NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)
NATIONAL OCEAN SERVICE (NOS)
CENTER FOR OPERATIONAL OCEANOGRAPHIC PRODUCTS AND SERVICES (CO-OPS)
STATEMENT OF NEED

Replacement Response Vessel Acquisition
Fiberglass Downeast Utility Vessel
Chesapeake Field Office

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1. PURPOSE

The National Ocean Service (NOS), Center for Operational Oceanographic Products and Services (CO-OPS), requires the acquisition of one commercial-duty fiberglass vessel to replace an aging response vessel used in support of NOAA scientific, environmental monitoring, hydrographic, construction support, and emergency response operations.

The vessel shall support the installation, maintenance, inspection, repair, and recovery of water level stations, current meter stations, meteorological sensors, and associated oceanographic instrumentation throughout the Chesapeake Bay, Atlantic Coast, Great Lakes, Gulf Coast, and nearshore coastal waters for the National Water Level Observation Network (NWLON), the Physical Oceanographic Real Time System (PORTS), and the National Current Observation Program (NCOP).

The contractor shall furnish all labor, materials, equipment, testing, documentation, training, transportation, and delivery necessary to provide a complete operational vessel ready for NOAA service.

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2. APPLICABLE STANDARDS

The vessel shall be designed, constructed, and equipped in accordance with the latest applicable editions of:

- ABYC Standards
- USCG Regulations
- NFPA Marine Electrical Standards
- EPA Marine Fuel System Requirements
- NMEA 2000 Standards
- Manufacturer Installation Requirements
- State and Federal Highway Transportation Requirements

Where conflicts exist, the more stringent requirement shall apply.

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3. GENERAL VESSEL REQUIREMENTS

Vessel Type
Commercial-duty Downeast utility vessel.
The vessel shall provide:

- Excellent sea keeping characteristics
- Stability during deployment operations
- Large open work deck
- Trailerability
- Long-term durability
- Ease of maintenance

Dimensions
Length Overall (LOA):

- Bracket measurement is not included in the LOA
- Minimum: 26 feet
- Maximum: 30 feet

Beam:

- Minimum 9’5”

Draft:

- **MANDATORY ELEMENT**Shall not exceed 30 inches with engines raised

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4. HULL CONSTRUCTION

Hull Design
The hull shall be a Downeast-style semi-displacement design optimized for:

- Coastal operations
- Chesapeake Bay operations
- Great Lakes operations
- Moderate offshore conditions
- Low-speed work operations
- Fuel efficiency

Hull Material
****MANDATORY ELEMENT****
Hull construction shall be:

- Hand-laid fiberglass
- Commercial-duty laminate schedule
- Solid fiberglass bottom construction

Cored hull bottoms will not be accepted.

Structural System
Contractor shall provide:

- **MANDATORY ELEMENT**Fiberglass stringer grid system
- Integrated bulkheads
- **MANDATORY ELEMENT**Reinforced transom
- **MANDATORY ELEMENT**Reinforced deck support system

Hull structure shall be designed to support:

- Full fuel load
- Six personnel
- Mission equipment
- Davit loading operations

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5. DECK CONFIGURATION

Aft Working Deck
The primary mission area shall be an open aft working deck.
Minimum clear unobstructed deck area:

MANDATORY ELEMENT **80 square feet (minimum)**
Deck shall be free from unnecessary obstructions.
Deck shall support:

- Instrument deployment
- Station maintenance
- Equipment handling
- Personnel movement

Deck Finish
Provide:

- Molded non-skid surface
- Self-bailing deck
- Oversized cockpit drainage scuppers

Hull Protection
Provide:
Port Side
Heavy-duty hull protection plating/rub strakes aft of davit installation.
Starboard Side
Heavy-duty hull protection plating extending midship to aft.

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6. CABIN CONFIGURATION

Pilot House
Fully enclosed pilothouse.
Minimum standing headroom:
6 feet 4 inches

Target headroom:
6 feet 8 inches

Door
Provide:
- Hard aft bulkhead
- Heavy-duty locking swing door

Seating
Provide:
- Two captain's chairs
- Storage beneath seating

Climate Control
Provide:
10,000 BTU Marine HVAC System
System shall provide:
- Air conditioning
- Heating

Suitable for Great Lakes spring and fall operations.

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7. PROPULSION SYSTEM

Engines
Provide:
Twin Outboard Engines
MANDATORY ELEMENT
Acceptable Manufacturers:
- Mercury
- Yamaha
- Suzuki

No substitutions.
Minimum engine rating:
200 HP each
Minimum total horsepower:
400 HP
Commercial-duty engine models preferred.

Propellers
Provide:
- **MANDATORY ELEMENT**Stainless steel propellers
- **MANDATORY ELEMENT**Counter-rotating configuration

Performance Requirements

Vessel shall maintain safe planing operation with:

- Full fuel load
- Six personnel
- Mission equipment

Provide:
Integration - **MANDATORY ELEMENT**The vessel shall incorporate an integrated station-keeping capability utilizing GPS positioning and engine control technology when available from the proposed propulsion manufacturer. The system shall assist operators in maintaining vessel position during deployment and recovery operations.

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8. FUEL SYSTEM

Provide:
Minimum total capacity:
140 Gallons
Fuel tanks shall be:

- Marine-grade aluminum
- Baffled
- EPA compliant

Provide:

- Mechanical sending units
- Fuel water separators
- Accessible service points

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9. ELECTRONICS PACKAGE
MANDATORY ELEMENT
The following electronics or similar Garmin shall be supplied and installed.

Navigation Displays
Twin Lowrance HDS PRO 16
Flush-mounted.
Networked through:

- Ethernet
- NMEA 2000

Sonar
Lowrance Active Imaging HD 3-in-1
Including:

- SideScan
- DownScan
- CHIRP Sonar

Radar
Lowrance HALO24
24-inch dome radar.

Weather
Lowrance WM-4
Including SiriusXM weather capability.

Communications
Lowrance Link-9 VHF
Including:
- AIS receiver
- GPS
- DSC capability

Antenna
Provide:
- 8-foot fiberglass antenna
- Minimum 6 dB gain

Searchlight
Provide:
- Roof-mounted LED searchlight
- 360-degree rotation
- Helm control
- Wireless remote

Provide:

Marine Intercom / Two-Way Hailer System
- The contractor shall furnish and install a commercial-grade marine two-way hailer system integrated with the vessel's VHF communications system.

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10. STABILIZATION SYSTEM

Provide:
Seakeeper 1 Gyroscopic Stabilizer
Or current Seakeeper model specifically rated by Seakeeper for the proposed vessel.
Installation shall follow manufacturer requirements.

Provide:
Hydraulic or Electric Trim Tabs
Integrated into vessel controls.

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11. DAVIT SYSTEM

Provide:
MANDATORY ELEMENT
Minimum lifting capacity:
500 pounds

Provide:
- Structural reinforcement
- Capstan winch
- 360-degree rotation
- Electrical controls

Location:
Port side immediately aft of cabin bulkhead
The davit location is considered mission critical.
Alternative locations will not be accepted.

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12. BOARDING AND DIVE ACCESS

Provide:
MANDATORY ELEMENT
TACO Boarding Handles
~~Actual handles shall be installed.~~
~~Receiver-only systems will not be accepted.~~
TACO brand Come On Board handles and Receivers
Mounting Location: NOAA has mission specific needs for the handles and will provide location and mounting layout during kickoff and design meetings.

Provide:
MANDATORY ELEMENT
Four-Step Dive Ladder
Mounted on engine bracket center post assembly.

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13. AUXILIARY SYSTEMS

Provide:
Raw Water Washdown
Including:
- Dedicated pump
- Through hull pickup
- Debris strainer

Provide:
Removable Head

Provide:
Portable Power Station Mount
Dedicated mounting bracket and wiring provisions.

Provide:
Bow Thruster
Factory-installed marine bow thruster designed and sized specifically for the proposed vessel.

Provide:
Windlass and Ground Tackle

- Electric windlass
- 22–25 lb stainless anchor
- 300 ft of rode
- 30 ft of chain
- Helm controls

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14. TRAILER

Provide:
Aluminum Tri-Axle Trailer (Trailer will be used to haul the vessel over long distances)
Minimum capacity:
13,000 pounds
Trailer shall include:

- Electric Disc brakes on all axles
- Aluminum wheels
- Radial tires
- LED lighting

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15. TESTING REQUIREMENTS

Sea Trial
Minimum:

Four-hour sea trial
Demonstrate:

- Acceleration
- Cruise speed
- Steering
- Electronics
- Stability

Davit Test
Contractor shall perform a full-load davit test.

Minimum test load:
500 pounds
Stability Test
Contractor shall demonstrate vessel stability while operating the davit at maximum rated load.
NOAA reserves the right to witness all testing.
Contractor shall provide NOAA a minimum of fourteen (14) business days notice before testing.

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16. WARRANTY

Provide minimum:
One-Year Vessel Warranty
Warranty shall cover:

- Hull
- Structural components
- Installed equipment
- Workmanship

Manufacturer warranties shall be transferred to NOAA.

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17. DELIVERY

FOB Destination.
Deliver to:
NOAA Chesapeake Field Office
672 Independence Parkway
Chesapeake, Virginia 23320

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18. ACCEPTANCE

Final acceptance shall occur following:

- Delivery inspection
- Sea trial review
- Equipment verification
- Documentation review
- Resolution of deficiencies

The Government reserves the right to reject the vessel if any requirement of this specification is not met.

19. VESSEL RENDERING (for visual concept only)