

Verification Report

Hemlock Ridge Forest

City Forest Credits Project Number 047

February 29 2024

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1 INTRODUCTION

City Forest Credits engaged Todd Douglass (a Validation and Verification Body (VVB) acting as a third-party verifier) to verify the Hemlock Ridge Forest (Project), in Lake County, Ohio, for the reporting period of December 20, 2022 to December 19, 2025. 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

This project preserved 222.8 acres of mixed hardwood forest across two parcels in Lake County, Ohio. The Project Area includes land located in Leroy and Concord Townships, in the northeastern suburbs of Cleveland along the I-90 corridor. The Project Area, flanked to the north by the Grand River and to the south by the interstate, provides a valuable buffer in the watershed to the river and associated wetland areas. The Project area contains mostly mixed early to mid-successional mesic hardwood species dominated by red maple, yellow poplar, and sassafras. The entire area has been forested since 1982, however, the forest is multi-aged and includes significant portions of larger and older oaks, hemlocks, sycamores, and cottonwoods reaching diameters of fifty or more inches. The land was purchased in December 2022 by Lake Metroparks, a parks, recreation and conservation organization in Lake County. Upon its purchase, Lake Metroparks granted a conservation easement on the property to the Project Operator, Western Reserve Land Conservancy, to protect the parcels.

1.2 CONTACT INFORMATION

Project Operator

Western Reserve Land Conservancy
3850 Chagrin River Road
Moreland Hills, OH 44022

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(440) 528-4168

Verification Body

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1.3 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 City Forest Credits (CFC) Protocol, and that the Project is in compliance with all CFC requirements relating to eligibility, accounting, and documentation.

2 VERIFICATION CRITERIA

2.1 GENERAL

The Registry will accredit VVBs to act as third-party verifiers who meet the Registry's qualifications and complete training. Those accredited VVBs can then act to verify compliance with this Tree Planting Protocol per International Standards Organization 14064-3. Specifically, the Registry adopts and utilizes the following standards from ISO 14064-3:

- Upon receiving a Project Design Document with data on eligibility, quantification of carbon and co-benefits, and a request for credits, the Registry will conduct a validation. If it validates the project at that stage, the Registry will retain a VVB to act as third-party verifier to verify compliance with this Protocol.
- The Registry requires a reasonable level of assurance in the accuracy the asserted GHG removals to a reasonable level.
- The verification items identified in the Tables 1 and 2 are all material elements, and any asserted GHG removals must be free of errors, misstatements, or omissions regarding those elements.
- The Registry will record, store, and track all quantification and verification data and either display it for public review or make it available for public review upon request.

2.2 PROTOCOL

The verification was conducted to the City Forest Credits Tree Preservation Protocol, version 12.40, February 22, 2023.

2.3 LEVEL OF ASSURANCE

This verification was conducted to a reasonable level of assurance. The Verification Report accurately reflects the documentation contained in the Project Design Document and supporting documents.

3 SCOPE OF VERIFICATION

- The Project encompasses land in Leroy and Concord Townships, both located in Lake County, Ohio. Tax map parcel 08-A-009-0-00-005-0 is located in Concord Township, and parcel 07-A-027-0-00-009-0 is located in Leroy Township, specifically described in the Project Design Document.
- The Project Operator was granted a conservation easement by the landowner, Lake Metroparks, which was recorded on December 20, 2022. The easement language includes use restrictions that protect trees and vegetation consistent with the Protocol. On page 8 of the Grant of Conservation Easement in section B.4(f), it states that the, "Grantor shall not cut down, remove, or destroy trees or other plants," aside from those permitted in the grant for purposes of safety or trail improvement, provided that, "any such removal does not materially impair significant conservation interests and has no more than a negligible or de minimis impact on biomass and carbon stock." (Page 6, section B.1(d))
- The Project avoids emission of CO₂ from trees and soil, by avoiding conversion of forest to non-forest land cover and avoiding conversion of forest soil to impervious surface.
- The Project duration is 40 years, beginning December 20, 2022. The Project Operator commits to protecting the trees within the Project Area and monitoring the project carbon stocks for the entire Project duration.
- The verification includes review of documents, data, imagery and other evidence provided by the Project Operator; independent checking of selected data; independent review of ownership records, tax maps, and municipal zoning ordinances; analysis of inventory and plot sampling data and i-Tree Eco-based carbon stock calculations; and checking of calculations for accuracy and conformance with the Protocol. All forest carbon input values were independently checked and calculations were independently replicated.

4 VERIFICATION PROCESS

4.1 VERIFICATION ACTIVITIES

The verification process consisted of the following activities:

- Verifier checked all requirements in the Protocol (outlined in 4.2), 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.
- Verifier independently checked mapping and calculated values in each stage of calculations.
- Verifier reviewed the credit calculations. Verifier reviewed the Project Operator's assertion that the Project results in GHG emissions mitigation of 37,173 tons of CO₂e.

- Verifier did not require any clarifications or corrections to be submitted to the Project Operator.

4.2 CITY FOREST CREDITS TREE PRESERVATION PROTOCOL REQUIREMENTS

4.2.1 Eligibility

Verifier reviewed the Project against all CFC Tree Preservation Protocol requirements and confirmed the following:

- Project Operator Identity (Section 1.1): Verifier confirmed identity of the Western Reserve Land Conservancy by reviewing Project Operator website and included tax document issued by the IRS.
- Project Documentation (Section 3): Verifier reviewed and confirmed Project Documentation including Project Design Document is complete and accurate.
- Project Implementation Agreement (Section 1.2): Verifier reviewed and confirmed fully executed Project Implementation Agreement on file signed and dated by both parties on August 16, 2023.
- Project Location (Section 1.3): Verifier reviewed mapping and location data. Project is located along the southern boundary of the US Census Bureau designated Urban Area for the greater Cleveland area. The project location also falls with the jurisdiction of a metropolitan planning agency, the Northeast Ohio Areawide Coordinating Agency, and therefore satisfies the urban location criteria according to the Protocol Section 1.3.
- Defining the Project Area (Section 1.4): Verifier confirmed the Project Area meets forest canopy cover requirements. I-Tree canopy coverage assessment provided a canopy coverage estimate of close to 95% which is corroborated with aerial imagery, and satisfies the requirement of 80% according to Protocol section 1.4.
- Land Ownership or Right to Receive Credits (Section 1.5): Verifier confirmed that there is a clear title to carbon credits and the Project Operator has legal authority to create and dispose of greenhouse gas offsets generated on the project lands. Erie Land Resources LLC (ELR LLC), an Ohio limited liability company and previous owner of the project parcels, retained the rights to the carbon credits as a condition of the deed transfer to the current owner, Lake Metroparks. On December 16, 2022, ELR LLC signed an Agreement to Transfer Potential Credits with the Project Operator, which provided the Project Operator with the legal authority to develop potential carbon credits on the project parcels.
- Demonstrating Preservation and Threat of Loss (Section 4):
 - Verifier confirmed that trees within the Project Area were not protected from removal prior to the Project. All pertinent zoning regulations were independently reviewed and verified. The Project area includes land in two counties and three separate zoning districts; all of which do not provide protections against tree removal for development. Any prohibitive hydrological or terrain features that would limit development were removed from consideration in the Project area.

- o Verifier confirmed that trees within the Project Area are now preserved from removal by a recorded Conservation Easement.
 - o The Project Operator has committed to meeting the permanence requirements.
 - o Prior to the Preservation Commitment action by the Project Operator there was threat of conversion of the project lands to non-forest cover. Threat of conversion was verified according to protocol section 4.4 A. and 4.4 B. The Project area is bordered on greater than 30% of its perimeter by non-forest uses including residential and highway right-of-way. Land was conveyed prior to preservation at well over \$8,000 per acre.
- No Double Counting and No Net Harm (Section 5):
 - o Verifier confirmed that Attestation of No Double Counting and No Net Harm is on file.
 - o Verifier compared the Project geospatial data to the registered urban forest carbon preservation projects geospatial database using ArcGIS and determined upon manual inspection that no overlap of registered projects occurred.
 - Monitoring and Reporting (Section 8): Verifier confirmed that the Project Operator has a plan for monitoring and reporting over the Project Duration, and the plan is plausible and reasonable.

4.2.2 Additionality

Verifier reviewed and confirmed that Project lands met the additionality requirements of the Protocol:

- Prior to the Project, lands were not protected from conversion by easement, zoning, or other legal mechanism. Areas within the parcels where trees do not face threat of removal and non-forested areas, such as primitive roads, utility right-of-way, and mown openings were removed from credited acreage. Areas within the floodplain in Leroy Township were not included in the Project area to reflect regulations that require the riparian setbacks to remain in a natural state. Verifier independently reviewed all overlays and restrictions and found no additionality conflicts on the Project area.
- Zoning allows development including removal of existing trees.
- The trees in the Project Area face some risk of removal or conversion out of forest, demonstrated by bordering non-forest uses including residential development and interstate right-of-way. Verifier confirmed over 30% of perimeter property is non-forest.
- Project Operator signed an Attestation of Additionality on September 21, 2023.

4.2.3 Permanence

The Project Operator has committed to CFC that they will protect the trees on the Project Area for at least 40 years. The conservation easement protecting the Project trees and lands is permanent.

4.2.4 Accounting

The Project documents an on-site plot sample forest inventory and uses required factors in carbon stock and offset calculations.

The Project Operator quantified present stored carbon stock according to CFC Protocol standards in Protocol Section 11.1 B. This method involved the collection of a random sample of 1/10th acre fixed radius forest inventory plots, measuring all live trees greater than 5" at 4.5' above ground level (DBH). The Project Operator hired Davey Resource Group to complete the inventory and all data was collected in August 2023. Twenty-four plots were distributed randomly across the sample area and a total of 460 trees were measured. The sample was distributed across six stands to represent the varying forest conditions; however, stratification was not necessary to produce an acceptable standard error with this sample size. The standard error of the sample was 6.07% of the mean of the estimated carbon stock, which is well under protocol allowance of 20%. Collected plot data was summarized in Davey Tree's i-Tree Eco modeling software to produce stand metrics and calculate forest biomass stock according the protocol. The model produced a standing carbon stock estimate of 17,147.35 metric tons of carbon or 62,873.6 metric tons of carbon dioxide equivalents. The verifier validated the model inputs to be accurate.

The verifier summarized plot and tree data independently of i-Tree to verify stand density and forest structure. The data produced an average live-tree basal area of 198 ft²/ac and an average of 174 trees per acre within the project area. The verifier determined that this density estimate is appropriate for the given forest type and forest age.

The Project Operator provided an estimate of 95% canopy which reflects the almost complete canopy cover of the Project area. Verifier confirmed this value to be accurate for use in the co-benefit calculator.

The Project Operator provided calculations of biomass fraction at risk of removal for each separate set of zoning requirements within the Project area (Concord R4, Concord R4 floodplain, Leroy R2, and Leroy B2). Verifier determined the calculations accurately followed the Protocol's allowances for avoided biomass emissions detailed in section 11.2. To determine risk of soil carbon loss due to conversion to impervious surfaces, the Project Operator followed Protocol section 11.4 B. The residential districts within the project area (excluding the floodplain) do not stipulate limits to impervious surfaces and therefore, the Project Operator used the allowed 50% of eligible project area to calculate loss due to conversion. Leroy Township limits impervious surface to 70% in B-2 zoning districts, which is reflected in the Project Operator's calculations. Areas at risk of removal were then calculated separately and combined into a weighted average of 80% for risk of tree removal and 49% of avoided impervious surface. The verifier reviewed and confirmed adherence to local zoning regulations.

The 30-acre area set aside for future improvements was deducted from the Project area and carbon credit quantification. The Project Operator makes the assumption that this acreage will be spread across the Project area to meet future needs, and the verifier confirms that this assumption is reasonable.

4.2.5 Leakage

Offset accounting makes deductions for expected displacement of emissions following the requirements of the Protocol.

5 VERIFICATION FINDINGS

The Project documents and data were reviewed, and the Verifier found that the emission reductions claimed are reasonable and in accordance with the Preservation Protocol. The Verifier makes no further recommendations.

6 VERIFICATION RESULTS AND CONCLUSION

This verification of the Hemlock Ridge Forest project for the reporting period of December 20, 2022 to December 19, 2025 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.

Table 1. Project GHG Removals

Project Name	Issuance Year	GHG Reductions and Removals Attributed to the Project (mtCO₂e)	Reversal Pool Account (10%) (mtCO₂e)	Emission Reductions to be Issued to Project (mtCO₂e)
Hemlock Ridge Forest	2024 (after verification)	10,711	1,071	9,640
Hemlock Ridge Forest	2024 (December, 20, 2024. Anniversary of Preservation Commitment recordation)	10,711	1,071	9,640
Hemlock Ridge Forest	2025	10,711	1,071	9,640
Hemlock Ridge Forest	2026	9,170	917	8,253
Cumulative		41,303	4,130	37,173

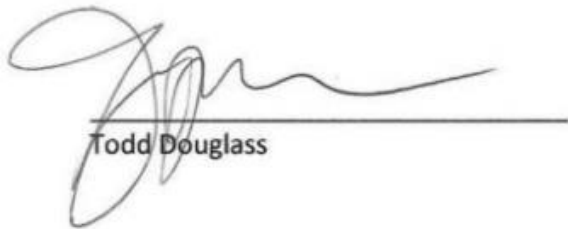
The Project Operator calculated ecosystem co-benefits using the CFC tool to determine dollar values of other ecosystem services. The verifier corroborated the CFC tool inputs and outputs to produce the values below. The verifier does not make an assessment to the plausibility of these values.

Table 2. Ecosystem Co-Benefits Per Year

<i>Ecosystem Services</i>	<i>Resource Units</i>	<i>Value</i>
Rainfall Interception (m3/yr)	109,630.2	\$231,715.02
Air Quality (t/yr)	7.6014	\$18,755.49
Cooling – Electricity (kWh/yr)	331,252	\$46,408.46
Heating – Natural Gas (kBtu/yr)	13,687,740	\$191,440.73
Grand Total (\$/yr)		\$488,319.70

Because the Project area is greater than 50 acres, credits are issued over 4 years. See Table 1. above.

Verifier Signature



Todd Douglass