Department of Lands and Natural Resources (DLNR)
Division of Forestry and Wildlife (DOFAW)

Request for Quote to assist the Division of Forestry and Wildlife (DOFAW) with botanical and other field survey work in Wao Kele o Puna Forest Reserve in Lower Puna, Kau and Kapapala Forest Reserves in the Volcano area. Work is to be done in conjunction with DOFAW staff and will be performed intermittently in accordance with a schedule determined by DOFAW personnel and other limiting factors.

Background

The State of Hawaii is interested in developing new remote sensing technologies in an effort to ease the process of vegetative survey and lower field costs. As a part of this effort The Division of Forestry and Wildlife are in the process of acquiring LiDAR and hyperspectral imagery for the above areas.

The primary goal of this request is to perform field surveys which can be used to verify the accuracy of the remotely sensed data. Data to be collected primarily falls into two categories, botanical survey which will verify the species have been correctly identified by the remote sensing technology, and forest mensuration to field check forest height, volume, and density measurements.

Wao Kele O Puna (WKOP) is 26,000 acres of newly acquired State owned lowland wet forest land on the Island of Hawaii. This land is currently owned by the Office of Hawaiian Affairs (OHA), but is being managed and protected by DLNR.

Work in the Kapapala Forest Reserve will focus on the Kapapala Koa Canoe Management Area located approximately 20 miles south of Volcano National Park. This is an area of approximately 1,200 acres in which large koa trees are being managed for the future production of voyaging canoes.

Kau Forest Reserve is adjacent to the Kapapala Canoe Management Area and is approximately 65,000 acres. The area yet to be surveyed is yet to be determined. Efforts will focus on collecting field samples to determine cause of koa mortality, identifying areas of ungulate disturbance, and measurements of forest under and overstory.

Scope of Service

This contract is seeking up to 400 hours of services by a professional botanist and up to 400 hours of service by a forest field technician. Bidders are free to offer a proposal for all or any portion of the work to be performed.

Work performed under this contract is of an intermittent nature. Schedule will be determined by DOFAW staff in accordance with the need to verify assumptions made from the remotely sensed imagery. DOFAW will attempt to schedule work as far in advance as possible but the bidder understands that at times work may need to be
performed with little notice. Work schedules may also be influenced by weather. In cases where work is postponed by inclement weather or other factors beyond the control of DOFAW compensation will be limited to the amount of time actually spent in the field. No compensation will be awarded for schedule changes or “lost time”.

Due to the distance between the areas of work, it is understood that some allowance must be made for travel. The maximum time allotted for travel will be limited to two (2) hours per day and will apply only to travel within the island of Hawaii. Transportation will be provided by the successful bidder and no allowance for cost incurred for travel will be borne or reimbursed by the State. There will be no compensation or reimbursement for time spent or expenses incurred for inter-island travel. Any helicopter flight time within the Island of Hawaii necessary to reach inaccessible areas will be provided by DOFAW.

All work involves extended periods of walking over areas of rough terrain and periods of inclement weather. By submitting a bid the bidder is certifying that he or she is capable of working effectively and safely in such conditions and will take reasonable precautions including but not limited to supplying practical clothing for inclement weather and first aid supplies.

 Specifications for services are as follows:

**Duties required**

**Botanical Services:**

A. Perform detailed botanical services in areas defined by the remotely sensed imagery as having high species diversity.
B. Collect samples of plants for biochemical and leaf spectral analysis by Carnegie and DOFAW staff.
C. Assist DOFAW staff in other field surveys

**Forestry mensuration technician:**

A. Use a GPS receiver to locate areas of interest specified in the imagery and perform field survey in accordance with project specifications.
B. Travel to areas identified as having understory disturbance and determine the cause of the disturbance.
C. Locate large trees identified in the imagery and use standard forestry equipment to measure dbh, height, top diameter and estimate defect.
D. Establish forest plots and use standard measurement techniques to collect field data.
E. Assist in botanical surveys as needed
Expertise Required:

**Botanical Services:**

  **Minimum Requirements:**
  
  A. Masters degree in botany from an accredited institution.  
  B. Demonstration of ability to perform botanical survey on the Island of Hawaii.  
  C. Working knowledge of global positioning systems and remotely sensed data.

  **Preferred Requirements:**
  
  A. PhD in botany from an accredited institution.

**Field Technician:**

  **Minimum Requirements:**
  
  A. An associates degree in forestry, ecology, botany or related field  
  B. Working knowledge of native and introduced forest plants commonly found in Hawaii.  
  C. Working knowledge of navigation using Global Positioning Systems (GPS) and traditional map and compass or aerial imagery.

  **Preferred Requirements:**
  
  A. A bachelors degree or higher in forestry, ecology, botany or related field  
  B. Previous experience in forest survey in the state of Hawaii.

**IV. Project Duration:**

The project will commence November 30, 2007 or as soon as the contract is executed. A general review will occur at the end of six (6) months. Final date of the project shall be no later than November 29, 2008.

**V. Proposal Procedures**

All proposals shall contain, but are not limited to the following:

1) Consultant’s Qualifications:

   A. General statement identifying the consultant’s experience and technical competence for the project.

   B) The proposal shall provide the following information: name, address, E-mail address, fax number, and telephone number(s) of the individual who may be contacted during the period of proposal evaluation.
C) The consultant’s resume.

2) Bid Requirement:

   A) Must include a budget for the proposed work. Budget should include a per unit breakdown to allow for modification or the project to remain within financial constraints

   B) A statement of desired method for payment. DOFAW can pay monthly, quarterly or bi-annually as services are rendered. Once payment method is understood a final payment is calculated, including the amount retained, and will be paid upon satisfactory completion and acceptance of all work.

VII. Submittal of Project Proposal:

1) Proposals are due by 4:00 pm on November 26, 2007.
2) Bidders must respond to this request through the Hawaii Electronic Procurement System (HEPS) website.
3) The proposal shall include consultant’s name, title, address, email address, and telephone number(s).
4) Submit Proposal To: David Joughin, Division of Forestry and Wildlife, 1151 Punchbowl St., Rm. 325, Honolulu, HI 96813 PH: (808) 586-0915; FAX: 808-587-0160; or E-Mail: David.R.Joughin@hawaii.gov

For Additional information or clarification, contact David Joughin at David.R.Joughin@Hawaii.gov or by telephone at (808)586-0915.