



Seeking Qualified Consultant Expertise

Carbon Assessment & Financial Modeling for an Elliott State Research Forest

Background: Exploring an Elliott State Research Forest

In December 2018, the State Land Board directed the Oregon Department of State Lands (DSL) to work with Oregon State University College of Forestry (OSU) to assess the potential for the Elliott State Forest (Elliott) to serve as a research forest managed by OSU. DSL and OSU have since launched collaborative efforts with stakeholders to more deeply examine the Elliott's potential to be de-coupled from the Common School Fund and managed as a research forest. A memorandum of understanding signed in February of 2019 broadly frames that effort, and additional information can be located at a website hosted by DSL at:

<https://www.oregon.gov/dsl/Land/Pages/Elliott.aspx>

Project Overview

As part of this effort, independent expertise is sought to assist in understanding two related but different components of our assessment of the feasibility of owning and managing the Elliott as a research forest. While outlined in more detail below, they generally are: (1) a feasibility analysis of (and strategic assistance defining, assessing, and implementing a plan to leverage) opportunities to sequester and monetize carbon in the forest by participating in existing or future carbon markets; and (2) modeling and forecasting a defined number of harvest scenarios and associated revenue streams based on anticipated management parameters (to be provided by OSU) that reflect research and education objectives, conservation measures, and other public values.

The carbon assessment and financial modeling will provide the project team with key financial and management considerations that (along with other equally important considerations and constraints) will be used by the University to help assess and frame a proposal for managing the Elliott as a research forest. The deliverables of this contract project will contribute to a growing pool of public information about potential OSU management for presentation and review by DSL and interested stakeholders.

How to Express Interest:

- 1. Written project proposals will be accepted until 5:00 pm May 15, 2019**
- 2. Written proposals must address the following:**
 - Address the means and methods for accomplishing the work description and identified deliverables.
 - Names, qualifications, and role of each team member who will be working on the project including experiences (or lack thereof) on similar projects;
 - Identify the project manager and primary point of contact for matters associated with the work contemplated;
 - Description of prior project experiences and how those prior experiences relate to the work specifically anticipated for either or both of the Carbon or Financial Analysis work contemplated in this document.



- Description of experience and intended approach to integrating forest carbon market eligibility assessment and HCP conservation measures with forest timber harvest planning and financial modeling.
 - Description of how the spatial modeling will be done including representation of harvest units and intended software.
 - Proposed method for calculating compensation (hourly, daily, or fixed rate) separately for each of the three phases of work contemplated for the Carbon Assessment, and for each of the deliverables associated with the Financial Modeling work.
 - Clearly articulated project pricing with a budget that includes a not-to-exceed amount for completing the full scope work described here, a breakdown of estimated costs for each project component, and a description of the assumed rate of compensation.
3. **Inquiries and questions may be addressed to:** Geoff.huntington@oregonstate.edu



Scope of Work for a Carbon Assessment & Financial Model of the Elliott State Forest

Project Goals

I. Carbon Assessment

The carbon assessment is expected to:

- Determine whether and how an OSU-owned Elliott forest would be eligible for carbon project registration under a compliance or voluntary carbon project program;
- Determine necessary actions and a budget associated with registering a carbon project under a compliance or voluntary program; and
- Given other regulatory and program constraints identified by OSU, estimate carbon stocks that could be registered under a proposed compliance or voluntary program and the financial value of those stocks, based on the three harvest scenarios described below; and
- Work and collaborate with the financial modeling team to integrate the outcome of a carbon feasibility assessment into harvest modeling scenario development; and
- Review and assistance to OSU in creation of presentation materials summarizing the results of the feasibility assessment

II. Financial Modeling

The financial model is expected to:

- Provide comprehensive financial results from three different harvest/management scenarios, including revenues and costs forecast for a minimum of 50 years;
- Include digital maps and tabular data that can be reviewed by an interdisciplinary team;
- Work and collaborate with the financial modeling team to integrate the outcome of a carbon feasibility assessment into harvest modeling scenario development; and
- Review and assistance to OSU in creation of presentation materials summarizing the results of the model runs.

Target Audience

Contractor will work closely with the OSU Elliott project team, and Research Forest Exploratory Committee to help frame and tailor deliverables to meet planning and public presentation needs. Contractor may be called upon to present and respond to questions in a limited number of settings involving DSL and/or stakeholder meetings sponsored by OSU and/or DSL.

Detailed Work Description

I. Carbon Assessment

The carbon assessment team will work closely with OSU to meet the project goals and ultimately deliver a preliminary carbon report, a carbon project implementation plan, and an assessment of carbon stocks and their value. The associated work will be divided into three phases, as described below.



Phase 1: Contractor will prepare a primer for OSU that summarizes carbon project requirements and associated long-term management responsibilities, as well as a description of carbon market dynamics, risk and pricing history. As relevant, this can include previously published materials. The primary Improved Forest Management protocols and associated markets the contractor is expected to assess are the California Air Resources Board, the American Carbon Registry, the Climate Action Reserve, and the Verified Carbon Standard. In particular, the contractor is expected to describe a) how the baseline would be calculated given the Elliott is currently state-owned property that could be transitioning to ownership by a quasi-governmental entity and b) the expected depth of market demand (as the Elliott has the potential to generate a large quantity of offsets). Materials will identify benefits and challenges associated with compliance and voluntary carbon programs, and contractor will assist OSU to identify pros and cons of enrolling in a compliance-based or voluntary scheme. AS part of providing this expertise, Contractor would be expected to communicate with decision-makers associated with carbon project registries and verifiers to determine whether an OSU-owned forest like the Elliott would be eligible for carbon project registration. If clearly not eligible, the project and associated work would terminate at this time. If potentially eligible, the contractor would determine barriers, risks, and strategies for moving forward and summarize those in written form to OSU.

Phase 2: Assuming potential eligibility and OSU interest based on outcome of Phase 1, the Contractor would prepare a carbon project implementation plan. This plan would include describing the steps associated with registering a carbon project, and an estimated timeline associated with carbon project registration. Additional components of this plan would include a list of expertise that would be required for project implementation, as well as a preliminary budget estimate for registering a carbon project for the Elliott forest.

Phase 3: If authorized by OSU, the contractor would estimate potential carbon stocks in the Elliott and the potential offset production and their associated financial value given management considerations and restraints provided by OSU to insure alignment with the three financial modeling scenarios contemplated and described in Section II below. This phase will entail working closely with OSU to align carbon stock estimates with OSU generated research goals, assumptions, three harvest/management scenarios, as well as any proposed plans (including a habitat conservation plan) or other information that may determine carbon project areas within the Elliott. The contractor must possess expertise necessary to identify factors that would inform additionality for the carbon project and review timberland inventory data for the Elliott in order to deliver a written report and presentation materials that estimate current and potential carbon stocks, potential offset production, caveats associated with this estimate, and the financial value of such offsets under current and future pricing trends.

II. Financial Model

The contractor modelling team will work closely with OSU to meet the project goals noted previously and to deliver a financial model that estimates revenues and costs for a minimum of 50 years for the Elliott under three different harvest/management scenarios. Assuming potential eligibility for a carbon project in the Elliott, the financial model must also incorporate relevant carbon revenues, costs and management implications.



Initially, the contractor modelling team will assist OSU in establishing parameters for three different management scenarios that reflect OSU's direction for conservation objectives, harvest objectives and techniques, and land management allocations. Across all three scenarios:

- The spatial harvest schedule should be developed with a 150-year planning horizon and five-year planning periods
- Harvest flows should be sustainable over this 150-year period, with a stable, sustainable ending inventory
- Harvest schedules should be compatible with the Oregon Forest Practices Act and draft conservation measures provided by OSU based upon development of a Habitat Conservation Plan for the forest pursuant to the federal Endangered Species Act. Draft conservation measures will be provided by OSU.

Modelling performed by the contractor will utilize the existing 2014 inventory of the Elliott State Forest and any adjustments that may be appropriate as a result of a "spot check" of that inventory against records for stand age. The spot check will be conducted by OSU under separate contract. Contractor will be expected to collaborate with OSU to insure the execution and oversight of that contract adequately develops and implements an accurate, practicable, and efficient approach to "spot check" the inventory against records for stand age.

Stands should be projected forward to a 2020 starting date using FVS or ORGANON, which Contractor will use to develop growth and yield of candidate prescriptions for each of the three scenarios. OSU will provide guidance on forestry prescriptions Contractor will utilize in the different scenarios, as well as a harvest unit layer.

For each five-year period, the financial report should include harvest revenues that recognize log size and species, as well as costs that account for logging costs, haul costs, site preparation, regeneration and other silviculture costs, road construction, road maintenance costs and administrative costs to support the timber management program and protect asset value. Contractor will develop these cost assumptions in collaboration with OSU.

Project Deliverables

I. Carbon Assessment

The carbon assessment should deliver the following:

- **Phase 1: Preliminary Carbon Report** including but not limited to:
 - Summary of carbon project requirements and associated long-term management responsibilities;
 - Description of carbon market dynamics, risk and pricing history.
 - Identify benefits and challenges associated with compliance and voluntary carbon programs,
 - Pros and cons of enrolling in a compliance-based or voluntary scheme that reflects considerations and constraints provided by OSU based on research program objectives, regulatory requirements, and stakeholder discussions.



- **Phase 2: Carbon Project Implementation Plan** including but not limited to:
 - **A written report and presentation materials that:**
 - i. Identifies and charts steps associated with registering a carbon project;
 - ii. Estimates timeline for the registration of a carbon project in the Elliott forest from start of application process to estimated start of revenue stream;
 - iii. Identifies expertise required for project implementation
 - iv. Provides a preliminary budget document for implementing a proposed work plan to register a carbon project in the Elliott forest
 - **Phase 3: Assessment of Potential Carbon Stocks:**
 - Written report and presentation materials that
 - i. Estimate potential carbon stocks with explicit caveats associated with the estimate,
 - ii. Estimate the financial value of such stocks at current and future pricing trends

II. Financial Model

The modelling component of this request should deliver the following:

- **A financial report** that outlines revenues and costs for a minimum of 50 years for the Elliott forest under three different management/harvest scenarios. The College will apply any discounting as appropriate to the Contractor's final report after delivery of the work product.
- **Presentation materials** summarizing and comparing the three scenarios
- **Digital maps and tabular data**, by five-year period and distinguishable by scenario, that may be reviewed by an interdisciplinary team

Timeline

Targeted project start date: June 1, 2019. Dependent on contract execution.

I. Carbon Assessment

- **Phases 1 and 2:** Negotiable but not more than 90 days from the project start date.
- **Phase 3:** Thirty days after completion of Phases 1 and 2 but not later than October 1, 2019 without express consent of OSU.
- **Final Written Work Product:** Not later than October 1, 2019 without written consent of OSU.

II. Financial Model

- **Within 60 days from project start date:** Harvest analysis and draft harvest/management scenarios, with input from OSU
- **Within 90 days from project start date:** Incorporate and account for draft conservation measures (provided by OSU) in harvest/management scenarios;
- **Within 120 days from project start date but no later than October 1, 2019:** Incorporate carbon assumptions and HCP draft conservation measures (provided by OSU) into the model, and provide financial outputs/projections for all three harvest/management scenarios.
- **Final Written Work Product:** Not later than November 1, 2019