

# **Verification Report**

## **Year 4**

### **Growing Futures, Growing Trees – Des Moines, IA**

City Forest Credits Project Number 05

November 7, 2023

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# 1 INTRODUCTION

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Matthew Lee (a Validation and Verification Body (VVB) acting as a third-party verifier) was engaged to verify the Growing Futures, Growing Trees (Project) Des Moines, Iowa, for the issuance of credits at the Year 4 interval based on the applicable protocol. The goal of the Year 4 verification is to ensure that the GHG assertion is materially correct, and that the sampling process and carbon quantification by the project are well documented and appropriate.

## 1.1 PROJECT BACKGROUND

Tree planting projects for the Growing Futures project occurred throughout the City of Des Moines from April-December of 2019. Tree planting locations were a mix of street tree (right of way) and park plantings, with a major focus on street tree plantings. Tree planting totals for the 2019 season were: 734 trees, combination of overstory, understory. The Project Operator used the single tree planting design method.

A total of 14 trees from the sample have been replaced over the four-year period. Replacement trees were largely of the same size class as ones originally planted and did not require changes to the initial quantification tool and planting list. Trees Forever staff collected data on a random sample of 142 trees. The project has a current mortality status of 10%.

## 1.2 CONTACT INFORMATION

### Project Operator

Trees Forever  
80 W 8th Ave  
Marion, IA 52302  
Contact:  
Megan Schneider  
Director of Programs Des Moines Metro  
Phone: (515)-776-0335  
Email: Mschneider@treesforever.org

### Verifier

Matthew Lee  
P.O. Box 37  
Scottsville, VA 24590  
Contact:  
Email: leemattthew82@gmail.com  
Phone: (434)-426-2448

## 1.3 OBJECTIVE

The goal of this GHG emission removal verification at Year 4 is to ensure that the GHG assertion made by the Project is materially correct, that the sampling process and data 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

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### 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 Year 4 Project Design Document Amendment with sampling data, 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 of the asserted GHG removals to a reasonable level.
- The verification items identified in 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 Planting Protocol, Version 6, August 11, 2018.

### 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

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- The Project is located in Des Moines, Iowa, specifically described in the Project Design Document.
- The verification is for the issuance of credits at the Year 4 interval.

- The verification includes review of documents, geospatial data and sample mortality data, geotagged imagery, and other evidence provided by the Project Operator; independent checking of selected data; checking of calculations for accuracy and conformance with the Protocol.

## 4 VERIFICATION PROCESS

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### 4.1 VERIFICATION ACTIVITIES

The verification process consisted of the following activities:

- Verifier checked that the dates for the Single Tree Quantification sampling were collected between July 14 – August 30 2023 and were subsequent to the Request for Credit Issuance date, December 5, 2022 which is within the 9-month window.
- Verifier checked all requirements in the Protocol, confirmed that documentation satisfies the requirements of the Protocol, and that values extracted from the documents and conclusions drawn from the document are accurate and appropriate
- Verifier checked tree data from sampled trees, every geocoded photo and location in Google Earth, the signed attestations, and other relevant documentation. Verifier reviewed the accuracy of process for sampling and data collection, including: doublechecked the sample size calculator value matched the sample sized collected in the field, verified the random number tool used to generate the sample ID sites visited, and the data input accuracy matched the data output via reviewing field photos. Verifier identified a discrepancy in the status tally in the Single Tree Quantification Tool and the geotagged photos. The tool originally stated 12 “Vacant”, 2 “Dead” and 128 “Alive”. After reviewing the geotagged photos, the status tally was actually 11 “Vacant”, 3 “Dead” and 128 “Alive”. The verifier updated the Single Tree Quantification Tool to reflect the status seen in the photos. Site ID 141732 was recoded from “Alive” to “Dead” and another Site ID 142417 that was coded as “Vacant” was recoded as “Alive”. These changes to the status of trees in the tool did not change the mortality calculations in the quantification tool.
- Verifier reviewed the accuracy of the carbon quantification and City Forest Carbon Forward Removal Credit calculations. Verifier reviewed the Project Operator’s assertion that the Project results in total GHG emissions mitigation of 1,400 tons CO<sub>2</sub>e over the 26-year Project Duration. Verifier reviewed the Project Operator’s assertion that, per Protocol guidelines, 40% of the Project GHG emissions mitigation is issued at Year 4, or 560 tons CO<sub>2</sub>e.
- Verifier requested clarification on the replacement of two trees that were left blank in the sampling spreadsheet. Tree ID# 318 (Site # 52093) and 355 (Site # 142471) were replaced with the same species, American sycamore according to CFC. The Project Operator submitted a duplicate photo for “Photo Jul 14 2023, 3 39 16 PM” because there were two trees in that area

that were vacant. The Verifier requested a new photo to not have a duplicate. The PO promptly submitted "IMG\_0269" to replace the duplicate. There were no changes to the outputs of the quantification tool.

## 4.2 CITY FOREST CREDITS TREE PLANTING PROTOCOL REQUIREMENTS AT YEAR 4

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

- Project Design Document (Appendix A): Verifier reviewed and confirmed Project Design Document is complete and accurate.
- Project Documentation (Appendix A and Appendix B): Verifier confirmed all required project documentation present.
- Additionality (Section 2): Verifier reviewed for additionality as follows:
  - Verifier reviewed the completed and signed Attestation of Additionality.
- Quantification (Section 9 and Appendix B):
  - Verifier confirmed Project Operator utilized the single tree CFC quantification methodology described in Appendix A.
  - Verifier reviewed the accuracy of the data collection process and the data integrity for the Year 4 sampling and quantification methodology.
  - Verifier reviewed the spreadsheets with the sampled tree data and matched this data in Google Earth against the geocoded photos submitted by the Project Operator. The Verifier corrected two site IDs that were coded incorrectly based on the geotagged photos submitted by the PO. Verifier also crosschecked the reported mortality in the Year 4 sample to ensure it was below the standard 20% mortality deduction for the single tree quantification method.
- Co-Benefits (Section 9 and Appendix B): Verifier confirmed the calculation of ecosystem co-benefits as set forth in the City Forest Credits quantification tool.
- Attestation of No Double Counting of Credits and No Net Harm
  - Verifier reviewed the completed and signed Attestation of No Double Counting of Credits and No Net Harm.

## 5 VERIFICATION FINDINGS

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Verifier reviewed the changes to the carbon quantification, including the status changes made by recoding two site IDs based on the geotagged photos. The changes did not affect the overall mortality reported by the PO or the carbon quantification. PO submitted updated PDD and carbon quantification spreadsheet, incorporating Verifier's suggested edits. Verifier determined that the updates were accurate and appropriate.

Verifier requested clarification on the random sample size calculation and number of geotagged photos. Project Operator submitted an additional geotagged photo. All issues raised by Verifier were clarified or corrected by the Project Operator and all issues were closed by appropriate responses by Trees Forever and City Forest Credits.

Verifier recommends that all geotagged photos are labeled by the Project Operator with the Site ID number used in the Single Tree Credit Tool to aid in cross-checking if the tree status codes are accurate when discrepancies arise between comparing photos and the reported values in the tool.

## 6 VERIFICATION RESULTS AND CONCLUSION

This verification of the Growing Futures, Growing Trees for the period of 26 years 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 verified GHG emissions removals for the Project for Year 4 credit issuance. These City Forest Carbon Forward Removal Credits are ex-ante credits based on forecasted removals and subject to multiple safeguards, including sampling, and which convert to ex-post at Year 26.

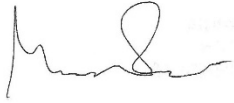
**Table 1. Project GHG Removals**

Project Name	GHG Removals Attributed to the Project (mtCO <sub>2</sub> e)	GHG Removals After Deductions for Mortality (20%) (mtCO <sub>2</sub> e)	GHG Removals After Deductions for Reversal Pool Account (5%) (mtCO <sub>2</sub> e)	City Forest Carbon Forward Removal Credits to be Issued to Project (mtCO <sub>2</sub> e)
Growing Futures Growing Trees, Des Moines, IA – Year 4	1,842	1,474	1,400	560

**Table 2. Ecosystem Co-Benefits Per Year After 25 Years**

<i>Ecosystem Services</i>	<i>Resource Units</i>	<i>Value</i>
Rainfall Interception (m <sup>3</sup> /yr)	3,847.85	\$27,547.03
Air Quality (t/yr)	0.1230	\$569.97
Cooling – Electricity (kWh/yr)	122,691.15	\$9,312.26
Heating – Natural Gas (kBtu/yr)	1,796,196.33	\$17,485.49
<b>Grand Total (\$/yr)</b>		<b>\$54,914.74</b>

**Verifier Signature**

A handwritten signature in black ink, appearing to read 'Matthew Lee', with a large loop at the end of the last name.

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**Matthew Lee**