#### **Supplier Scouting Opportunity**

Item to be scouted: Phosphate Sensor

**Item description:** This product performs lab-grade measurements in all liquid water environments - high performance sensitive wet-chemical analysis; high resolution data up to every 5 minutes; easily swappable reagents; thousands of readings per reagent canister; onboard calibration and standardization; contained onboard waste storage; deployable to 6000 meter depth. Applications include rivers/estuarine monitoring, aquaculture, ocean science, autonomous vehicles, and wastewater monitoring.

NAICS code: 334513

Technical Information ------Supplier Information ------Type of supplier being sought: Manufacturer

Reason for scouting submission: Sole Source Foreign Manufacture (BABA)

Summary of technical specifications and performance requirements

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**Describe the manufacturing processes (elaborate to provide as much detail as possible):** Electronic and mechanical assembly. Manufacturing processes are not provided in specification documentation for sensor.

#### Provide dimensions / size / tolerances / performance specifications for the

item: Temperature range: 0-35 degrees C; Power consumption: 1.8 W; Range: 0-100 uM; Limit of Detection: 0-02 uM; Sample volume: 0.6 mL; Max depth: 6000 m; Comms: USB/serial; Total height: 56 cm; Total width: 16 cm.

Must weigh less than 6.8 kg in air with reagents on board for mooring purposes; must work on an LED wavelength of 870 nm; must draw no more than 1.8 W at max capacity; must have either RS233/RS485 communications output; must have detection limit of less than or equal to 0.02 uM; must have range of 0-100 uM; must be able to internally record at least 1GB of memory; must have a sample rate of at least one sample per 6 minutes; reagents must be enclosed in plastic cartridges; must be able to record 1000 samples at a minimum; software and communications cables must be provided by vendor; must have depth rating of 6000 meters; must operate within a temperature range of 0-35 degrees C; waste must be stored in onboard canister; must have a deployment cable (open tail) 5 meters in length. Reagent cartridges must be refillable from vendor and purchased from vendor or swappable.

**List required materials needed to make the product, including materials of product components:** Required materials are not provided in specification documentation for sensor.

Are there applicable certification requirements?: No Are there applicable regulations?: No Are there any other standards, requirements, etc.?: No

#### **Business Information**

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#### Volume and pricing

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**Estimated potential business volume:** One-time purchase of quantity 1 phosphate sensor with quantity 1 deployment cable.

Estimated target price / unit cost information (if unavailable explain): \$25,570.00 total

#### **Delivery requirements**

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When is it needed by?: Deliver by 30 days after date of award.

Describe packaging requirements: Packaging guidance not provided by program office.

Where will this item be shipped?: 4840 South State Street, Ann Arbor, MI 48108

#### **Additional comments**

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**Is there other information you would like to include?:** Other brands were already sent to the program office for technical evaluation. Brands include Sea-Bird's HydroCycle-PO4 (no longer manufactured), Xylem's Alyza IQ, and Yokogawa's WE440. None were found to be technically acceptable and meet all requirements.

## Additional Information

Photos or diagrams of the item

Check if you uploaded file(s) to Box.com: Yes

Agree (click to read agreement): Yes

#### **Clear Water** Chemical Sensor Series Precision submersible chemical sensors SENSORS

# Phosphate sensor

Based on advanced lab-on-chip technology, this miniaturised microfluidic phosphate sensor performs lab-grade measurements in all liquid water environments.



### **Specifications**

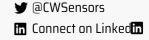
Temperature range: 0-35 °C Power consumption: 1.8 W 0-100 µM Range: Limit of Detection: 0.02 µM

Sample volume:	0.6 mL
Max depth:	6000 m
Comms:	USB/serial
Total height:	56 cm

Applications: rivers/estuarine monitoring, aquaculture, ocean science, autonomous vehicles, wastewater monitoring



➡ info@clearwatersensors.com www.clearwatersensors.com





Environmentally friendly -Contained onboard waste storage



Deep sea - Deployable to 6000 m depth



High performance - Sensitive wet-chemical analysis



High-resolution data up to every 5 minutes



**User friendly** - Easily swappable reagents



Long endurance - Thousands of readings per reagent canister



No drift - Onboard calibration and standardisation



