



RUBY CANYON ENVIRONMENTAL

Verification Report

CAR1261 – Ducks Unlimited – May Ranch Avoided Grassland Conversion

Reporting Period: January 1, 2022 – December 31, 2022

Prepared for:

Ducks Unlimited, Inc.

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1.0 Introduction

Ruby Canyon Environmental, Inc. (RCE), a subsidiary of TÜV SÜD America, 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, 2022 through December 31, 2022 to the Climate Action Reserve (Reserve) U.S. Grassland Protocol Version 2.1 (Protocol). The Project reduces greenhouse gas (GHG) emissions by preventing emissions to the atmosphere by conserving grassland belowground carbon stocks and avoiding crop cultivation activities on land owned by May Farms.

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 with 13,319 acres of this property included in the geographic boundary of the project. 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.

A wildfire occurred within the project area during this reporting period, in April 2022. A total of 3,422.5 acres of the project area burned. Mechanical fire breaks were used to contain the wildfire along its eastern and western boundaries. The calculation of emission reductions accounts for these fire break areas (8.8 acres) as "sod-busted" areas and removed the acres from the project area.

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 who are accredited by the Reserve to conduct verifications under the U.S. Grassland Protocol:

Lead Verifier: Nina Pinette

Senior Internal Reviewer: Phillip Cunningham

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;
- 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; and
- Issue a verification report, list of findings, and verification statement to Ducks Unlimited and the Reserve.

1.6 Verification Criteria

The Project was verified to the criteria shown in Table 1.

Criteria	Details
Standard of Verification	<ul style="list-style-type: none"> • Climate Action Reserve Grassland Project Protocol, Version 2.1 (February 13, 2020) • Climate Action Reserve Grassland Project Protocol, Version 2.1 Errata and Clarifications (July 18, 2023) • Reserve Offset Program Manual (March 12, 2021)
Verification Process	<ul style="list-style-type: none"> • Climate Action Reserve Verification Program Manual (February 3, 2021) • ISO 14064-3:2006 Greenhouse gases – Part 3: 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

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 on April 4, 2023; the COI assessment revealed no conflicts of interest and was approved by the Reserve on April 17, 2022.
- RCE held a verification kickoff meeting with Ducks Unlimited on April 27, 2023. 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 did not conduct a site visit as part of this verification, but a site visit occurred during the verification of the Project's first reporting period and thus the Project's value of Risk_{SV} shall be 0 for the entire crediting period.
- 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 corrective action requests, additional documentation requests, and clarification requests as necessary to Ducks Unlimited during 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. Through review of the National Land Cover Database, RCE confirmed that the project area does not have tree canopy exceeding 10% of the land area on a per-acre basis.

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. A wildfire occurred within the project area during this reporting period, and thus project emissions from burning are included in the assessment boundary for this reporting period.

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 • Burning • Leakage emissions
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3.3 Project Eligibility Criteria

The Protocol specifies seven eligibility rules that a project must meet in order to register emission reductions with the Reserve: Location, Project Start Date, Additionality, Project Crediting Period, Permanence, Regulatory Compliance, and Rangeland Health. 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 area is also located on land whose combination of Major Land Resource Area (MLRA), soil texture, and prior land use history would result in emissions of soil carbon in the baseline scenario. The Project therefore meets the location 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 long-term 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 Reserve has developed a standardized threshold for financial additionality, referred to as the cropland premium, which is determined as the percentage difference in the value of cropland over pastureland in the county where the project is located. 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. RCE verified the eligibility status of Prowers County as 100% eligible, with no discount, via the Grassland Project Calculation Tool (GrassTool) and the Grassland Project Parameters, which were reviewed during a prior verification.

Suitability Threshold

The project area must be suitable for conversion to cropland. 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. During RCE's first verification for the Project, the verification team 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.

Limits on payment and credit stacking

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, 2022 to December 31, 2022 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 language that restricts plowing and farming that would release carbon stored in the soil. RCE reviewed the PIA and confirmed the Project owner is an accredited land trust, and therefore the risk of financial failure ($Risk_{FF}$) is 0. The risk of misstatement due to not having a site visit by a third-party verifier ($Risk_{SV}$) is 0 because a site visit was conducted during the verification of the Project's first reporting period. The total risk of reversal ($Risk_{rev}$) is 0.02. RCE verified that Ducks Unlimited correctly accounted for risk in the GrassTool. The Project contributed 184 tonnes of CO_{2e} to the buffer pool for this reporting period.

3.3.6 Eligibility Rule 6: Regulatory Compliance

RCE reviewed U.S. EPA's Enforcement and Compliance History Online (ECHO) database and the United States Department of Labor Occupational Safety and Health Administration (OSHA) website to confirm regulatory compliance for the project. There are no entries for entities related to the Project in the project area nor is the landowner required to hold any permits related to the Project. There is no evidence of any regulatory compliance issues nor violations 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

Grassland project areas, regardless of location or management, are subject to forces that could degrade the grassland ecosystem and potentially cause the land to transition to a different landscape type, even in the absence of a single disturbance event. Thus, it is required that projects undergo a periodic assessment of rangeland health. A rangeland health assessment must be submitted for review during one of the first two project verifications. RCE reviewed the Project's Rangeland Health Assessment document; during a prior verification, the Reserve approved the use of a rangeland health assessment plan that varies from the Protocol. The rangeland health assessment was performed in October 2018. Ducks Unlimited chose not to perform a rangeland health assessment this year since the Protocol requires a rangeland health assessment every six years.

RCE also reviewed the Colorado Cattleman's Agricultural Land Trust Conservation Easement Monitoring Report which stated that there were no changes to the property or agricultural operations. Photographs of many areas of the land were included in the report confirming that none of the land has been converted to cropland. Photographs of burned areas were also included, as discussed in more detail in Section 3.6.

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. During prior verifications, RCE also reviewed the processes for project area stratification and how data was entered into the GrassTool in detail with Ducks Unlimited and there have been no changes for this reporting period, except for the accounting of the burned area of the project. Ducks Unlimited provided data and detailed descriptions for how burned acreage and "sod-busted" acreage was determined. RCE reviewed the 2022 monitoring report and photos taken in 2022 which include details of the wildfire and photographs of the project area after the wildfire.

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. Ducks Unlimited used a data table output from the SSURGO layer to classify the area by dominant soil texture component. During the verification of reporting period 2, the verification team independently reproduced Ducks Unlimited's methods for stratification and confirmed that May Ranch is the owner of all property listed within the project area. The project area in MLRA 69 was reduced for this reporting period by 8.8 acres—in the relevant soil texture categories—that were fire breaks or "sod-busted" areas resulting from the

wildfire. RCE verified that this method was consistent with guidance provided by the Reserve. MLRA 67B acreage remained the same as in prior reporting periods.

RCE reviewed time-stamped Google Earth images of the project area to confirm the land appears uncultivated for the previous 30+ years. 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 confirmed that there was no fertilizer application to Project land and no other changes during the current reporting period.

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 dates; risk of financial failure; site visit (yes/no); the financial threshold option (default); which suitability threshold option was chosen (Option 1: MLRA Default); whether the Project passes the suitability threshold; State and county; MLRA grouping; soil texture category; prior land use category; area in each project stratum (acres), and project emission inputs including fossil fuel combustion, animal grazing days, and burned area. 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 combusted by 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, bulls and calves are the only livestock category that grazes in the Project area. RCE also verified that the Monitoring Plan includes a description of mechanisms to prevent overgrazing.

The acres burned in the April 2022 wildfire were determined using drones and on-the-ground documentation from a certified biologist to map the burned area. RCE reviewed Ducks Unlimited's aggregation of burned areas and verified inputs to the GrassTool.

RCE found no material misstatements in the final Project GHG emission reduction calculations.

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.

RCE issued additional documentation requests and clarification requests to complete the verification. The details of RCE's requests are documented in the List of Findings provided to Ducks Unlimited and the Reserve.

Table 3 in the next section defines the emission reductions verified for this reporting period. During final review, RCE identified no material misstatements in the data or emission reduction calculations.

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, 2022 through December 31, 2022 and can be considered:

- In conformance with the Reserve Grassland Project Protocol Version 2.1,
- Without material discrepancy, and
- Verified to a reasonable level of assurance.

The verified emission reductions are shown in Table 3.

Table 4. Emission Reductions Verified for January 1, 2022 through December 31, 2022.

Vintage	Baseline Emissions (MT CO₂e)	Project Emissions (MT CO₂e)	Total Emission Reductions (MT CO₂e)	Buffer Pool Contribution (MT CO₂e)	Total CRTs to be Issued (MT CO₂e)
2022	13,643	5,077	8,566	184	8,382

Lead Verifier



Nina Pinette

Senior Internal Reviewer



Phillip Cunningham