



MARIANO MARCOS STATE UNIVERSITY

Bids and Awards Committee

BID BULLETIN No. 2022-028

**Project: Procurement of Multi-Water Quality Parameter Tester for the DOST-PCAARRD
Funded Project Titled, "Glass Eel early Weaning and Nursery Grow Out Operations"
ABC: P1,600,000.00**

Issued pursuant to Sec. 22.5 of the IRR of R.A. 9184 to clarify and/or amend certain provisions in the Bidding Documents issued for the above project:

A. AMENDMENTS/INCLUSIONS

Reference	Amendment/Inclusions
Technical Specifications	<p>Multi-water Quality Parameter Tester</p> <p>Applications:</p> <p>-Water quality measurement in Freshwater, Saltwater, and Brackish water.</p> <p>Parameters Measured:</p> <p>-Temperature (range: -5 to 50°C; accuracy: ±0.10°C; resolution: 0.01°C),</p> <p>Conductivity (range: 0 to 100 mS/cm; accuracy: ± (0.5% of reading + 0.001 mS/cm; resolution: 0.001),</p> <p>Depth (range: 0.25m; accuracy: ±0.05m; resolution: 0.01m),</p> <p>pH (range 1-14 pH Units; accuracy: ±0.2 pH units; resolution: 0.01 pH units),</p> <p>Dissolved Oxygen (LDO) (range: 0 to 60mg/L; accuracy: ± (0.1 mg/L at < 8mg/L; ± 0.2 mg/L at >8mg/L; ±10% reading a >20 mg/L; resolution: 0.01mg/L),</p> <p>Turbidity (range: 0 to 3000 NTU; accuracy: ±1% up to 100NTU, ±3% form 100 to 400NTU, ±5% from 400 to 3000NTU; resolution: 0.1 NTU form 0-400 NTU; 1 NTU for >400NTU,</p> <p>ORP (range: -999 to 999mV; accuracy: ±20mV; resolution: 1mV)</p> <p>Chlorophyll a, (range: low sensitivity: 0.03 to 500µg/L; medium sensitivity: 0.03 to 50µg/L; high sensitivity: 0.03 to 5µg/L; Accuracy: ± 3% for signal level equivalent of 1ppb rhodamine WT dye or higher using a rhodamine sensor; resolution: 0.01 µg/L</p> <p>Blue-green algae (range: low sensitivity: 150 to 2,000,000 cells/mL; medium sensitivity: 150 to 200,000 cells/mL; high sensitivity: 150 to 20,000 cells/mL; Accuracy: ± 3% for signal level equivalent of 1ppb rhodamine WT dye or higher using a rhodamine sensor; resolution: 1 cell/mL</p> <p>Rhodamine</p> <p>Ammonia (range: 0 to 250 mg/L-N; accuracy: greater of ±10% of reading, or ±2 mg/L-N; resolution: 0.01 mg/L-N)</p>



Bids and Awards Committee

	<p>Nitrate (range: 0 to 250 mg/L-N; accuracy: greater of $\pm 10\%$ of reading, or ± 2 mg/L-N; resolution: 0.01 mg/L-N)</p> <p>Chloride (range: 0 to 18,000 mg/L; accuracy: greater of $\pm 10\%$ of reading, or ± 5 mg/L; resolution: 0.01 mg/L)</p> <p>Features:</p> <ul style="list-style-type: none">-Self-monitoring system reports the status of the instrument, flags the data, and shows the user where the problem is with assistance on how to solve the issue.-User-scheduled calibration and maintenance intervals indicate when they are due.-Guided and semi-automated calibration routines lead the user through the calibration process.-Calibration results are stored with date and time, calibration type, user identification, and user notes.-Check calibration process allows the user to verify calibration and store the results.-Calibration reports contain information about previous calibrations and calibration checks.-Sensor status is saved with every line of data and is contained in the log file.-Dedicated communications modules allow easy integration with data loggers and telemetry systems.- fully IP67 handheld designed for field use with a full-color screen that is visible in direct sunlight. <p>INCLUDE: HL4 Sonde With internal battery pack and storage/calibration cup. Depth Rating – up to 200 meters (656 ft) Deployment cable or mooring cap must be installed. Communication module: USB, SDI-12, RS232 Modbus and TTY, RS485 Modbus. User interface - Operating Software on Microsoft Windows OS (Windows XP with Service Pack 3 or later) Logging - 4 GB of internal memory</p> <p>INCLUDE: Surveyor HL Handheld Graphical Display – Color, LCD QVGA. Transflective (readable in direct sunlight). Power supply include Lithium-ion rechargeable Battery with battery life of least 10 hours continuously on (20 °C). IP Rating of Handheld meter: IP67 Buoyancy: Positively buoyant in water. Material: polycarbonate with thermoplastic elastomer (TPE) overmold</p>
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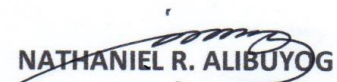
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Bids and Awards Committee

	<p>Operating temperature - 5 to 50 °C (23 to 122 °F).</p> <p>Include:</p> <ul style="list-style-type: none">- Training at least 5 personnel upon delivery on the operation- Operational Manual (English)- Certificate of Calibration- Calibration chemicals
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For the guidance and information of all concerned.

August 8, 2022.


NATHANIEL R. ALIBUYOG
BAC CHAIR