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=7 Turner Designs Cyclops Submersible Sensors [No Housing and No Connector configuration] and n=1 Rhodamine 400 ppb calibration standard solution for pop-up floats built in-house at the Ecosystem-Fisheries Oceanography Coordinated Investigations (EcoFOCI) lab under the Innovate Technologies for Arctic Exploration (ITAE) program. Seven floats outfitted with fluorometers will be deployed between July and October 2020 in the Bering and Chukchi Seas.

The Turner Designs Cyclops Submersible Sensor is an accurate single-channel detector that can be used for many different applications. It is designed for integration into multi-parameter systems from which it receives power and delivers a voltage output proportional to the concentration of the fluorophore, particle, or compound of interest. The Cyclops voltage output can be correlated to concentration values by calibrating with a standard of known concentration.

Total estimated cost for n=7 Turner Designs Cyclops Submersible Sensors [No Housing and No Connector configuration] ($1,475.00 each) and n=1 Rhodamine 400 ppb calibration standard solution ($145.00) will be $10,470. We respectfully request procurement through an individual purchase order.

Delivery date shall no later than January 10th 2020.

3. Identification of the single source or the brand name to be solicited.

Turner Designs, 1995 N 1ST ST, San Jose CA 95112-4220
Thomas D. Brumett, 408-212-4046, tbrumett@turnerdesigns.com

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

✓ Compatibility to existing systems or equipment - The required supplies or service must be compatible in all aspects (form, fit, and function) with existing systems or equipment and the source is uniquely qualified to meet the requirement.

The ITAE Pop-Up floats are a developmental technology. Designs for the floats have run through four different generations since building first began in 2015. In 2017, a fluorometer was added to the sensor package and integrated into the program and circuit-board design. Two pop-ups were made to integrate the Turner Designs Cyclops Submersible Sensor [No Housing and No Connector

configuration] and use Chlorophyll-a fluorescence concentration measurements from the sensor as a proxy for primary productivity. The data received from this sensor and its integration into the pop-up float was successful. The pop-up float design is specific to the Cyclops Submersible Sensors [No Housing and No Connector configuration], including machined ports in each float that fit the exact dimensions of the sensor, pressure housings that house the sensor, and software that controls the sensor.

Turner Designs is the only vendor that sells the Cyclops Submersible Sensor with the "No Housing" and "No Impulse Connector" configuration. Other suppliers carry Turner Designs Cyclops-7F sensors in stock configurations, but they do not supply them with the "No Housing" and "No Impulse Connector" configuration (see Fondriest Environmental under Market Research, and attached email correspondence).

5. Market Research.

Current market research includes:

Fondriest Environmental Cyclops Submersible Sensor
https://www.fondriest.com/turner-designs-cyclops-7f-submersible-sensors.htm
Cost: ~$1,635.00 each
Notes: Cost is more expensive than purchasing directly from Turner Designs, does not allow options for "No Housing" or "No Impulse Connector". Fondriest representative Paul Niederding suggested working directly with Turner Designs for our needs (see attached email correspondence).

Envco Cyclops Submersible Sensor
https://envcoglobal.com/catalog/water/water-quality-analysis/fluorometry/cyclops-7-submersible-fluorometer
Notes: Envco representative Richard Morrow suggested working directly with Turner Designs for our needs (see attached email correspondence).

Xylem YSI Total Algae Sensor
https://www.fondriest.com/pdf/ysi_total_algae_spec.pdf
Cost: $3,040.00 each
Notes: Depth only rated to 100m. Cost is nearly twice that of the Turner Designs Cyclops Submersible Sensor.

SeaBird ECO Puck
https://www.seabird.com/auv-rov-sensors/eco-puck/family?productCategoryId=55352274651
Cost: ~$4,100
Notes: cost is prohibitive.

In conclusion, purchasing the Turner Designs Cyclops Submersible Sensors from Turner Designs directly is within reasonable cost for an oceanographic chlorophyll fluorometer and furthermore supports compatibility to existing systems by providing the sensors without housing or impulse connector.

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.

DONOHOE.SARAH.SOPHIA.1516633618 Digitally signed by DONOHOE.SARAH.SOPHIA.1516633618 Date: 2019.11.26 10:32:17 -08'00'

_____ __11/25/2019___

Sarah S. Donohoe Date

Scientific Support Engineer, LTJG/NOAA

7. Determination (Required)

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.

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(Insert name) Contracting Officer Date