Statement of Work – Annual Shipyard Services
NOAA Research Vessel SHEARWATER
1305M226Q0210

A] GENERAL INFORMATION:

1] This Statement of Work contains the requirements for shipyard services on the NOAA Research Vessel *Shearwater* (R6201).

2] The general characteristics of the vessel are as follows:

Length:	62 feet	Beam:	24 feet
Draft:	6 feet	Displacement:	41.3 tons

3] All work is to be accomplished at the Contractor's facility. NOAA will deliver the vessel to the Contractor's facility, and re-delivery will also be at the Contractor's facility. The required performance period for all work defined herein is: September 1, 2026 to April 30, 2027.

All work must be accomplished no later than April 30, 2027, in order to conduct research and education missions in the Channel Islands National Marine Sanctuary.

4] Coordination of work schedules will be the responsibility of the Contractor in order to avoid any delays or disruptions, and to adhere to the performance period. The Contractor will provide all facilities, labor, materials, tools, and services required to complete the work.

5] Upon arrival at the Contractor's facility the contractor shall accept full responsibility for the safety of the vessel, including fire protection, security patrols, water-tight integrity, protection from adverse environmental conditions, etc. This responsibility will terminate only after all work defined herein is complete, accepted by NOAA, and NOAA personnel remove the vessel from the Contractor's facility.

6] NOAA employees and contractors may be working on board the vessel during the performance period on a not to interfere basis. These personnel will be provided access to the vessel during normal working hours.

7] If the vessel is hauled from the water, the Contractor shall ensure that all machinery and equipment used for that purpose is fully functional, suitable for the task, rated for loads at least 20% greater than the maximum weight of the vessel, and operated by trained personnel. The NOAA Government Technical Point of Contact (TPOC) will provide a docking plan for the vessel if requested.

<u>8] The government reserves the right to award some or all tasks defined below.</u>

9] All work performed under this SOW shall meet or exceed all current requirements of ABYC and USCG (Subchapter T) as applicable to this size and type of vessel, in addition to any specific requirements stated below.

10] In the event defects or damage unrelated to the work tasks defined below are discovered, the Contractor shall submit a Condition Found Report (CFR) to the TPOC identified below. The CFR will define corrective actions needed, the cost for that work (separated into labor, materials, services, and total), and the impact to the performance period.

11] If required, all welding done as part of the tasks shall be performed by certified welders working in accordance with approved weld procedures. Certifications and approvals by USCG, ABS, or another nationally recognized authority are acceptable, and copies of these shall be provided with the quote. Before any welding work begins, ensure that all sensitive electronics are isolated from the hull and get written approval from NOAA staff or GCP before proceeding. The new plate shall be 5083 alloy of the H321 or H116 temper, and of a thickness equal to the removed plate. Filler wire shall be 5183 alloy. Weld throat widths shall equal the original welds, and weld patterns (continuous, skip, etc.) will be the same as original patterns. After welding, the contractor shall remove all smoke, soot, and oxides with a wire brush, and de-burr all sharp edges.

12] A site visit prior to bidding is strongly recommended. Bidders are encouraged to inspect the vessel and understand all conditions that may affect project cost and schedule. In no event will a failure to adequately inspect the vessel constitute grounds for cost escalation after award. The address for a site visit is 132A Harbor Way, Santa Barbara, CA 93109. Technical Point of Contact (TPOC): LT Daniel Lucas, 805-450-1504; voc.cinms@noaa.gov.

13] Provide pricing for each task listed in this SOW.

B] SPECIFIC WORK TASKS - DOCKSIDE

B1] Service dive compressors (2)

Shearwater has two breathing air compressors on board (one Bauer Mariner II and one Bauer DMT08-E3). One is mounted in the port engine space while the other is a portable unit stored on the top deck.

- Change compressor oil and filters using the manufacturer's recommended oil and filters. Inspect compressor filter canisters for corrosion and pitting before inserting new filter cartridges.
- Inspect compressor cooling fans and V-belts, and inter-stage and crankcase cooling fans.
- Clean element of intermediate separator.
- Inspect all control valves installed on the compressors. If repairs or replacement is required, submit a CFR to NOAA staff.
- After the filters and fluids have been replaced, run the compressor up to the maximum allowable working pressure and hold at this pressure to ensure there are no leaks anywhere in the system (approx 4,000psi for the mounted compressor and 3,200 for the portable compressor).
- Provide written air-test report to show that breathing gas meets OSHA standards for SCUBA/breathing gas. Provide **written** report of test results to NOAA personnel.
- Provide separate **written** reports for each compressor detailing all work done.

B2] Service generators (2)

The contractor shall perform the following service work on both generators installed in the vessel. Port generator is Northern Lights M753W.3 and will have about ~**300 Hours**, and starboard generator is Northern Lights M844LW3.3G and will have ~**4600 Hours**:

a) Sample, test, and provide written report on the condition of the following to the TPOC before start of any work:
    - Lube Oil
    - Coolant
b) Remove old and install new:
    - All seawater anodes (contractor to provide replacements)
c) Change (and dispose of old) engine oil
d) Generator bearing inspection
e) Visually inspect for signs of leaks and degradation
f) Inspect and Adjust Valve clearances and injectors
g) Inspect:
    - Coolant
    - Water pump
    - All engine or generator mounts
    - Vibration dampers
    - Pulleys and belts
    - Bearings in generator end

- Report all adverse findings on the machinery to TPOC
- Conduct operational testing dockside. Run at maximum rated amps for 30 minutes. NOAA staff to assist as needed.
- Provide a written report describing all work performed

Upon re-launching of the vessel, conduct dock trials and sea trials to demonstrate proper operation of both generators and related systems. Provide a **written** report describing all work completed.

B3] Service P&S main engines

The contractor shall perform the following preventative maintenance and service on the port and starboard John Deere 6135SFM85-M4 engines and attached transmissions. Maintenance and service will be performed by an individual certified by John Deere for the engine model installed. Engines will have ~**2250** hours of service logged. Service to include a minimum:

a) Overhaul seawater pumps
b) Sample, test, and provide written report on the condition of the following to the TPOC before start of any work:
    a. Lube Oil
    b. Transmission Oil
    c. Coolant
c) Remove old and install new seawater anodes (contractor to provide replacements)
d) Inspect vibration dampers, engine mounts, and wiring harnesses.
e) Inspect pulleys and belts
f) Inspect and clean After cooler and heat exchanged
g) Inspect and adjust valve clearances and EUI preload
h) Check and adjust engine speeds, per official maintenance manual

- Report any deficiencies found to TPOC

- Conduct operational testing dockside (vessel waterborne) with trained technician, conduct and document assessment of engine performance including temperatures, pressures, and load levels, confirm that both engines perform within approved specifications
- Provide a written report describing all work performed

Upon completion conduct dock trials and sea trials to demonstrate proper operation of the engines, gears, and related systems. Provide a **written** report describing all work performed.

C] SPECIFIC WORK TASKS - HAUL OUT

C1] Haul, clean, block, store, and launch
The contractor shall remove the vessel from the water. Pressure-wash the entire hull from sheer line to keel, removing all dirt, grime, and marine growth. Clean all surfaces within the tunnel. Similarly, clean all fittings below the waterline, including propulsor components, struts, stern tubes, rudders, foils, fins, through-hulls, etc. Clean transducers with a non-metallic brush, taking care to not mar the emitting surface in any way. Clean all surfaces of all anodes with a wire brush unless they are to be replaced.

The contractor shall block the vessel in a level altitude with the keel (or keels) 36" minimum off the ground. Inspect the hull, coatings, and all attachments and report any damage or discrepancies to the TPOC staff in writing. Provide electrical power to the vessel suitable for its shore power system.

Upon completion of all work done out of the water, the contractor shall launch the vessel, inspect all compartments for leaks, and secure it dockside. If dockside testing or underway trials are required after launch, the contractor shall provide advance notification so the TPOC can attend.

C2] Touch up bottom paint
The contractor shall repair any damaged or flawed areas of the bottom paint in accordance with International Paints standards for the repair of Intersleek 1100. All work will be done under the guidance of a technical representative either employed by or certified by International.
Upon completion, schedule an inspection of the coating system by the TPOC.

C3] Recoat Propulsors with prop-speed
The contractor shall renew the Prop-speed coating on the propellers, shafts, and other items of running gear that are currently coated with this material. Follow manufacturer's instructions for preparation and application. Upon completion, schedule an inspection of the coating system by the TPOC.

C4] Inspect through-hulls, seacocks, transducers
The contractor shall inspect all through hulls aboard the ship to ensure they are in good condition. The contractor shall actuate (open and close) and visually inspect all seacocks in the hull bottom and topsides. A written report shall be submitted to the TPOC detailing the location and condition of seacocks and any recommendations for replacement or maintenance.

C5] Pressure test foils, strakes, and guards
After the vessel is hauled and washed, and after the surfaces are dry, but before the application of new coatings, the contractor shall inspect the foils, strakes, and guards for evidence of leaks. Report any leaks found to the TPOC in writing. The contractor shall remove the test plugs from each of these items and pressure test to 3.0 PSI and inspect for visible leaks. Hold pressure for ten (10) minutes and

determine if pressure has been lost. If pressure is lost, locate non-visible leaks by soapy film test or other means. Repair leaks and repeat testing until no additional leaks are found. Reinstall test plugs using suitable marine grade pipe thread sealant.

C6] Reprofile all main deck surfaces
Using 20x50 epoxy-coated copper slag or equivalent, blast a non-skid surface into the deck plate without removing any of the aluminum material. The finish surface texture is to be approved by the TPOC via inspection of samples provided by the yard before profile blasting. The contractor shall take special precautions to avoid particulate contamination as a result of blasting, such as temporarily closing off air intake and exhaust vents, pipe vents, and all interior spaces. The contractor will demonstrate to the TPOC how interior spaces are to be protected before any work is started. Upon completion, the contractor will demonstrate to the TPOC that all areas worked on are textured to the same degree as the samples. If any area is not profiled as required, repeat the profiling process in that area.

C7] Sight Glass Valve replacement
Coordinate with the TPOC to verify the fuel tank is empty. If not, either use internal piping and transfer pump to move fuel to the port side tank (verify with the TPOC that there is adequate room in the port tank to accept all of the fuel in the starboard tank), or pump to a storage container (contractor to provide all required materials and equipment). Remove and replace with a new compatible sight glass isolation valve of the same size and material as the original. Refill the tank and observe the valve for 24 hours in both the open and closed positions to verify all connections are leak free.

C8] Conditions Found
In the event additional repairs or issues are discovered during yard work that must be addressed while the vessel is hauled out for service.

D] IT SECURITY REQUIREMENTS

The Certification and Accreditation (C&A) requirements of 48 CFR 1352.239-73 do not apply, and a Security Accreditation Package is not required. The contractor will not have access to any government owned IT equipment or be furnished government privileged information. However, the contractor will have full access to the vessel and all of its systems.

E] AWARD BASIS

This will be a lowest-price technically acceptable evaluation. The Contractor shall demonstrate past performance in working with aluminum high speed catamaran vessels including aluminum welding.

F] LOCATION

The vessel is to be transported at sea by the Government to and from the repair facility. The Contractor's facility shall be within 200 nautical miles of the vessel's home port in Santa Barbara, CA. The vessel is to be transported at sea by the government to and from the repair facility.

G] Points of Contact

Technical Point of Contact (TPOC)
TBD at time of award.