# Verification Report Year 4

# Pierce Conservation District Reforestation Program - 2020

City Forest Credits Project Number 007

1/30/2025

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# **1** INTRODUCTION

Matthew Lee (a Validation and Verification Body (VVB) acting as a third-party verifier) was engaged to verify the Pierce Conservation District Reforestation Program 2020 (Project), Puyallup, WA and South Prairie, Pierce County, WA, 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

For the original 7.65-acre South Prairie Creek project area, and for the 1.5-acre Peck Riparian project area, a planting density of 401 plants/acre was used to plant 3,065 trees, using the riparian planting design. Based on the version of the protocol when the project started, Planting Protocol Version 6, the riparian method was available. Moving forward the project will be monitored using aerial imagery, per the cluster planting method; the initial crediting quantification method aligns with the cluster method. The trees were planted throughout the sites on an average of 10' spacing. Trees were planted on both sites to restore riparian areas as vegetated stream buffers. Trees were planted from October 2020 through March 2021. Note, due to flooding, the South Prairie Creek total project area decreased by 0.35 acres, and is now 7.3 total acres. The original 1.5-acre Peck Riparian project area was clipped, upon Year 4 investigation, to exclude areas where trees were present prior to the first planting and the shapefile is now 1.37-acres. The Peck Riparian project area included planting 655 trees, which is still intact. No major changes have occurred within the Peck planting area, and the area has been maintained.

Monitoring is completed using Pierce Conservation District's (PCD's) revegetation monitoring protocol, which includes collecting plant health data. Drone imagery is also collected on a quarterly basis each year to create orthomosaics which assist in measuring tree growth, canopy, and change over time.

PCD utilizes a monitoring protocol and conducts annual monitoring via randomized plots that aim to sample 2%-5% of the planting area and 10%-20% of the installed plants. Data collected via line point intercept, photo monitoring, and vegetation height/DBH allows them to assess plant survival, species diversity, and other changes in site characteristics.

To determine canopy growth at Year 4, PCD uploaded drone imagery to ArcGIS and conducted a random point sample of the project area. For 150 points on the Peck Riparian site, PCD collected whether each point's cover class was "tree" or "non-tree." At the South Prairie Creek site, PCD collected 250 points, assigning cover class the same way. PCD found tree cover to be 14.67% at the Peck Riparian site, and 9.60% at the South Prairie Creek site; when averaged together, this constitutes a 10.40% tree canopy cover value.

Additionally, though 0.35 acres of the South Prairie Creek site was lost due to the creek shifting and migrating, this only accounts for about 3.77% of the total trees planted, which is well under the 20% mortality rate that was built into the project at the initial crediting stage.

#### 1.2 CONTACT INFORMATION

<u>Project Operator</u> Pierce Conservation District 308 West Stewart Ave. P.O. Box 1057 Puyallup, WA 98371 Contact: Ryan Bird, Habitat Restoration Manager, phone: 253-225-0306, email: RyanB@piercecd.org

<u>Verifier</u> Matthew Lee 1307 Ashbourne Dr., Lynchburg, VA 24501 Contact: email: leematthew82@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

#### 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 thirdparty 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

- The Project is located in Puyallup and South Prairie, Pierce County, Washington, 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, data, 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

#### 4.1 VERIFICATION ACTIVITIES

The verification process consisted of the following activities:

- Verifier checked that the dates when the tree canopy imagery was analyzed, November 5, 2024 for the Cluster Planting Design quantification method were subsequent to the Request for Credit Issuance date, March 9, 2024.
- 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 maps submitted by the PO, reviewed photos of the site and independently confirmed through geocoding software that the photos were taken on site, and confirmed signed attestations and other documentation. Verifier reviewed the accuracy of the PO's process for sampling and data collection, including: confirming that the random GIS data for cover sampling points matched submitted aerial cover maps for both sites, reviewed the accuracy of

the classified sampling points based on the underlying drone imagery, and confirmed that the sample size for both sites was large enough to create a standard error lower than 5% which is aligned with CFC's protocols for random sampling.

- 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 4,588 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 Project GHG emissions mitigation is issued at Year 4, or 1,835 tons CO<sub>2</sub>e.
- Verifier submitted to the Project Operator clarification on the exact methodology used for quantification. The PDD referenced both the Cluster Method and the Area Reforestation Method in the document. The Verifier requested the PDD document be updated to reflect the specific quantification method. The verification report was updated after the PO confirmed the correct method used.

#### 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:

- <u>Project Design Document (Section 3)</u>: Verifier reviewed and confirmed Project Design Document is complete and accurate.
- <u>Project Documentation (Section 3 and Appendix A)</u>: Verifier confirmed all required project documentation present.
- <u>Additionality (Section 4):</u> Verifier reviewed for additionality as follows:
  - o Verifier reviewed the completed and signed Attestation of Additionality.
- <u>Quantification (Section 10 and Appendix A):</u>
  - o Verifier confirmed Project Operator utilized the Cluster Planting Design 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 spreadsheets with data from random sampling points for land cover classification for carbon quantification, drone imagery flown by the PO, geocoded photos of the site at Year 4, the Canopy Change Workbook and the carbon quantification tool for accuracy.
- <u>Co-Benefits (Appendix A):</u> 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 (Section 5)
  - Verifier reviewed the completed and signed Attestation of No Double Counting of Credits and No Net Harm.

# **5** VERIFICATION FINDINGS

Verifier reviewed the changes to the carbon quantification or Project Area, including the permanent loss of 0.35 acres to the South Prairie Creek Site (SPC). Verifier determined that the updates were accurate and appropriate based on the PO's assertion that the loss only accounts for about 3.77% of the total trees planted, which is well under the 20% mortality rate built into the project.

Verifier confirmed that the Project at Year 4 meets the cluster planting design minimum required stocking threshold of 2.8% canopy, or 400 trees per acre, needed to create full canopy cover after 25 years. Therefore, the Verifier confirmed that no changes are required to the credit issuance schedule.

All issues raised by Verifier were clarified and confirmed by Ryan Bird, Habitat Restoration Manager with the Pierce Conservation District, the Project Operator and all issues were closed by appropriate responses by Morgan Anya with City Forest Credits.

# 6 VERIFICATION RESULTS AND CONCLUSION

This verification of the Pierce Conservation District Reforestation Program - 2020 for the Year 4 issuance 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.

Project Name	GHG Removals Attributed to the Project (mtCO <sub>2</sub> e)	GHG Removals After Deductions for Mortality (20%) (mtCO2e)	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 at Year 4 (mtCO <sub>2</sub> e)
Pierce Conservation District Reforestation Program - 2020 – Year 4	6,037	4,829	4,588	1,835

#### Table 1. Project GHG Removals

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

Ecosystem Services	Total Resource Units	Total Value
Rainfall Interception (m3/yr)	19,413.73	\$142,522.88
Air Quality (t/yr)	-0.7020	\$1,411.65
Cooling – Electricity (kWh/yr)	40,447.86	\$2,070.93
Heating – Natural Gas (kBtu/yr)	125,341.13	\$1,426.84
Grand Total (\$/yr)		\$151,136.15

#### **Verifier Signature**

S

Matthew Lee