SINGLE SOURCE DETERMINATION USING
SIMPLIFIED ACQUISITION PROCEDURES (SAP)
FOR AN ACTION NOT EXCEEDING THE SIMPLIFIED ACQUISITION THRESHOLD
(AUTHORITY: FAR 13.106-1(b)(1))

(Insert PR/RFQ number, as applicable)

1. **Agency and contracting activity.** Department of Commerce, NOAA Acquisition and Grants Office (AGO), Ocean Exploration Research Division (OERD) and NOAA Pacific Marine Environmental Laboratory (PMEL)

2. **Description of supplies or services required to meet agency needs (including the estimated value).**

   This request is for an order of n=20 Iridium 9523 satellite transceiver modems. The 9523 modems are for integration into the assembly of pop-up floats built in-house at the Ecosystems-Fisheries Oceanography Coordinated Investigations (EcoFOCI) lab under the Innovative Technologies for Arctic Explorations (ITAE) program. The pop-up float is a developmental technology asset for NOAA. Twenty pop-up floats will be assembled and deployed in spring of 2021 in the Bering and Chukchi Seas as part of PMEL research.

   The Iridium 9523 modem is an Iridium transceiver module designed to support all Iridium's voice and data services (dial-up, direct Internet, RUDICS, SBD and SMS). The Iridium 9523 module has small form factor, reliable coverage and low latency. It is intended for integration with other functions by application developers.

   Total estimated cost for n=20 Iridium 9523 satellite transceiver modems ($475.00 each) and shipping ($39.99) will be $9,539.99. We respectfully request procurement through an individual purchase order.

3. **Identification of the single source or the brand name to be solicited.**
   Brand Name/Part must be: Iridium (Core) 9523

4. **Supporting rationale.** Only one source or brand name is reasonably available as detailed below:

   - ✓ <u>Brand Name</u> –
     The code for the float that controls data storage and transmission is written for the Iridium 9523 modem, a different modem cannot replace the 9523 without redesigning the float circuit board hardware and programming software. The Iridium brand and the 9523 modem part are therefore essential to the float's design. This particular brand name is essential to the float's design and market research indicates similar products do not meet or cannot be modified to meet those design needs.

   - ✓ <u>Compatibility to existing systems or equipment</u> -
     The code for the float that controls data storage and transmission is written for the Iridium 9523 modem. Similar products from different brands (ex. SatphoneStore, Beam) do not have the exact size or functionality required for the Iridium modem to integrate with the float circuit board. For the purpose of compatibility and continuity with the float

design, purchasing the Iridium 9523 is a priority. The required modem must be compatible in all aspects (form, fit, and function) with the existing float design and the Iridium 9523 is uniquely qualified to meet the requirement.

5. Market Research.

NAL Research Corporation
url: https://www.nalresearch.com/products/trackers-modems/embedded-modules/modem-9523/
cost: $475 each
notes: lowest overall cost

SatPhoneStore
url: https://www.satphonestore.com/tech-browsing/iridium-core-9523-modem.html
cost: $1,250 each
notes: prohibitive cost

Maxtena
url: https://www.maxtena.com/products/iridium/iridium-9523-transceiver/
cost:$490 each
notes: reasonable market price, still higher than NAL Research Corp.

MetOcean Telematics
url: https://www.metocean.com/product/9523-transceiver/
cost: $550 each
notes: includes SIM cards that are not needed

In conclusion, purchasing the Iridium 9523 satellite transceiver modems from NAL Research Corporation is within reasonable cost for an oceanographic-quality transceiver and furthermore supports compatibility to existing designed systems.

6. Technical/Requirements Representative Certification

I certify that this requirement constitutes the Government's minimum needs and the supporting data provided herein is accurate and complete to the best of my knowledge and belief.

Digitally signed by DONOHOE.SARAH.SOPHIA.1516633618
Date: 2021.01.21 11:34:42 -08'00'

_____ _____1/21/21_____

Sarah Donohoe. LTJG/NOAA Date
PMEL/EcoFOCI, Scientific Support Engineer

7. Determination

I hereby determine that the circumstances of this action deem only one source is reasonably available. This determination is accurate and complete to the best of my knowledge and belief.

_____ _____

Ben Carlson, Contracting Officer Date