# Colorado State Land Board

# Biological Carbon Program

National Assoc. State Trust Lands – Denver, CO
July 21, 2025


New Revenue,
Enhanced Stewardship,
Climate Goals

- **New Revenue Source**
  - **Voluntary carbon market** - offset projects
  - **Incentive-based** for SLB and its lessees
- **Enhanced Stewardship**
  - Use **regenerative grazing & cropland** practices
  - Significantly **improve stewardship** outcomes on state trust land
- **Increased soil carbon sequestration**
  - Contribute to **greenhouse gas reduction goals**
  - **Opportunity for biodiversity enhancement** projects as metrics develop

# BIOLOGICAL CARBON PGM GOALS





# VOLUNTARY MARKETS

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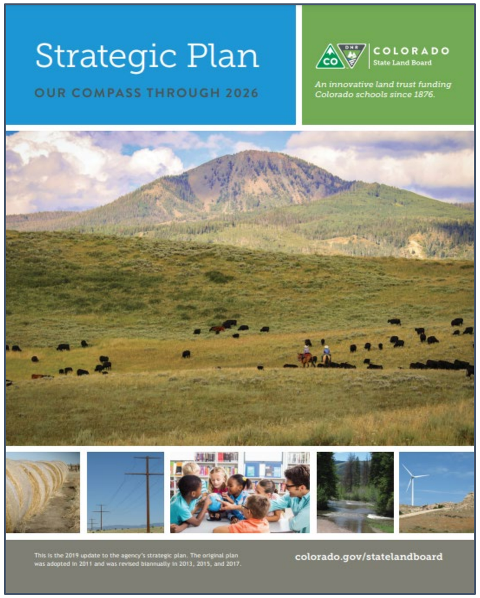
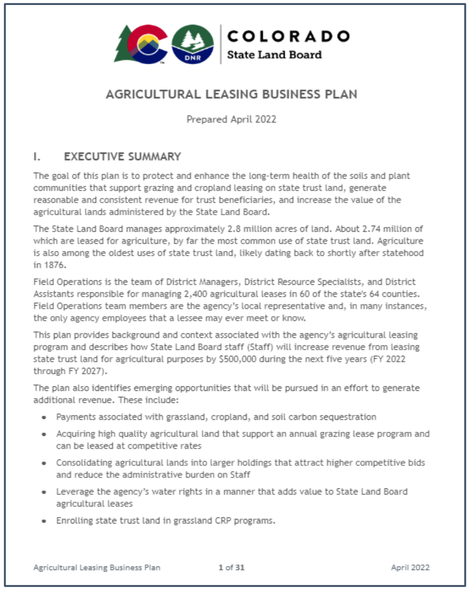
# SLB & STATE CARBON/GHG GOALS

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AGRICULTURAL LEASING BUSINESS PLAN

Prepared April 2022

I. EXECUTIVE SUMMARY

The goal of this plan is to protect and enhance the long-term health of the soils and plant communities that support grazing and cropland leasing on state trust land, generate reasonable and consistent revenue for trust beneficiaries, and increase the value of the agricultural lands administered by the State Land Board.

The State Land Board manages approximately 2.8 million acres of land. About 2.74 million of which are leased for agriculture, by far the most common use of state trust land. Agriculture is also among the oldest uses of state trust land, likely dating back to shortly after statehood in 1876.

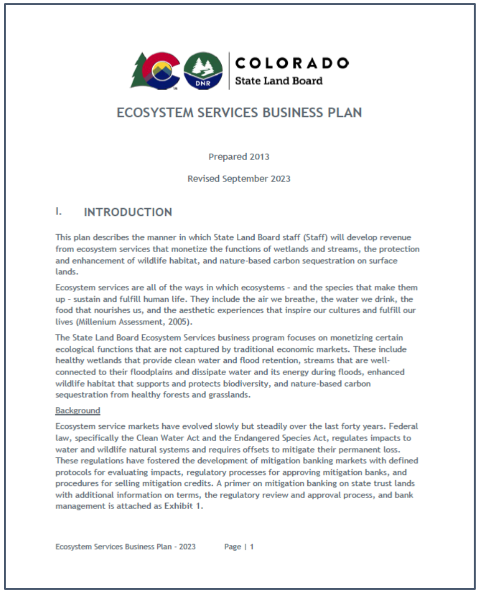
Field Operations is the team of District Managers, District Resource Specialists, and District Assistants responsible for managing 2,400 agricultural leases in 60 of the state's 64 counties. Field Operations team members are the agency's local representative and, in many instances, the only agency employees that a lessee may ever meet or know.

This plan provides background and context associated with the agency's agricultural leasing program and describes how State Land Board staff (Staff) will increase revenue from leasing state trust land for agricultural purposes by $500,000 during the next five years (FY 2022 through FY 2027).

The plan also identifies emerging opportunities that will be pursued in an effort to generate additional revenue. These include:

- Payments associated with grassland, cropland, and soil carbon sequestration
- Acquiring high quality agricultural land that support an annual grazing lease program and can be leased at competitive rates
- Consolidating agricultural lands into larger holdings that attract higher competitive bids and reduce the administrative burden on Staff
- Leverage the agency's water rights in a manner that adds value to State Land Board agricultural leases
- Enrolling state trust land in grassland CRP programs.

Agricultural Leasing Business Plan 1 of 31 April 2022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ECOSYSTEM SERVICES BUSINESS PLAN

Prepared 2013

Revised September 2023

I. INTRODUCTION

This plan describes the manner in which State Land Board staff (Staff) will develop revenue from ecosystem services that monetize the functions of wetlands and streams, the protection and enhancement of wildlife habitat, and nature-based carbon sequestration on surface lands.

Ecosystem services are all of the ways in which ecosystems - and the species that make them up - sustain and fulfill human life. They include the air we breathe, the water we drink, the food that nourishes us, and the aesthetic experiences that inspire our cultures and fulfill our lives (Millenium Assessment, 2005).

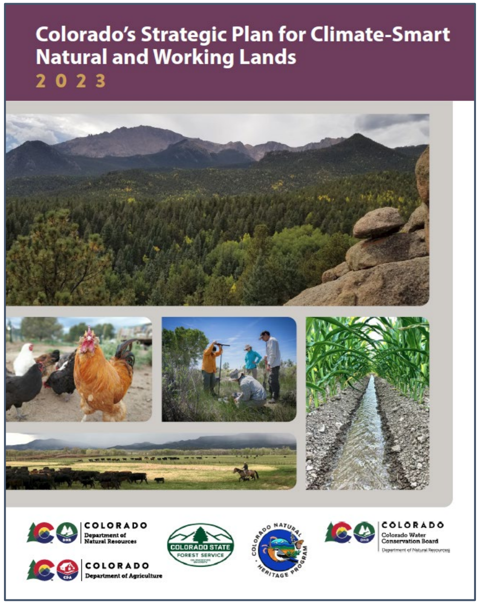
The State Land Board Ecosystem Services business program focuses on monetizing certain ecological functions that are not captured by traditional economic markets. These include healthy wetlands that provide clean water and flood retention, streams that are well-connected to their floodplains and dissipate water and its energy during floods, enhanced wildlife habitat that supports and protects biodiversity, and nature-based carbon sequestration from healthy forests and grasslands.

Background

Ecosystem service markets have evolved slowly but steadily over the last forty years. Federal law, specifically the Clean Water Act and the Endangered Species Act, regulates impacts to water and wildlife natural systems and requires offsets to mitigate their permanent loss. These regulations have fostered the development of mitigation banking markets with defined protocols for evaluating impacts, regulatory processes for approving mitigation banks, and procedures for selling mitigation credits. A primer on mitigation banking on state trust lands with additional information on terms, the regulatory review and approval process, and bank management is attached as Exhibit 1.

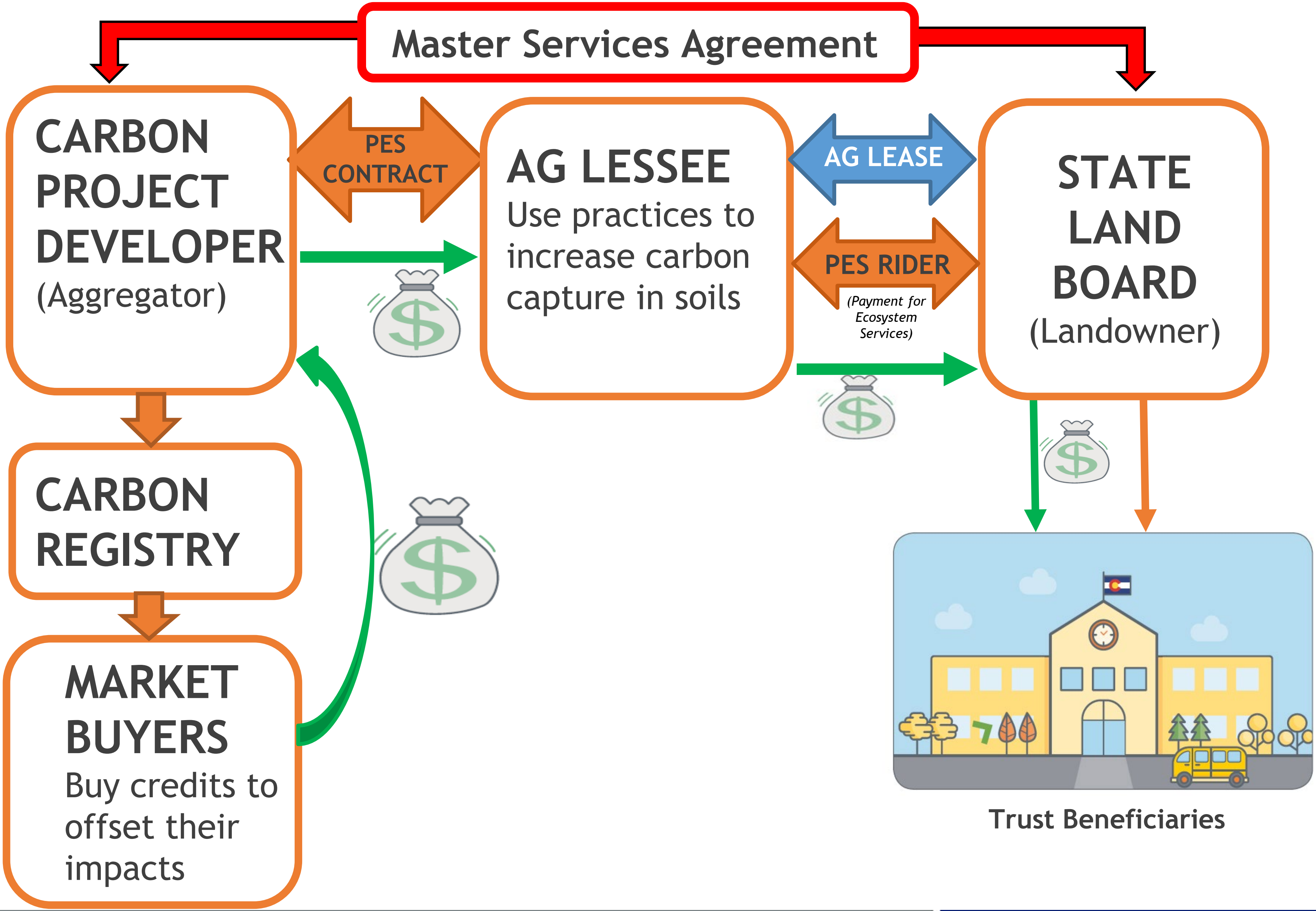
Ecosystem Services Business Plan - 2023 Page | 1

**State Land Board plans**





**State of Colorado plans**




# MARKET ACTORS & STRUCTURE

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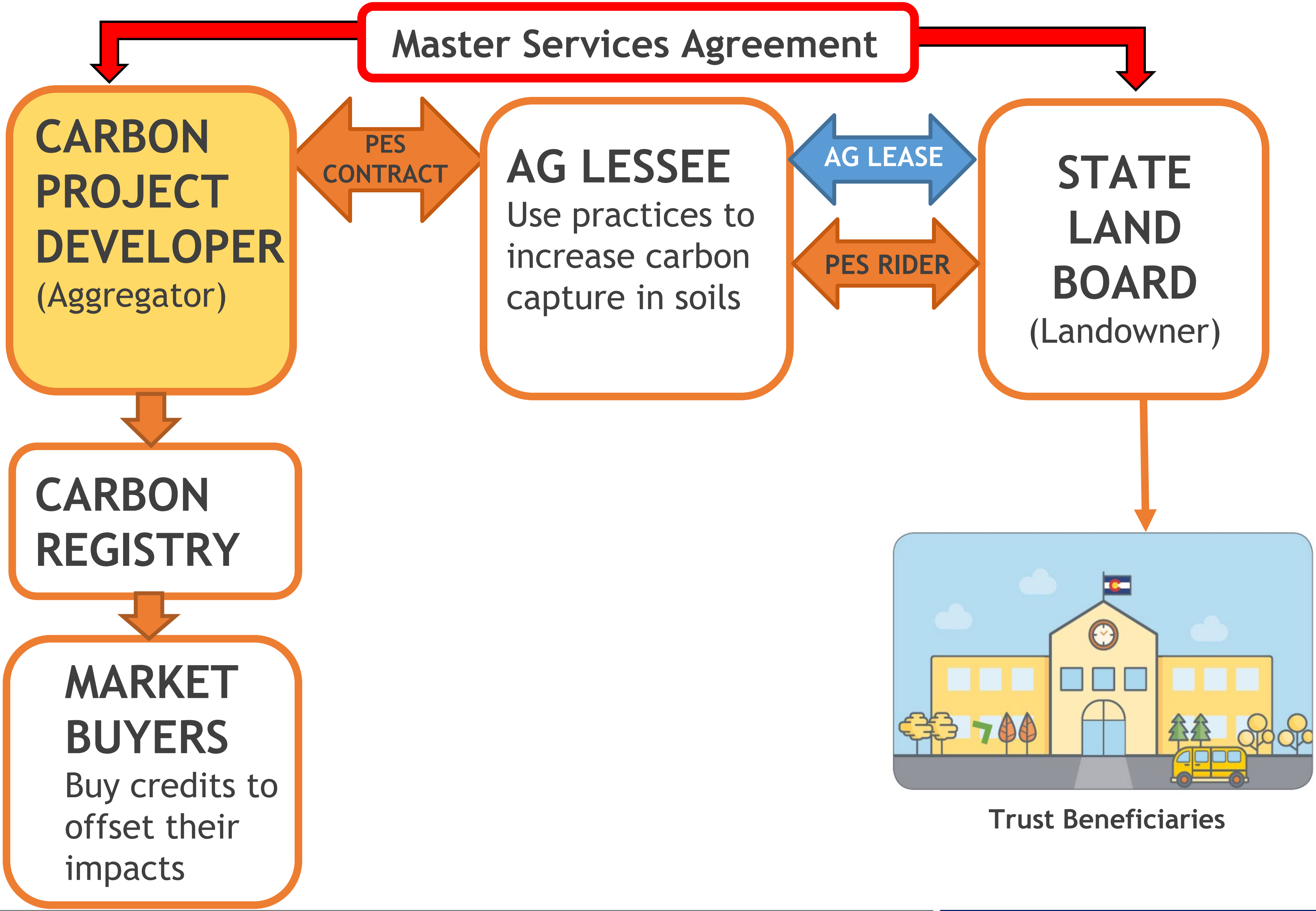
# Vetted Companies, Lessee Options




# MARKET ACTORS & STRUCTURE

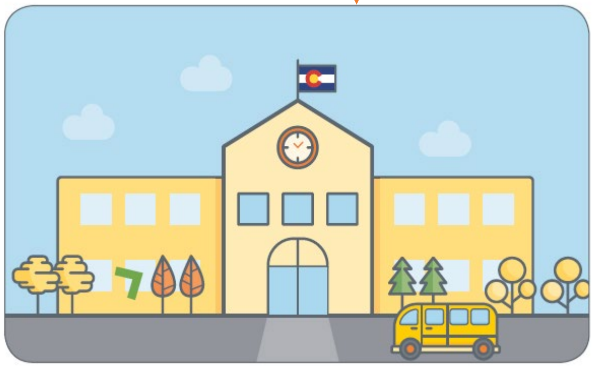
Master Services Agreement

**CARBON PROJECT DEVELOPER**
(Aggregator)

**CARBON REGISTRY**

**MARKET BUYERS**
Buy credits to offset their impacts

**STATE LAND BOARD**
(Landowner)



Trust Beneficiaries

# MARKET ACTORS & STRUCTURE

- **MillPont, Inc.** - selected by Staff for its experience and expertise in the voluntary carbon market
  - Knowledge and experience in the agricultural community and commodity markets
  - Existing geo-spatial platform tracks properties engaged in carbon market

# MILLPONT, INC.

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1. Develop grassland carbon project contract specifications between SLB and lessee

2. Select “Best-Fit” project developers

3. Facilitate commercial terms between SLB and project developers

4. Identify and develop offtake market purchases

5. Portfolio management (identify involvement of state trust lands in the carbon market)

# MILLPONT – 5 TASKS

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# Goal: Select *Qualified* Carbon Project Developers that are the "Best-Fit" for SLB and its lessees

MillPont's 9 Evaluation Criteria and Scoring Rubric

- Verified and Trustworthy Background
- Financial Stability
- Technical Expertise
- Experience
- Innovation, Adaptation & Flexibility
- Cost-effectiveness & Barrier Reduction
- Carbon Credit Quality (Rigor, Additionality, Causality, Durability, Safeguards)
- Co-benefits Beyond Carbon (environmental & social benefits)
- Transparency

**Carbon Credit Quality:** Are the carbon credits produced of **high quality** and **meet or exceed environmental standards**?

a. **RIGOR:** Is the **scientific foundation and precision** of the project developer's primary carbon crediting approach **robust and reliable** in generating carbon credits?

b. **ADDITIONALITY:** Are the credited carbon reductions or sequestrations are **truly additional** and would not have occurred under a 'business as usual' scenario?

c. **CAUSALITY:** Are **GHG outcomes** (reductions or sequestrations) **related to the economic incentive** and would not have occurred under a 'business as usual' scenario? This reflects the quality in carbon insetting frameworks, i.e. is the carbon benefit connected to economic incentives provided for decarbonization activities in a given company's value chain?

d. **DURABILITY:** Is there **long-term reliability** and **stability of carbon sequestration** ensuring that carbon reductions are maintained over time?

e. **SAFEGUARDS:** Are provisions are in place to **protect landowners' land, data rights,** and broader **community engagement?**

# MillPont, LLC:

1. Screens interested carbon project developers (CPDs)
2. Evaluates and scores CPDs against nine criteria
3. CPDs submit Form/template Contracts for SLB review
4. CPDs invited to review/comment on MSA

# State Land Board:

1. Staff interviews CPDs with MillPont scores > 80 and meeting recommended SLB criteria
2. Recommends Board approval as Qualified Project Developers (QPDs)

## Identifying Qualified CPDs

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# A. Improved Grassland Management (2 QPDs)

- Payment for enhanced grassland management practices demonstrated to increase carbon soil sequestration.
- VERRA’s VM-0042: Methodology for Improved Agricultural Land Management or the Soil Enrichment Protocol
- Carbon credit payments split between SLB and agricultural lessee.

Kateri

Unlocking the Potential of the World’s Grasslands

Grassroots Carbon

## 4 QPD’S APPROVED TO DATE

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## B. Reforestation

LAND LIFE

- Payment for reforestation (on burned trust lands).
- VERRA'S VM-0047 Methodology for Afforestation, Reforestation, and Revegetation
- Long-term rent payment to the SLB.

## C. Avoided Grassland Conversion

AgriCapture

- Payment for existing soil carbon; no management changes required.
- Am. Carbon Registry's ACoGS, v.2: Avoided Conversion of Grasslands & Shrublands to Crop Production
- Carbon credit payments made solely to the SLB.

4 QPD'S APPROVED TO DATE


| Pre-Planting | | | Planting | Post-Planting | |
|---|---|---|---|---|---|
| Project Financing | Land Access | Design | Implement | Monitoring & Data | Verification / Certification |

# LANDLIFE PROJECT

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1. Staff recommends *Qualified* Project Developers (QPDs) that are the "Best-Fit" for SLB and its lessees

   a. Millpont's Evaluation and Scoring Rubric

   b. Staff recommended additional criteria

2. Board enters into a Master Services Agreement (MSA) with each QPD

   a. Approved PES Lease Riders will be attached.

# BIO CARBON PGM DOCUMENTS

| Document | Purpose | Participating Parties | | | Approved by SLB |
|---|---|---|---|---|---|
| | | SLB | QCPD | AG Lessee | |
| 1. Master Services Agreement (MSA) | Establish terms for collaboration between the SLB and Qualified Carbon Project Developer (QCPD. | ✓ | ✓ | | ✓ |
| 2. SLB Agricultural (AG) Lease | Defines land use & management terms AG lessee. Serves as the foundational agreement for additional riders like PES. | ✓ | | ✓ | ✓ |
| 3. Payment for Ecosystem Services (PES) Lease Rider | Amends existing SLB AG leases to include ES rights:<br>• Enables participation in the biological carbon program (PES Contract), and<br>• Payment for carbon credits generated. | ✓ | | ✓ | ✓ |
| 4. Form Contract (Precursor to the PES contract) | The CQPD's own carbon program template/form.<br>• Submitted to SLB for approval to ensure consistency and compliance with MSA.<br>• If SLB approves form contract, the QCPD develops the PES Contract. | | * | * | ✓ |
| 5. PES Contract | Contract between QCPD and AG lessee with terms & obligations to implement projects and generate carbon or biodiversity credits. | | ✓ | ✓ | ✓ |

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| PROJECT ACTIVITY | Completed By |
|---|---|
| 1. **Project Sourcing and Evaluation:** Identifying potential project sites and activities. | QPD & Lessee |
| 2. **Feasibility Studies:** Assessing the technical and economic viability of the project. | QPD |
| 3. **Methodology Selection:** Choosing appropriate methodologies for measuring and verifying emission reductions or removals. | QPD & Lessee |
| 4. **Project Design:** Developing a detailed project design document outlining the project's scope, objectives, and implementation plan. | QPD & Lessee |
| **( STATE LAND BOARD APPROVAL)** | |
| 5. **Implementation:** Carrying out the project activities, such as regenerative grazing practices or cropland practices. | Lessee |
| 6. **Monitoring, Reporting, and Verification (MRV):** Continuously monitoring the project's performance, reporting data, and independent verification to ensure the integrity of the carbon credits. | QPD |
| 7. **Credit Issuance and Sale:** Once the project is verified, carbon credits are issued and can be sold in the voluntary carbon market. | QPD |

# CARBON PROJECT STEPS

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Annual Carbon Payments are based on <u>the amount of carbon sequestered in the soil</u> (i.e. carbon credits generated).

- **Year 1:** Based on <u>measured</u> soil carbon
- Years 2-4: Based on *estimated* carbon sequestered
- **Year 5:** True up #1: Based on <u>measured</u> soil carbon
- Years 6-9: Based on *estimated* carbon sequestered
- **Year 10:** True up #2: Based on <u>measured</u> soil carbon

# CARBON CREDITS & PAYMENTS

DNR

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- All Monitoring, Reporting and Verification (MRV) done by **independent, third parties**.
- MRV costs **paid by the QPD.**
- Years 1, 5 and 10 involve soil sampling to determine **actual soil carbon levels**.
- Property monitored ‘in-between’ years **via remote sensing, aerial imagery**, ground-truthing, and/or **site inspections.**
- MRV costs are subtracted from the sale of credits, resulting in **Project Net Profit** shared between the Lessee and the SLB.

# MONITORING, REPORTING & VERIFICATION

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**PES Contract** includes a **30 or 40 yr project term**

- Initial 10-year carbon ‘crediting period’
- Two successive 10-year ‘storage periods’

**Two Types of Reversals**

- **Avoidable**
  - Minor/de minimus changes
  - Significant changes (> 2 to 5% of enrolled land)
- **Unavoidable** (‘Acts of God’)

# 30-YEAR PROJECT LENGTH

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SLB is **invested in the success** of the program & the grazing operations of its lessees:

- Increased stewardship outcomes
- Revenue for trust beneficiaries
- Support of greenhouse gas reduction goals

Lessees still must **make their own decision about program involvement** given:

- 30-year PES contract term
- Board’s 10-year leasing structure does not guarantee AG lease renewal at year 10 or 20.
- Their ranch/farm operation goals, structure, etc.

# SLB SUPPORT OF PROGRAM

## State Land Board steps to ensure project success:

1. Include **assignment provision** in the PES Rider.
2. Continue competitive bid scoring which includes **40% of score to stewardship** practices and outcomes.
3. Set a **relatively high percent of property** subject to **de minimus** land use changes (5% vs. 2%)
4. **Commit to negotiate in good faith** with lessee and QPD to mitigate impacts of significant avoidable reversals.
5. **Limit eligibility of state trust land properties** by geographical location, size, ecological characteristics, or other factors.

# SLB RISK MITIGATION

# Regenerative Agriculture Management

# Regenerative Grazing

1. Higher Stock Densities
2. Shorter Duration Graze
3. Long periods of recovery
4. Staggered seasonality
    a. Improves
        i. Plant Diversity
        ii. Water Cycle
        iii. Carbon Cycle
        iv. Drought Resilience
            - Quantifiable

Healthy Soil & Healthy Ecosystems

# Higher Stock Densities

- Hoof action
- Break up crust
- Concentration of manure
- Better forage utilization
- Litter on/in the ground
- Competition within the herd

# Shorter Duration Graze

- Avoid overgrazing
- Avoid over trample
- Insects
- Plant diversity
- Erosion

# Long periods of recovery

- Avoid overgrazing
- Quality of forage
- Quantity of forage
- Plant reproduction
- Erosion


Staggered seasonality
Diversity
Quality of forage
Quantity of Forage
Wildlife
Regenerative Mng.
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# Healthier Soil, Healthier Ecosystems, Healthier Livestock, Higher Revenues, Longevity of Working Lands

# QUESTIONS/COMMENTS

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