

BRAD HENRY
GOVERNOR

JARI ASKINS
LIEUTENANT GOVERNOR



MIKE THRALLS
EXECUTIVE DIRECTOR

BEN POLLARD
ASSISTANT DIRECTOR

Responsible Care For Oklahoma's Natural Resources

Oklahoma Carbon Program

Verification Report

N. Canadian River Watershed Carbon Pilot Program 2009

Prepared for: Western Farmers Electric Cooperative
701 NE 7th Street
Anadarko, OK 73005

Prepared by: Oklahoma Conservation Commission
2800 N. Lincoln Blvd. Ste 160
Oklahoma City, OK 73105



January 2010

1. Summary

In 2009, the Carbon Pilot Program in the N. Canadian River Watershed sequestered 3,698 metric tons of carbon dioxide with conservation practices (no-till, conversion to grasslands, exclusion of riparian buffers) on agricultural lands. The sequestration was confirmed by field verification of 100 percent of the fields totaling 9,731 acres under contract. Of those acres, 411 were ineligible with the remaining 9,290 acres certified by the Conservation Commission. Western Farmers Electric Cooperative (WFEC) is paying \$3.50 per metric ton of CO₂ for a total of \$12,942 in year one.

2. Introduction

This report is provided to WFEC as a deliverable of the Oklahoma Carbon Pilot Program (Pilot Program) verification process. This report covers the verification of carbon sequestration by agricultural best management practices (no-till, conversion to grasslands, and exclusion of riparian buffers) in place during 2009. The Pilot Program location is in the North Canadian River Watershed as defined by the North Canadian River Watershed 319 Project by the Oklahoma Conservation Commission to be between the Canton Dam and Lake Overholser partially within Blaine, Canadian, and Dewey counties in Oklahoma. The Conservation Commission conducted verification from October 2009 to December 2009 in accordance with the Oklahoma Verification Standard 2010.1.

The Oklahoma Conservation Commission conserves, protects and restores Oklahoma's natural resources, working in collaboration with conservation districts and other partners, on behalf of the citizens of Oklahoma. The Oklahoma Conservation Commission and conservation districts accomplish conservation of renewable natural resources through soil and water conservation, landuse planning, small watershed upstream flood control, abandoned mine land reclamation, water quality monitoring, environmental education and wetlands conservation.

The Oklahoma Carbon Program provides verification, certification, and registration of Oklahoma carbon offsets from agriculture, forestry, and downhole injection of carbon dioxide. The program offers oversight of carbon trading in the state by educating and connecting Oklahomans interested in carbon offsets with screened aggregators and trained verifiers of carbon offsets.

Definition of Conservation Tillage: The practice of reducing or eliminating soil tillage from a crop management system while retaining and managing the crop residue on the soil surface.

Definition of Cropland Conversion to Grassland: Occurs when marginal croplands, that are not consistently producing an optimal harvest due to soil quality or type, climate, or other reasons, are converted to grassland.

Definition of Riparian Area Exclusion: Occurs when a fence is erected between a field in agriculture production and a stream or lake for the purposes of creating a vegetated buffer between the field and water.



The Pilot Program contracts were aggregated by the Oklahoma Carbon Initiative for Western Farmers Electric Cooperative. Local conservation districts assisted producers with applications. Sarah Love Pope, Director of the Carbon Initiative, was responsible for contracts and payments. The contracts were verified by the Oklahoma Conservation Commission, with the Director of the Oklahoma Carbon Program, responsible for application tracking, field verification, document verification, and report preparation. Contact the Commission with questions pertaining to verification or this report at 405-522-4739 or stacy.hansen@conservation.ok.gov.

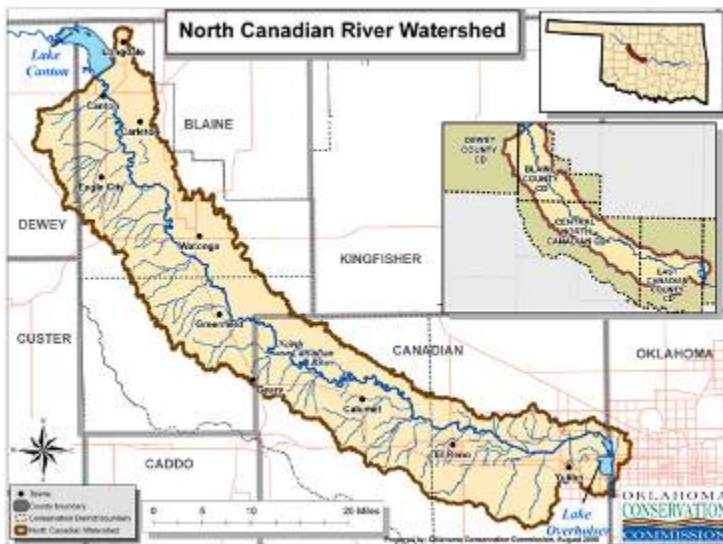
3. Objectives

The purpose of this verification was, through review of field assessments and documents, to establish that the Pilot Program contracts meet requirements of the Pilot Program criteria and the reported observations are accurate, complete, consistent, transparent, and free of material error or omission.

4. Verification Scope

Specific scope metrics for the verification are outlined below:

Geographic Boundary North Canadian River Watershed between Canton Dam and Lake Overholser partially within the boundaries of Blaine, Canadian, and Dewey counties. See map below.



Greenhouse Gases Verified: Emissions reductions (expressed in units of Carbon Dioxide equivalents, CO₂-e) resulting from agricultural best management practices that are not business as usual: no-till, cropland conversion to grassland, and riparian exclusion.

Reporting Period: August, 2008 through December 31, 2009

Data Sources: Visual assessments; maps; emissions reduction calculations

Principle: GHG are stored when agricultural production occurs in a manner that minimizes or eliminates soil disturbance by livestock or farm equipment while optimizing plant growth, coverage, and health.

Requirements: In order to be Oklahoma Certified, verified offsets must meet criteria of the Oklahoma Verification Standard 2010.1. Oklahoma Certified offsets will be published to the Oklahoma Carbon Offset Registry.

5. Standards Used to Verify Emissions Reduction

The following outlines the guidance and protocols used to conduct this verification:

Standard of Verification: Oklahoma Verification Standard 2010.1

6. Verification Methodology

Verifiers followed the Oklahoma Carbon Program Verification Standard 2010.1 to assess no-till, grassland, and riparian exclusion. Verification included review of documents, interviews and meetings with land managers as necessary, and **visual on-site assessment** of the following parameters.

	No-Till	Grassland	Riparian Exclusion
Field	Confirm field legal location	Confirm field legal location	Confirm field legal location
	Review maps or photos	Review maps or photos	Review maps or photos
	# Acres in field	Seeding date	Miles of fence installed
	# Irrigated acres	Acres planted to grass	Acres excluded
	Previous crop type	Predominant perennial plant species	Exclusion date
	Evidence of full width tillage	% Cover perennial plant species	No evidence of recent livestock traffic
	Crop residue or stubble burned	% Cover annuals, weeds or brushy plant species	Vegetation density and type
	Crop residue or stubble removed	% Soil surface exposed	Longevity of exclusion
	Growing crop grazed out	% Acres with residue removed	
	Field fallowed > than one year	Amount of standing biomass	
Photos	Digital	Digital	Digital
	Two minimum per field	Two minimum per field	Two minimum per field
	Panoramic up or down rows	Panoramic	Panoramic
	Close up 45 degrees showing vegetation type and residue	Close up 45 degrees showing vegetation type	Close up 45 degrees showing vegetation type
	Soil disturbance or questionable area	Soil disturbance or questionable area	Soil disturbance or questionable area
Documents	Aerial maps	Aerial maps	Aerial maps
	319 Project agreement	319 Project agreement	319 Project agreement
	Carbon Pilot Program application	Carbon Pilot Program Application	Carbon Pilot Program application

7. Overview of the Verification Process

To review Pilot Program's offset contracts, the following verification process was used:

- Select Verification Team
- Develop verification and assessment plan
- Contact land manager
- Conduct site visits of 100% of fields
- Submit data for internal review
- Review and evaluate data for period under review
- Follow up contact for corrective action or supplemental data as needed
- Prepare final report with calculations

The verification process was utilized to gain an understanding of each participant's carbon sequestering activities.

Verification Team

The Conservation Commission's verification team consisted of the following individuals who were selected based on their verification training, experience with agriculture, and local knowledge of agriculture in the area.

- Lead Verifier: Monty Ramming
- Verifiers: Scott Hoar, Roy Burns
- Technical Expert: Monty Ramming
- Internal Reviewer: Stacy Hansen

Land Manager Contact

Each land manager applicant was contacted to schedule a site visit and given the option to accompany the Verification Team during verification.

Development of the Verification Plan

The team developed a verification plan to make efficient use of travel time and minimize fuel emissions when visiting locations. Data was gathered in accordance with Oklahoma Carbon Program field verification forms.

Site Assessment

The Verification Team conducted site visits between October 2009 and December 2009 on 100% of fields signed up for the Pilot Program.

Internal Review

All field data sheets and photographs were submitted to the Internal Reviewer for review and use in the final report.

Carbon Sequestration Data and Calculation Assessment

This assessment used information and insights gained during the previous steps to evaluate the collected data and determine carbon dioxide reduction quantities.

Corrective Actions and Supplemental Information

The team requested supplemental information through interviews, but did not request corrective actions during the verification process.

Verification Reporting

Verification reporting, represented by this report, documents the verification process and identifies its findings and results. Verification reporting consists of this annual report for WFEC.

8. Site Conformance with Verification Criteria

Site Overview

The Pilot Program is located in the North Canadian River Watershed between Canton Dam and Lake Overholser in Blaine, Canadian, and Dewey counties in west central Oklahoma. This area was chosen because a watershed implementation project had just been launched in the area due to the strong local leadership and initiative of local conservation districts interested in addressing nonpoint source pollution affecting the river. This stretch of river has repeatedly exceeded water quality standards for turbidity and *Escherichia coli* and *Enterococcus* (forms of fecal bacteria). The goal of the three year water quality project is to install best management practices (BMPs) to reduce bacteria, nutrients, and sediment entering area streams and the river. As of December 30, 2009, a total of 94 landowners had installed \$406,599 in BMPs. Over \$50,194 of this amount came from landowners. During 2009, a total of 10,497 acres were converted from tilled to no-till cropping systems. Of this total, over 9100 acres were signed up for the Pilot Program.

Data Collection Monitoring Processes

The Lead Verifier spoke by phone with the Internal Reviewer in December 2009, after the site visits were conducted and field data and photodocumentation were received, to confirm the following about the verification process:

- The data collection process
- Transmission of photos and documents
- Internal documents and protocols were followed

9. Verification Findings Summary

Twenty producers participated in the Pilot Program. A total of 9,731 acres were verified. Of the total, 441 acres, or 0.04 %, were not in compliance and not certified. Reasons for noncompliance varied and are summarized in the tables below. A total of 9,290 acres were certified by the Conservation Commission. The verification process focused on verifying that performance standards were being met at each field location participating in the Pilot Program. This was necessary because the quantification methodology that was used to calculate the emissions reductions is based on the performance standard. To complete the verification process, the Verification Team made contact with land managers and arranged follow-up visits as necessary. No corrective action requests were made. The time period of the assessment impacted some fields, which were spring crops that had already been harvested prior to the assessment. However, verifiers were able to tell that the fields were under continuous no-till management.



Explanation of Field Findings

	Total Acres	Verified (%)	In Compliance (%)	Out of Compliance (%)
All Practices	9731	100	96	0.04
No-till	9313	100	96	0.04
Grassland	297	100	100	0
Riparian	121	100	74	26
Rangeland	0	0	0	0

Explanation of Acres and Contracts Not in Compliance

Contract #	# Acres	Reason	Action
WF09 [REDACTED]	100	No-Till: Acres worked due to pipeline crew disturbance	Acres Ineligible
WF16 [REDACTED]	79	No-Till: Not planted yet	Acres Ineligible
WF23 [REDACTED]	32	Riparian: Fenced but not gated because water well wasn't in	Acres Ineligible
WF02 [REDACTED]	190	No-Till: Retired	Acres Ineligible
[REDACTED]	40	No-Till: Disturbed acres	Acres Ineligible
TOTAL	441		

10. Verification Conclusions and Recommendations

This assessment utilized Oklahoma Verification Standard 2010.1 to assess performance standards and annual stored metric tons of carbon dioxide by participating agriculture producers in the North Canadian River Watershed Carbon Pilot Program area.

Conclusions on the GHG assertion:

Based on the assessments performed, the Conservation Commission concludes that the Project GHG emissions reductions, due to the offsetting by agricultural management practices for the period of August, 2008 through December 31, 2009, can be considered to a reasonable level of assurance:

- Consistent with the Program Methodology
- Without material discrepancy, and
- The carbon dioxide sequestered equals 3,698 metric tons

Calculations

	No-Till	Grassland	Riparian	
Sequestration Rate Metric Tons CO2/Ac/Yr	0.4	0.4	0.2	
Acres	8904	297	89	
Total Metric Tons CO2/Yr	3,561.6	118.8	17.8	3,698