Combatant Craft Heavy Mk II
*Win • Transform • People*

CAPT Brian O’Lavin *Program Manager – Surface Systems*

SOFWERX Collaborative Event
Program Management Office

SURFACE SYSTEMS

Combatant Craft Heavy

Combatant Craft Medium Mark 1

Combatant Craft Assault

Combatant Craft FLIR 2

Special Operations Craft - Riverine

Maritime Precision Engagement
NSW Surface Craft Roadmap

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Combatant Craft Heavy (CCH): SEALION

- SEALION provides long range insertion capabilities for SOF personnel. Supports limited coastal patrol and interdiction
- SEALION I Overhaul contract awarded FY17
- SEALION III Production contract awarded FY17
- 2 of 3 Fielded

### ACQUISITION STRATEGY
- Two tech demonstrators transferred from USN
- SEALION III sole source award

### PERIOD OF PERFORMANCE
- FY16 through FY19

### MILESTONES
- IOC: FY14
- FOC: FY20

### FUNDING
- RDT&E FY18 through FY24
- PROC FY22 through FY24
- O&M FY18 through FY24

### POINT OF CONTACT
- USSOCOM SOF AT&L, Technology & Industry Liaison Office (TILO) (813) 826-9482
Combatant Craft Heavy Mk II Focus Areas

- **Craft Design**
  - Overall length and width
  - Design Speeds
  - Fuel Type
  - Dynamic Positioning
  - Range

- **Power Generation and Management**
  - Power Density (Diesel, Hybrid power sources, and recaptured energy solutions)
  - Power management solutions (fixed or variable) to maximize range and endurance

- **Payload Launch and Recovery (L&R) and Handling/Stowage (H/S)**
  - L&R and H/S systems capable of handling multiple platforms of varying size and weights
  - Various payloads up to 25k

- **Command and Control, Communications, Cyber-Defense, Combat Systems, and Intelligence, Surveillance, and Reconnaissance (C6ISR) systems**
  - Fully interoperable across the spectrum of joint operations
Combatant Craft Heavy Mk II
Craft Design

Overall length
• Notional maximum length of 200’

Overall width
• Notional maximum width of 49’

Design Speeds
• Up to and including fully planing (FNV > 3.0)
• Designs with design speeds below fully planing (e.g., semi-planing or semi-displacement) are of interest

Fuel Type
• Diesel fuel primary power plant is required (no MOGAS)
• hybrid or dual-mode propulsion designs
  • overall power management will be important
• innovative approaches may be considered

Dynamic Positioning
• propulsion systems that support the ability to effectively determine and maintain precise routes and position locations are required

Range
• maximize both vessel range and endurance
• maximum range expressed with craft carrying full payload at cruise speed

Design Attributes
• Seakeeping performance (max speed vs sea state)
• Seakeeping stabilization at all speeds
Power Density

- Propulsion plant intended to run on diesel and/or JP-5
  - may not be fueled by MOGAS
- Interest in options that increase efficiency
  - potential for hybrid power sources
  - recaptured energy solutions
- Interest in potential power management solutions (fixed or variable) to maximize range and endurance
  - it is anticipated that power demand will be independent of main engine rpm
Combatant Craft Heavy Mk II
Payload L&R and H/S

Design Requirements

- Effective working load up to 25,000 pounds
- Notional maximum payload design volume:
  - 25 feet in length, 5 feet in width, and 5 feet in height

Design Attributes

- L&R and H/S systems capable of handling multiple platforms of varying size and weights
- Design adaptable to interface with other crafts of varying hull forms (e.g., deep-vee or cylindrical hulls)
  - Single craft-capable design is a valid baseline
- Modular and scalable designs preferred
- L&R system that enables full operation without compromising the physical boundaries of the craft is preferred (e.g., no breaching the super-structure)
Combatant Craft Heavy Mk II
C6ISR

Design Attributes
- Fully integrated C6ISR system
  - Command and Control
- Fully interoperable across spectrum of joint operations
  - Communications
  - Computers
  - Cyber-defense
  - Combat systems
  - Intelligence
  - Surveillance
  - Reconnaissance