PEO-SW: SOF Safety at Sea Assessment Event (AE)
Assessment Criteria

Problem Context & Operational Use Case

Naval Special Warfare (NSW) personnel operating on Combatant Craft (CC) face a significant risk to life in the event the craft sinks. An Operational Deficiency has been identified regarding the lack of a suitable survival capability, specifically a life raft, to ensure Safety of Life at Sea (SOLAS). The sinking of a Combatant Craft Heavy (CCH) in May 2023 highlighted this critical gap.

The primary end-users are NSW personnel aboard Combatant Craft. The solution is intended for immediate, near-term fielding to address this urgent safety requirement. The operational environment is maritime, with the life raft required to function in temperatures ranging from -40°F to 115°F, operate in Sea State 3, and survive in conditions up to Sea State 5.

Target Technology Focus Area(s)

The focus is on mature, inflatable, multi-place life raft technologies. This includes advancements in durable, lightweight materials, rapid and reliable self-deployment systems, and integrated survival features suitable for austere maritime environments.

Technology Readiness Level (TRL)

Minimum TRL: TRL 6 or 7. A near-production prototype or an existing commercial-off-the-shelf (COTS) solution that can be modified.

Desired TRL: TRL 8 or 9. The solution should be a deployable system ready for production and distribution to meet immediate operational needs. Ready to go to USSOCOM Developmental Testing (DT) and Operational Testing (OT).

Performance Characteristics (SWaP & Technical Attributes)

Define practical constraints without over-prescribing solutions.

Size, Weight, and Power (SWaP)

Minimum Performance: Must be man-portable and capable of being stored in a valise of waterproof, ruggedized fabric or a hardened enclosure. Specific dimensions and weight are flexible but should be optimized for stowage on various Combatant Craft. Current space allocation is 30”–32” L x 18”–20” W x 16”–17” H, with a weight of up to 80 lbs.

Technical Performance

Capacity: Must support a minimum of 8 and a maximum of 12 personnel, each with an assumed weight of 250 lbs with gear. The raft must have an overload capacity for a minimum of 10 and a maximum of 15 personnel.

Endurance: Must enable survival at sea for a period of no less than 24 hours and up to 72 hours without external support. A Survival Kit of various essentials for safety of life should be part of the package.

Canopy: Must be self-erecting, constructed of subdued blue, non-reflective material. It shall include detachable high-visibility panels for rescue situations and be designed to enable the collection of rainwater without contaminating the water.

Buoyancy & Stability: Must be constructed from polyurethane (PU) coated fabric and feature ballast bags for stability, conforming to the International Life-Saving Appliance Code (SOLAS LSA Code). A water removal capability is required.

Maintenance: The servicing cycle shall be no less than 2 years and no greater than 5 years. Periodic checks should be possible without disassembling the raft.

Integration & Interoperability

The life raft is primarily a standalone system. However, it must be capable of being stored and deployed from various NSW Combatant Craft, including the Combatant Craft Assault (CCA), Medium (CCM), and Heavy (CCH). No integration with existing platforms, networks, or software is required.

Data, Cyber, and Security Considerations

This capability does not handle sensitive data and has no direct cybersecurity requirements. An Authority to Operate (ATO) is not required.

Evaluation Approach (High-Level)

Compliance: Adherence to the performance characteristics, including MIL-PRF-18494F with specified exceptions.

Operational Suitability: Practicality for use in the demanding NSW maritime environment, including ease of deployment and maintenance.

Maturity: The solution must be a mature technology ready for near-term fielding.

Cost: Cost-effectiveness for procurement and through-life sustainment