



Verification Report
CAR1261 – Ducks Unlimited – May Ranch Avoided Grassland Conversion

Reporting Period: January 1, 2018 – December 31, 2018

Prepared for:
Ducks Unlimited, Inc.

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1.0 Introduction

Ruby Canyon Engineering, Inc. (RCE) was contracted by Ducks Unlimited, Inc. (Ducks Unlimited) to perform the verification of the May Ranch Avoided Grassland Conversion (Project) for the reporting period January 1, 2018 through December 31, 2018 to the Climate Action Reserve (Reserve) Grassland Project Protocol Version 2.0 (Protocol). The Project involves land owned by May Farms and involves greenhouse gas (GHG) emission reductions from the prevention of emissions to the atmosphere through conserving grassland belowground carbon stocks and avoiding crop cultivation activities. RCE subcontracted with FRST who reviewed GIS data for the Project; RCE performed all other verification activities.

1.1 Project Background & Site Description

May Farms is the landowner of approximately 14,500 acres of grassland located in Prowers County, Colorado located northeast of Lamar. May Farms recorded a Deed of Conservation Easement with the Colorado Cattlemen’s Agricultural Land Trust on December 14, 2016 to preserve and protect in perpetuity the conservation values of the land (and Project area). The easement prohibits the conversion of the project area from a grassland state. During a review of Google Earth imagery, RCE confirmed that the project area did not have tree canopy exceeding 10%.

1.2 Responsible Parties

Project Developer: Ducks Unlimited, Inc. (Ducks Unlimited)

Landowner: May Farms

1.3 Verification Team

The RCE verification team consisted of the following individuals:

Lead Verifier: Bonny Crews (RCE)

Team Member: Christian Eggleton (FRST)

Senior Internal Reviewer: Phillip Cunningham (RCE)

1.4 Objectives

The goal of the verification activities was to ensure that the claimed GHG emission reductions were complete, consistent, accurate, transparent, and permanent, and that the Project is in compliance with the Reserve project additionality, monitoring, and reporting requirements. Furthermore, the verification activities ensure that the data provided to RCE is well documented and free of any material errors or omissions.

1.5 Scope

The scope of the verification consisted of the following independent and objective activities:

- Review the project documentation against the Verification Criteria listed in Table 1 to develop a verification plan and a sampling plan
- Review the Project Monitoring Plan and Monitoring Report
- Review project ownership documentation
- Review project eligibility
- Review the Project’s baseline emissions and confirm the baseline and Project boundaries;
- Review the Project’s evidence of environmental and regulatory requirements to ensure that the Project is additional;

- Review data management and monitoring systems
- Review the Project’s emission reduction calculations;
- Issue requests for additional documentation, clarifications, and corrective actions as necessary
- Issue a verification report, list of findings, and verification statement to Ducks Unlimited and the Reserve.

1.6 Verification Criteria

Table 1. Verification Criteria

Criteria	Details
Standard of Verification	<ul style="list-style-type: none"> • Climate Action Reserve Grassland Project Protocol, Version 2.0 (January 18, 2017) • Errata and Clarifications to Grassland Project Protocol, Version 2.0 (November 16, 2017) • Climate Action Reserve Program Manual (September 1, 2015) • Climate Action Reserve Verification Program Manual (February 8, 2017) • Climate Action Reserve Policy Memo, “Use of GWP for all Project Protocols” (May 1, 2018)
Verification Process	Climate Action Reserve and ISO 14064-3:2006 Specification with guidance for the validation and verification of greenhouse gas assertions
Level of Assurance	Reasonable assurance
Materiality	A +95% accuracy level (less than 5% error) because total annual ERs are less than 25,000 tCO ₂ e.

2.0 Verification Activities Summary

The current verification began with Ducks Unlimited selecting RCE as the verification body. As the first step in verification activities, RCE developed a verification plan to be followed throughout the verification. The verification plan consisted of the following activities:

- RCE completed the Notice of Verification Activities/Conflict of Interest form (NOVA/COI), announcing planned verification activities. This form was submitted to the Reserve’s website on January 22, 2019; the COI assessment revealed no conflicts of interest and was approved by the Reserve on January 23, 2019.
- RCE held a verification kickoff meeting with Ducks Unlimited on February 4, 2019. During the kickoff meeting RCE reviewed the verification objectives, verification process, and the verification schedule.
- RCE performed a strategic review and risk assessment of the received data and support documents to understand the scope and areas of potential risk in the GHG emissions reductions.
- RCE developed a risk-based sampling plan based upon the strategic review and risk assessment. The verification plan and sampling plan were used throughout the verification and were revised as needed based upon additional risk assessments.
- RCE performed a risk-based desktop review of the submitted verification documents including an assessment of the GHG calculation methods, modeling inputs and parameters, source data

completeness, GHG management and monitoring systems, evidence of regulatory compliance, and record retention practices.

- RCE submitted requests for additional documentation, clarifications, and corrective actions to Ducks Unlimited throughout the verification.
- RCE’s Senior Internal Reviewer conducted a review of the verification sampling, verification report, and verification statement.
- RCE issued a final verification report, verification statement, and list of findings.
- RCE held an exit meeting with Ducks Unlimited.

3.0 Project Overview

3.1 Assessment of the GHG Reduction Project Operations

The project is located on 13,319 acres of eligible grassland northeast of Lamar, Colorado. The landowner recorded a conservation easement with the Colorado Cattlemen’s Agricultural Land Trust on December 14, 2016 which is the Project commencement date according to the Protocol. The Project activity consists of preserving the grassland in its natural state and ensuring no tillage for commercial crop cultivation takes place. In the absence of the easement, the baseline assumes that the land would have been converted for crop production.

3.2 GHG Project Boundary (sources, sinks and/or reservoirs)

GHG emission reductions for the Project are quantified by mapping land areas within the conservation easement that meet the Reserve’s eligibility requirements. Project emissions from grazing and fossil fuel use to support grazing activities are also included in the assessment boundary.

According to the Protocol, GHGs included in the baseline and project boundary are carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O).

Table 2 lists the sources of GHG emissions reviewed during the verification of the Project, as required by the Protocol.

Table 2. Project GHG Sources, Sinks, and Reservoirs

Activity	GHG Sources, Sinks & Reservoirs
Baseline	<ul style="list-style-type: none"> • Soil Organic Carbon. • Belowground biomass • Soil nitrogen dynamics and fertilization • Agricultural equipment from site preparation and ongoing operations
Project	<ul style="list-style-type: none"> • Grazing • Agricultural equipment from site preparation and ongoing operations

3.3 Project Eligibility Criteria

The Protocol specifies six eligibility rules that a project must meet in order to register emission reductions with the Reserve: Location, Project Start Date, Additionality, Project Crediting Period, Requirements for Permanence and Regulatory Compliance. Below is a summary of the Reserve eligibility requirements and the Project’s compliance to each requirement.

3.3.1 Eligibility Rule 1: Location

The Project is located northeast of Lamar, Colorado, USA. The included acreage is located entirely on private property. None of the Project land is located on state, federal or Native American tribal land. The Project therefore meets this eligibility requirement.

3.3.2 Eligibility Rule 2: Project Start Date

The project start date is defined as the date on which the project area is committed to the continued management and protection of grassland and therefore avoids conversion to cropland. May Ranch signed a deed of conservation easement with the Colorado Cattlemen’s Agricultural Land Trust and publicly recorded the easement on December 14, 2016. This is the project start date. RCE confirmed that Ducks Unlimited completed the project submittal form and uploaded the form to the Reserve website on May 8, 2017 which is no more than six months after the project start date.

3.3.3 Eligibility Rule 3: Additionality

- Performance Standard Test

The project passes the performance standard test established by the Protocol by meeting a performance threshold applicable to all grassland projects. The performance standard test involves two steps: the financial threshold and suitability threshold.

Financial Threshold

The Protocol stipulates that projects in counties with a cropland premium greater than 100% are eligible without any discount for uncertainty. The project area is located entirely within Prowers County, Colorado and RCE used the Grassland Project Calculation Tool (GrassTool) Beta Version 1.0h (November 2017) to confirm that the cropland premium for this county is above the 100% threshold.

Suitability Threshold

Suitability is demonstrated by determining the non-irrigated Land Capability Classification (LCC) for the soil map units that are contained within or intersect the project area. At least 67% of the total area contained within the project boundary must be identified as Class I, II, III, or IV soils and up to 33% of the total area may be Class V or VI soils. Ducks Unlimited used GIS analysis combined with soil survey geographic database (SSURGO) information to produce a data table calculating the amount of area in each soil class. FRST reproduced the mapping of LCC classification from the Project GIS data and confirmed that not more than 33% of the project area is Class V or VI soils. No marginal soils were included in the boundaries (Class VII and VIII).

- Legal Requirement Test

All projects are subject to a Legal Requirement Test to ensure that the GHG reductions achieved by a project would not otherwise have occurred due to federal, state, or local regulations, or other legally binding mandates. All project area is located on private lands in rural areas. Ducks Unlimited provided information confirming that there was no zoning, permitting, ownership or other legal obstacle to the conversion of the project area to cropland. RCE viewed the signed Attestation of Voluntary Implementation, uploaded to the Reserve after the end of the reporting period.

The landowner has not entered into any concurrent legally binding agreements and is not receiving ecosystem services credits or payment stacking.

3.3.4 Eligibility Rule 4: Project Crediting Period

The baseline for any grassland project registered under this protocol is valid for 50 years. The crediting period for this project is December 14, 2016 to December 13, 2066. RCE confirmed that the reporting period January 1, 2018 to December 31, 2018 is within the crediting period.

3.3.5 Eligibility Rule 5: Requirements for Permanence

Emission reductions credited under this Protocol must be permanent. For the purposes of the Protocol, an emission reduction is considered “permanent” if the quantity of carbon associated with that reduction is stored for at least 100 years following the issuance of a credit for that reduction. A reversal occurs if stored carbon is released through a disturbance of the project area or is deemed to be released through termination of the project or a portion of the project. RCE confirmed in interviews with Ducks Unlimited that no avoidable or unavoidable reversals occurred during the Project reporting period.

RCE also reviewed the conservation easement and confirmed that there was sufficient wording that restricts plowing and farming that would release carbon stored in the soil. The landowner has elected to record the project implementation agreement (PIA) on the land title which grants the Reserve the ability to enforce the protocol requirements on the project area. RCE reviewed the PIA and confirmed the Project owner is an accredited land trust and therefore the risk of financial failure is 0. Ducks Unlimited correctly entered this parameter into the GrassTool. The Project contributed 184 tonnes of CO₂e to the buffer pool during the reporting period.

3.3.6 Eligibility Rule 6: Regulatory Compliance

RCE reviewed EPA’s enforcement and compliance history online (ECHO) database and the United States Department of Labor Occupational Safety and Health Administration website to confirm regulatory compliance for the project. No evidence was found that would indicate that there was a regulatory violation attributable to the project during the reporting period.

Finally, RCE confirmed signature of the Attestation of Regulatory Compliance, after the end of the reporting period, which was uploaded to the Reserve.

3.3.7 Eligibility Rule 7: Rangeland Health

RCE reviewed the Project’s Rangeland Health Assessment document; the Reserve approved the use of a rangeland health assessment plan that varies from the Protocol. The rangeland health assessment was performed during the first reporting period. The Project Developer chose not to perform a rangeland health assessment this year, though has five more years to do so as per the Protocol, which requires a rangeland health assessment every six years.

3.4 Ownership of GHG reductions

RCE reviewed evidence that the Project Developer has sole ownership of the GHG emission reductions. RCE reviewed a grant and conveyance document executed February 20, 2018, that conveys from the Grassland Owner (May family) to the Project Developer (Ducks Unlimited) all GHG attributes resulting from the Project. RCE confirmed the property within the project area is under the ownership of May Ranch

by reviewing the conservation easement owned by the Colorado Cattlemen’s Agricultural Land Trust. RCE also confirmed signature of the Attestation of Title which was uploaded to the Reserve after the end of the reporting period.

3.5 GHG Monitoring and Management Systems

RCE reviewed the data management systems during the desktop review. The Lead Verifier held a conference call with Ducks Unlimited to review the processes for project area stratification and how data was entered into the GrassTool.

The primary data gathered for the Project originates from GIS shape files. Ducks Unlimited used USDA data to map the entire area covered by the conservation easement (approximately 14,500 acres).

The next step involved comparing the project area to the SSURGO GIS layer and excluding any ineligible LCC classes (marginal lands). Ducks Unlimited removed LCC V and VI lands that would put the total areas of these classes over the Protocol 33% threshold. The final project area was approximately 13,319 acres.

For stratification purposes, all project lands are in the Major Land Resource Areas (MLRAs) 69 and 67B: Upper Arkansas Valley Rolling Plains and Central High Plains, Southern Part, respectively. During its review, FRST found that Ducks Unlimited had omitted a very small section (30.4 acres) in MLRA 67B; the entire Project area was listed as being in MLRA 69. Ducks Unlimited updated the tool to include the previously omitted MLRA; the omission was conservative as the revision resulted in 4 additional tonnes of CO₂e. Ducks Unlimited used a data table output from the SSURGO layer to classify the area by dominant soil texture component. FRST independently reproduced Ducks Unlimited’s methods for stratification and confirmed that May Ranch is the owner of all property listed within the project area.

RCE reviewed time-stamped Google Earth images of the project area to confirm the land appears uncultivated for the previous 30+ years. RCE confirmed that prior land use was reviewed and verified during the initial reporting period as documented in that verification report. Additionally, RCE reviewed the May Ranch Baseline Report which documents the Project area has been in grassland 30+ years with no evidence of cultivation.

Ducks Unlimited’s data storage and retention policies are in conformance with the Protocol requirements and follow the Monitoring Plan. All data are kept for a period of ten years after the information is generated or seven years after the last verification.

3.6 Assessment of GHG Emissions Reductions Calculations

The emission reduction calculation assessment included a review of Project assumptions, raw data inputs, and accuracy of calculations. Ducks Unlimited used the Reserve GrassTool to calculate emission reductions for the project. RCE’s review was divided into two separate operations; namely reviewing the inputs into the GrassTool and confirming Ducks Unlimited’s GIS analysis.

RCE reviewed the following inputs into the GrassTool: reporting period start and end date, type of project implementation agreement, site visit (yes/no), whether the Project passes the suitability threshold (yes/no), State and county, MLRA grouping, soil texture category, prior land use category, area in each project stratum (acres), fossil fuel usage and animal grazing days. RCE found no material errors in any of these inputs.

Project emissions consisted of direct emissions of CO₂ from the combustion of diesel which is used in mobile equipment dedicated to the support of grazing operations. Ducks Unlimited used the GrassTool to quantify project emissions from grazing. RCE reviewed the Project Developer’s method of calculating total animal grazing days and found it to be reasonable. Additionally, RCE reviewed the May Ranch Grazing

Principles document that outlines the procedures for animal stocking to maintain grassland health. The Project Developer calculates animal grazing days from the ranch sustainable grazing plan which includes cow/calf pairs, cows culled, heifers retained, and bull population per month. Beef cows are the only livestock category that grazes in the Project area. There were no fires in the Project area during the reporting period.

RCE reviewed the Project assertion spreadsheet and corresponding GHG calculations for compliance to the Protocol's calculation methodologies and found no material misstatements in the final Project GHG reduction calculations and results.

4.0 Verification Results

Ducks Unlimited provided sufficient evidence and documentation of their emission reduction estimates, data collection procedures, and monitoring and quality control procedures. The verification process focused on verifying the emission reduction calculations and the source data used to quantify the emission reductions in accordance with Protocol requirements.

Table 5 defines the emission reductions verified for this reporting period. During final review, RCE identified no material misstatements in the data or emission reduction calculations.

During the verification process, RCE issued three material findings, three additional document requests and two clarifications to complete the verification. Ducks Unlimited sufficiently addressed all corrective actions. The details of these requests are documented in RCE's list of findings provided to the Reserve and Ducks Unlimited.

5.0 Conclusion

RCE conducted a risk-based analysis of the CAR1261 May Ranch Avoided Grassland Conversion emission reduction assertion including a strategic review of the Project data and evidence. Based upon the processes and procedures and the evidence collected, RCE concludes that the GHG assertion is a fair representation of the Project emission reductions resulting from the prevention of emissions of GHGs to the atmosphere through conserving grassland belowground carbon stocks and avoiding crop cultivation activities during the reporting period from January 1, 2018 through December 31, 2018 and can be considered:

- In conformance with the Reserve Grassland Project Protocol Version 1.0,
- Without material discrepancy, and
- Verified to a reasonable level of assurance.

The verified emission reductions are listed in Table 3.

Table 3. Emission Reductions Verified for January 1, 2018 through December 31, 2018.

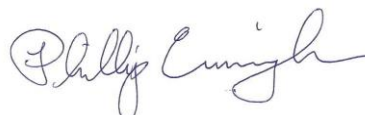
Emissions Verified		Baseline Emissions CO ₂ e (metric tons)	Project Emissions CO ₂ e (metric tons)	Total Emission Reductions CO ₂ e (metric tons)	Buffer Pool Contribution CO ₂ e (metric tons)	Total Emission Reductions Issued to Account Holder CO ₂ e (metric tons)
2018	Project Developer	14,278	4,582	9,696	184	9,512
2018	Verifier	14,278	4,582	9,696	184	9,512

Lead Verifier Signature



Bonny Crews

Senior Internal Reviewer Signature



Phillip Cunningham