

## JUSTIFICATION AND APPROVAL FOR OTHER THAN FULL AND OPEN COMPETITION

**1. Contracting Agency and Activity.** The Department of the Interior, United States Geological Survey Reston Acquisitions Branch, Reston, VA, plans to contract on a sole source basis. This document sets forth the justification and approval as required by FAR 6.302-1, Only One Reasonable Source and No Other Supplies or Services will Satisfy Agency Requirements.

**2. Nature of Action Being Approved.** The requested procurement is for award of a new firm fixed price contract Campbell Scientific for an Open-Path Eddy Covariance System. The period of performance is 3 months or less and is a single equipment award.

**3. Description of Supplies or Services.** The U.S. Geological Survey (USGS), Water Resources Division, Hydrologic Instrumentation Facility (HIF), requests award of a non-competitive procurement to Campbell Scientific for the purchase of 1 each, Campbell Scientific Open-Path Eddy Covariance Systems for delivery to the Water Science Center in Denver, CO

This water quality equipment is used to measure carbon sequestration and evapotranspiration from various ecosystems covering the United States. This equipment is used to expand on current research focused on carbon and water vapor fluxes from a subalpine lake and sublimation from seasonal snowpacks. When combined with measurements of carbon fluxes of lake inflow and outflow, total carbon for the water can be calculated and would be unique among alpine lakes globally.

Improving our understanding of carbon and hydrological cycles has broad and critical implications in evaluating the sustainability and resilience of ecosystems and global change impacts.

**4. Estimated Dollar Value.** The estimated value of this procurement is \$24,700. This procurement is for a single award with no options.

**5. Statutory Authority.** The proposed action may be awarded on a sole source basis in accordance with: FAR 6.302-1, Only One Reasonable Source and No Other Supplies or Services will Satisfy Agency Requirements.

**6. Rationale Supporting Use of Citation in No. 5.** Campbell Scientific is the original equipment manufacturer of the required equipment. Campbell Scientific maintains proprietary data rights to the equipment and has no known authorized resellers. The required equipment is of a highly specialized nature and integrates into several other systems in the USGS. Purchase of another manufacturer's equipment would require serious modification to existing infrastructure to include writing new computer code or programs to integrate another manufacturer's equipment into the aforementioned systems. This modification of the existing infrastructure would not only cause serious delays in the procurement process due to stringent test requirements but also represents a substantial duplication, estimated to be tens of thousands of dollars of the government's cost.

Use and interfacing of another product(s) would require the following effort: (1) the equipment would have to be tested and proven to meet the manufacturer's and USGS specifications. (2) users would have to be trained on how to use and calibrate the new systems, (3) users would then have to integrate the product into the aforementioned USGS systems, (4) new decoding programs would have to be re-written to take the data output from the new system and convert it to an output that is acceptable for entry into the USGS National Water Information System (NWIS) for data consistency purposes, and (5) users would have to be trained on how to maintain the equipment and perform periodic maintenance inspections. The delays associated with testing the new equipment, receiving training, and interfacing the equipment into the existing infrastructure would be significant, at least 6-9 months.

We request to sole source this requisition to Campbell Scientific, as it is the only known source for this equipment that can meet equipment specifications and integration requirements in the area measuring carbon exchange and evapotranspiration over remote land or water surfaces on a continuous basis. This CO<sub>2</sub>/H<sub>2</sub>O instrumentation has high accuracy, uses an open-path analyzer system, and has low power consumption (6 watts or less of 12 volt power).

It is necessary to operate the system with solar panels and batteries. The installation footprint needs to be minimal in this remote installation site.

Water is a vital resource to humans and other life, and carbon dioxide is the most important trace greenhouse gas regarding global warming potential. To measure and analyze carbon and water exchanges, it is necessary to use state-of-the-art instrumentation, such as this.

This equipment must be simple to integrate with existing Campbell Scientific data logging equipment.

**7. Other Information.** Campbell Scientific is the proprietary manufacturer of the equipment and they possess the technical knowledge and patents covering the intricate designs of the instrumentation and any accessory items associated with their instruments. The Government's request is to sole source this requirement to Campbell Scientific, as it will provide a continuity of equipment and standardization of repair parts to an existing infrastructure. The requested equipment runs on existing programs and will require no modification to programs in order to function seamlessly, saving the government time and money that would be required to integrate a similar product from another vendor.

An internet search for similar gas analyzer and sonic anemometer combination equipment was conducted. The proposed CO<sub>2</sub>/H<sub>2</sub>O equipment utilizes the least power of any open-path eddy covariance system available on the market. Low power requirements are crucial, since commercially available power is not available. Higher power consumption would preclude installation of this equipment.

No other manufacturer can offer equipment that meets both the stringent measurement requirements written by the USGS and the integration requirements of the existing infrastructure.

Procurement History:

<u>Award Number-</u>	<u>Date-</u>
G13PX00261	02/01/2013

**8. The Efforts to Identify Additional Sources Including the Market Research Conducted.**

One other vendor, Li-Cor, can provide a similar model of eddy covariance systems. However, their system requires substantially more power than is available at this field site (greater than 6 watts or less of 12 volts). This vendor's system has been used at another site but required considerable difficulty integrating the vendor's system into the existing data loggers from Campbell Scientific which were already in place. This consumed weeks of manpower and lost data collection time, negatively impacting the ability to conduct needed measurements.

**9. Future Plans to Permit Competition.** To promote competition, HIF continually tests new devices as they become available on the market. HIF routinely attends vendor conferences, trade shows, meetings, and conferences where vendors are present. HIF also attends local Business and Procurement Expositions in order to make vendors aware of USGS needs and business opportunities. HIF encourages vendors to develop and submit products that meet USGS requirements. In addition, HIF promotes visits from vendors to demonstrate and provide information about their products.

**10. Recommendation Program Office**

Based on the above, I recommend this acquisition be conducted on a sole source basis and certify that the above statements are true and correct.

\_\_\_\_\_  
Frank S. Henry, Assoc. Chief, HIF

  
Signature

7-11-13  
Date

**11. Certifications from the Contracting Officer**

- Prices will be determined fair and reasonable by comparison to published list prices and/or invoices for similar goods/services.
- This justification is accurate and complete to the best of my knowledge and belief.

\_\_\_\_\_  
Contracting Officer

\_\_\_\_\_  
Date

