

Invitation for Bid

Solicitation No. Soil 24

HI-CARBON SOIL SAMPLING-24
Department Of Land and Natural Resources
Carbon Smart Land Managers Assistance Pilot Program 2024

State of Hawaii, Department of Land and Natural Resources
1151 Punchbowl Street
Honolulu, HI 96813

1. Introduction

Department of Land and Natural Resources (DLNR), is seeking bids from qualified vendors to perform soil sampling for carbon sequestration and soil health measurements for at maximum ten (10) grantees within the Carbon Smart Land Managers Assistance Pilot Program (CSLMAPP), and to facilitate delivery of soil samples for testing to be undertaken by the University of Hawai'i laboratories (Soil Health, Environment, and Ecosystems Resilience or SHEER lab) at Sherman Hall. The S(HEE)R lab is a multi-user research lab at the University of Hawai'i at Mānoa that develops tools to best characterize, understand, and predict the behavior of diverse soils and ecosystems of Hawai'i, the Pacific Region, and beyond.

Soil samples to be undertaken through coordination with CSLMAPP grantee land managers and DLNR, at designated locations throughout the State. This job may be partially awarded, based on funding availability and permissions for access.

Definitions:

Soil health tests: The Soil Health Test includes a suite of 9 key indicators developed for Hawai'i soils along with bulk density and includes adjustments for mineralogy and legacy of intensive land use successfully. The 9 indicators are hot water extractable carbon, 24-hours CO₂ burst, potentially mineralizable nitrogen, water holding capacity, water stable mega aggregates, pH, total organic carbon, β -glucosidase, and β -glycosaminidase. These indicators and meta data are brought together in a Structural Equation Modeling scoring function to provide a final soil health score.

Deep soil carbon tests, for below ground carbon sequestration analysis:

Deep Soil Carbon measures total organic carbon at a maximum depth of 1.2 m in 20 cm increments to understand the impact of land management practices on soil carbon pools. The stability of the soil carbon pool can be increased with depth as well as effect by applications of carbon amendments (like compost or manure) on the surface. In order to understand the dynamics and ultimately carbon sequestration in soils it is essential to monitor soil carbon throughout the soil profile.

Qualifications of contractor: soil scientist(s) with practicum experience (alongside professional / academic training) in soil sampling for soil health and deep soil carbon laboratory testing; knowledge of

quarantine process for soil samples; possession of a permit / working under agency in possession of a permit to allow safe soil samples shipping across Hawaiian islands; and experience working with the University of Hawai'i SHEER laboratory. Ability to provide explanations to land managers in everyday language, of the meaning and implications of the soil health and deep soil carbon test results, is a plus.

The selected contractor will

- a. Follow a clear protocol checklist (and submit to DLNR)
- b. Provide or acquire supplies needed for all field related sampling activities (and provide list to DLNR)
- c. Be able to produce and submit required labeling information used to track and monitor samples that are collected, in alignment with procedures at the SHEER lab
- d. Know how to delineate a site for sample collection once location is co-determined with the CSLMAPP grantee
- e. Know how to collect a deep soil carbon core
- f. Know how to collect a Hawaii soil health sample
- g. Know how to transport samples to the SHEER lab for analysis and provide materials (including cooler) to do so.

Additional non-mandatory attributes (desired not required) include knowledge of soil profiles, spectral analysis, SOM models, carbon sequestration, fixation, and global carbon modeling.

2. Scope of Work

The selected vendor will be responsible for the following tasks:

2.1 Soil Sampling

Perform appropriate soil sampling for baseline tests and end-of-project soil health and deep soil carbon tests (as defined above in section 1 Introduction) on designated sites as appropriate to soil type, topography, and instructions from CSLMAPP DLNR, for

- a maximum of 10 (ten) land manager grantees,
- at minimum 2 soil health (baseline and end-of-project) and 2 deep soil carbon tests (baseline and end-of-project) for each site, depending on topography, soil types, and other assessment information for which the contractor is qualified to assess).

The sampling events will include inter-island travel; bids should include travel, lodging and other logistical expenses for a maximum of four (4) inter-island trips. Bidders may contact emilie.parry.contractor@hawaii.gov for specifics to enable more precise budget estimations.

2.2 Facilitate Sample Analysis

Facilitate and manage the quarantine, labelling and shipping of the soil samples to University of Hawai'i Manoa Sherman Hall (UH SHEER) Labs . Bids should outline how vendor will ensure samples will not be contaminated. All costs associated with the soil sampling and shipping for analysis, including packaging, should be included in the budget.

3.3 Provide supplemental (to or through the UH SHEER Lab) explanations and support to CSLMAPP land managers and DLNR coordinators, to interpret and apply information from the soil test results.

3. Submission Requirements

Interested vendors are requested to submit the following information:

3.1 Company Profile

- Brief overview of the company, including relevant experience in soil sampling
- Examples of work conducted in the past

3.2 Technical Approach

- Proposed methodology for soil health and deep soil carbon tests.
- Approach to ensuring safe transportation of soil samples.

3.3 Team Composition

- Key personnel who will be assigned to the project and their qualifications

3.4 Budget

- Budget for the project including logistics, fees, soil sampling procedures and lab processing

3.5 References

- Please provide contact information for at least three references from similar projects

6. Project Timeline

The proposed timeline for this project is as follows:

- Project Start: December 2024
- Project Completion: December 2027

7. Submission Instructions

Please submit your response to this IFB via email to Leah.J.Laramee@hawaii.gov with the subject line "IFB Response – Soil 24" by October 31, 2024.

8. Contact Information

For questions regarding this RFI, please contact:

Leah Laramee

State of Hawaii Climate Change Coordinator

Email: Leah.J.Laramee@hawaii.gov

Phone: 808 895 1477

9. LIABILITY INSURANCE

The Contractor shall maintain in full force and effect during the life of this contract, liability and property damage insurance to protect the Contractor and his subcontractors, if any, from claims for damages for personal injury, accidental death and property damage which may arise from operations under this contract, whether such operations be by himself or by a subcontractor or anyone directly or indirectly employed by either of them. If any subcontractor is involved in the performance of the contract, the insurance policy or policies shall name the subcontractor as additional insured.

As an alternative to the Contractor providing insurance to cover operations performed by a subcontractor and naming the subcontractor as additional insured, the Contractor may require the subcontractor(s) to provide its own insurance which meets the requirements herein. It is understood that a subcontractor's insurance policy or policies are in addition to the Contractor's own policy or policies.

The following minimum insurance coverage(s) and limit(s) shall be provided by the Contractor, Including its subcontractor(s) where appropriate.

<u>Coverage Limits</u>	
Commercial General Liability (Occurrence form) limit per occurrence for bodily	\$2,000,000 combined single injury and property damage
Basic Motor Vehicle Insurance :	\$1,000,000 per person
and Liability Policies	\$1,000,000 per accident
PD:	\$1,000,000 per accident

Each insurance policy required by this contract, including a subcontractor's policy, shall contain the following clauses:

1. "This insurance shall not be canceled, limited in scope of coverage or non-renewed until after 30 days written notice has been given to the State of Hawaii, Department of Land and Natural Resources, Division of Forestry and Wildlife, 1151 Punchbowl Street, Room 325, Honolulu, Hawaii 96813."
2. "The State of Hawaii is added as an additional insured as respects to operations performed for the State of Hawaii."
3. "It is agreed that any insurance maintained by the State of Hawaii will apply in excess of, and not contribute with, insurance provided by this policy."

The minimum insurance required shall be in full compliance with the Hawaii Insurance Code throughout the entire term of the contract, including supplemental agreements.

Upon Contractor's execution of the contract, the Contractor agrees to deposit with the State of Hawaii certificate(s) of insurance necessary to satisfy the State that the insurance provisions of this contract have been complied with and to keep such insurance in effect and the certificate(s) therefore on deposit with the State during the entire term of this contract, including those of its subcontractor(s), where appropriate. Upon request by the State, the Contractor shall be responsible for furnishing a copy of the policy or policies.

Failure of the Contractor to provide and keep in force such insurance shall be regarded as material default under this contract, entitling the State to exercise any or all of the remedies provided in this contract for a default of the Contractor.

The procuring of such required insurance shall not be construed to limit the Contractor's liability hereunder or to fulfill the indemnification provisions and requirements of this contract.

Notwithstanding said policy or policies of insurance, the Contractor shall be obliged for the full and total amount of any damage, injury, or loss caused by negligence or neglect connected with this contract.

Thank you for your interest in supporting the State of Hawaii's climate action initiatives.