



Control No: (if applicable): FY23-FPAC-Justification-041

United States Department of Agriculture  
Limited Sources/Brand Name Justification  
Less Than the Simplified Acquisition Threshold (SAT)  
FAR 13.106-1(b)(1) - Simplified Acquisitions

**1. Identification of the agency and the contracting activity.**

USDA-NRCS OR Snow Survey, 1201 NE Lloyd Blvd. STE 900 Portland OR. 97232  
FPAC-BC, Western Section, Fort Worth, Tx 76115

**2. Description of supply or service required to meet the agency's needs.**

This procurement will provide the NRCS Snow Survey program the required data collection platforms from remote SNOTEL for use in mission critical operations in water supply forecasting and drought monitoring for the SNOTEL networks. These networks require the soil moisture sensor uses Coaxial Impedance Dielectric Reflectometry as the method to measure the real dielectric permittivity and imaginary dielectric permittivity components of the soil.

**3. Rationale or circumstances for limiting competition.**

Currently the Stevens HydraProbe is the only commercially available sensor that measures real and imaginary permittivity of soil using the Coaxial Impedance Dielectric Reflectometry. The Stevens HydraProbe "dielectric impedance" measurement principle differs from TDR, capacitance, and frequency soil sensors by taking into account the energy storage and energy loss across the soil area using a 50 MHz radio frequency wave.

Stevens Water is the only manufacturer and distributor of these specific soil moisture sensors that provides the four (4) distinct voltages required for soil calculations developed by the Kellogg Soil Survey Laboratory. USDA currently has over 2,000 Stevens Water brand HydraProbes within the SNOTEL network. It would be cost prohibitive to the Government to change the complete network of sensors rather than a portion every year. This drastic change in sensor brand would cause significant loss of more than 20 years of scientific soils records as the records are electronic.

**4. Description of the market research conducted among schedule holders and the results, or a statement of the reason market research was not conducted.**

While Stevens Water brand HydraProbe is the only manufacturer that meets the criteria of being able to measure real dielectric permittivity and imaginary dielectric permittivity components of the soil using Coaxial Impedance Dielectric Reflectometry, an internet search revealed several different vendors that are capable of providing the Stevens Water brand name HydraProbe items.



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**5. Estimated price, including all options, if applicable.**

\$14,620.00 (no options)

**6. Recommended Source(s).**

Brand Name - Stevens Water Monitoring Systems, Inc.

**Certifications & Approval**

☒ The information provided for this justification has been reviewed and certified accurate and complete.

Prepared by:

**WESLEY ENGEL** Digitally signed by WESLEY ENGEL  
Date: 2023.05.17 08:03:34 -07'00'

Wesley Engel

NRCS OR Snow Survey

Portland, OR

**Contracting Officer (less than SAT).** I have reviewed this justification and certify it to be accurate and complete to the best of my knowledge and belief.

 Digitally signed by KYLE HEID  
Date: 2023.05.18 10:39:13 -05'00'

Mr. Kyle L Heid

FPAC-BC, Western Section