



# ADMINISTRATION COMMITTEE

Administration Building  
10844 Ellis Avenue  
Fountain Valley, CA 92708  
(714) 593-7433

## Agenda Report

---

**File #:** 2023-2898

**Agenda Date:** 4/12/2023

**Agenda Item No:** 2.

---

**FROM:** Robert Thompson, General Manager  
Originator: Lan C. Wiborg, Director of Environmental Services

**SUBJECT:**

**REPLACEMENT OF CONDUCTIVITY-TEMPERATURE-DEPTH (CTD) WATER QUALITY SAMPLING SYSTEM FOR OCEAN MONITORING**

**GENERAL MANAGER'S RECOMMENDATION**

RECOMMENDATION:

- A. Approve a sole source purchase order to Sea-Bird Electronics, Inc. for a conductivity-temperature-depth water quality sampling system in the amount of \$156,001, plus applicable sales tax, and
- B. Approve a contingency of \$7,800 (5%).

**BACKGROUND**

The conductivity-temperature-depth (CTD) sampler, commonly used by ocean discharging wastewater agencies, measures a suite of offshore water quality parameters on a monthly to quarterly basis as required by Orange County Sanitation District's (OC San) National Pollutant Discharge Elimination System (NPDES) permit and Ocean Monitoring Program. The CTD is operated onboard the Motor Vessel *Nerissa* where it is lowered through the water column approximately 184 times quarterly to collect key compliance water quality data including conductivity, temperature, depth, dissolved oxygen, pH, water clarity, light penetration, colored dissolved organic material, and chlorophyll. The CTD connects to a water sampler to collect discrete water samples from depths prescribed in the NPDES permit. The measured parameters are used to detect the location of OC San's discharged effluent plume and monitor the quality of receiving waters to ensure protection of beneficial uses.

**RELEVANT STANDARDS**

- Comply with environmental permit requirements
- Maintain a culture of improving efficiency to reduce the cost to provide the current service level or standard
- Commitment to safety & reducing risk in all operations

**PROBLEM**

The current CTD sampler being used is eight years old and the back-up CTD sampler is 15 years old. The manufacturer recommended lifespan is 7-10 years. With increasing age, the sampling unit becomes less reliable and requires more service time, staff time, and resources to stay in working condition. Furthermore, the vendor has recently transitioned to a more modern and reliable technology for sensor connectors which requires replacement of each of the sensor connectors and cables to ensure continued operability.

**PROPOSED SOLUTION**

Approve a sole source purchase order to Sea-Bird Electronics, Inc. for a CTD system in the amount of \$156,001 plus applicable sales tax, to replace the current system and improve reliability for offshore water quality sampling.

**TIMING CONCERNS**

Long lead times by the vendor to manufacture a unit due to supply chain issues may increase the difficulty in purchasing this unit as budgeted for the current fiscal year. Potential cost and down time may increase if the current system is not replaced.

**RAMIFICATIONS OF NOT TAKING ACTION**

If a new replacement CTD sampling unit is not procured, OC San is at risk of the current CTD sampler failing. Should this happen, NPDES compliance sampling may not be met for water quality, which could lead to enforcement action and daily penalties up to \$25,000 for each violation, in addition to other actions deemed appropriate by the EPA and SARWQCB.

**PRIOR COMMITTEE/BOARD ACTIONS**

N/A

**ADDITIONAL INFORMATION**

OC San conducts regional water quality sampling in coordination with the three other large POTWs in Southern California as part of the NPDES Southern California Bight Regional Water Quality Program. To facilitate data comparability between program participants, the POTWs agreed to purchase and maintain similar oceanographic instrumentation (i.e., Sea-Bird Electronics, Inc).

The items being requested are compatible with water quality instrumentation already owned by OC San and supported through staff training in existing software and hardware operation and maintenance. Sea-Bird Electronics, Inc has a proven track record within the greater oceanographic community of precise and accurate instrumentation, coupled with excellent technical support.

Sea-Bird Electronics, Inc. is an OC San Board approved Original Equipment Manufacturer vendor for ocean monitoring instrumentation. Discounts for government organizations and purchase of sensors in bulk quantities have been applied by the vendor. The cost of \$156,001 includes the CTD system with water quality sensors and cables, spare sensors and cables, and freight. A 5% contingency is

requested in the event of pricing changes due to tariffs, delays in placing the order beyond the quote availability, or other unforeseeable changes.

**CEQA**

N/A

**FINANCIAL CONSIDERATIONS**

This request complies with authority levels of OC San's Purchasing Ordinance. This item has been budgeted in Division 630 2022/2023 Capital Equipment. The available funding is sufficient for this action.

<u>Date of Approval</u>	<u>Contract Amount</u>	<u>Contingency</u>
04/12/2023	\$156,001	\$7,800 (5%)

**ATTACHMENT**

*The following attachment(s) may be viewed on-line at the OC San website ([www.ocsan.gov](http://www.ocsan.gov)) with the complete agenda package:*

N/A