomass emissions (tCO ₂ e)	3,989
On-site avoided soil carbon emissions (tCO ₂ e)	3,846
Deduction for displaced biomass emissions (tCO ₂ e)	730

Deduction for displaced soil emissions (tCO ₂ e)	1,165
Credits from avoided biomass emissions (tCO ₂ e)	3,259
Credits from avoided soil emissions (tCO ₂ e)	2,681
Total credits from avoided biomass and soil emissions (tCO ₂ e)	5,940
Credits attributed to the project (tCO ₂ e), excluding future growth	5,940
Contribution to Registry Reversal Pool Account	594
Total credits to be issued to the Project Operator (tCO₂e) <i>(excluding future growth)</i>	5,346

Co-Benefits Quantification (Section 11.5)

Criteria

Project Operator follows co-benefit quantification for rainfall interception, air quality, and energy savings, per protocol criteria Section 11.5.

Issue Validated

Project Operator has followed the co-benefits quantification method using the templates provided by City Forest Credits. Project Operator included 93% percent deciduous, and 7% percent non-tree for the 49.3-acre Project Area. 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)	23,449.8	\$49,563.68
Air Quality (t/yr)	1.6178	\$3,988.26
Cooling – Electricity (kWh/yr)	71,205	\$9,975.87
Heating – Natural Gas (kBtu/yr)	2,947,538	\$41,225.12
Grand Total (\$/yr)		\$104,752.94

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

Project Operator has agreed to submit written reports every three years using the template provided by City Forest Credits. West Creek Conservancy staff will visit the project annually as part of their stewardship activities and implement invasive species and deer population management to ensure forest health and habitat quality. The property will be managed by the Conservancy as a public nature preserve, in partnership with Summit County Metroparks.

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 12.40.

Approved by City Forest Credits on April 16 in 2024.