

Code 45 – USW Platforms and Payload Integration Department: Industry Day 2024



16 October 2024

*USW Platforms & Payload Integration Department
Naval Undersea Warfare Center Division Newport, RI*



USW Platforms & Payload Integration Department - Code 45 Overview



Our Mission:

- Exercise full-spectrum programmatic and technical excellence in tactical missile, payload integration and unmanned undersea system solutions to deliver and sustain USW superiority

Our Vision:

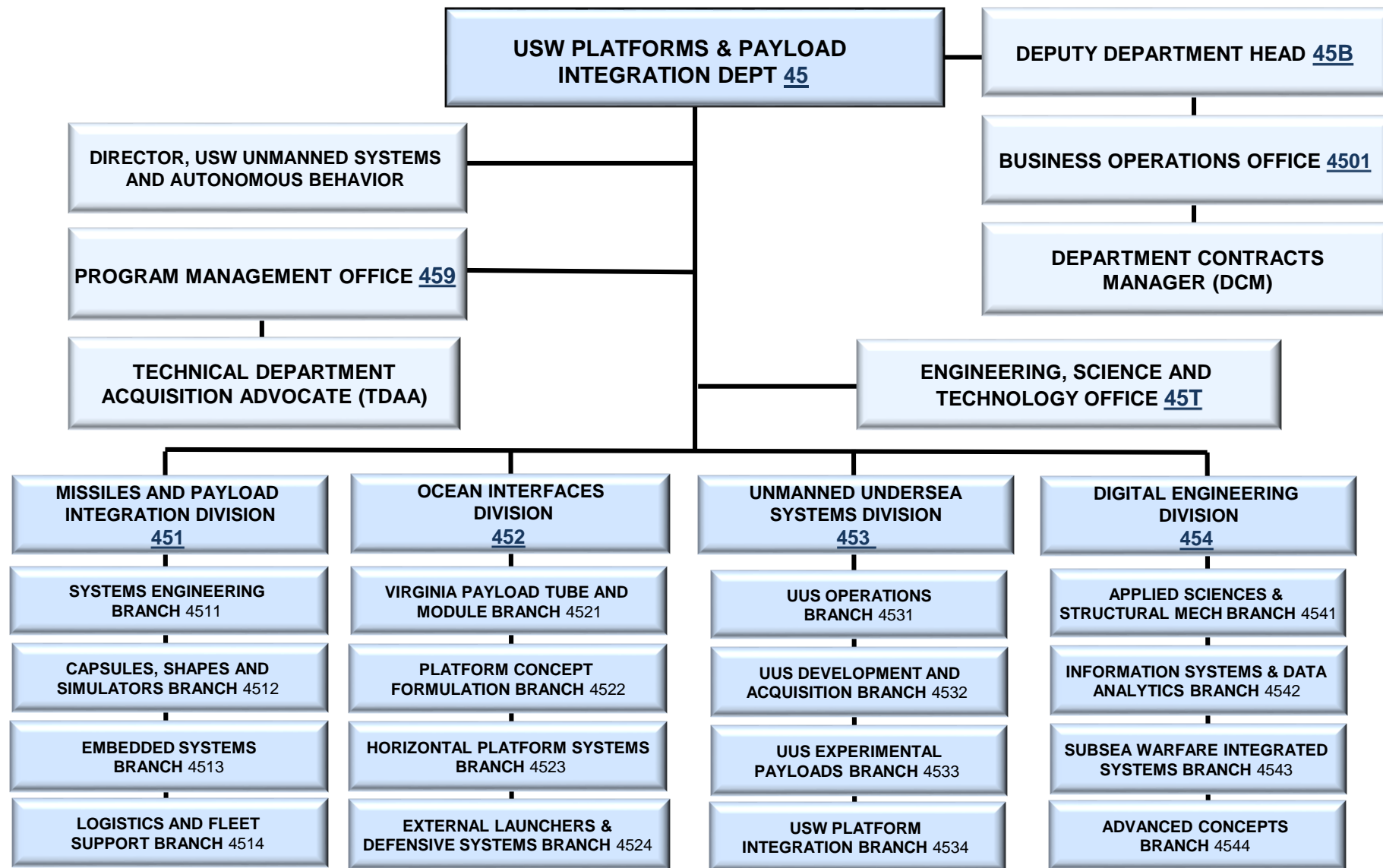
- Exploit the Ocean Interface for USW Platform & Payload Superiority.

USW Platforms & Payload Integration Department - Code 45 Overview (cont'd)



USW Platforms & Payload Integration

Department - Code 45 Overview (cont'd)



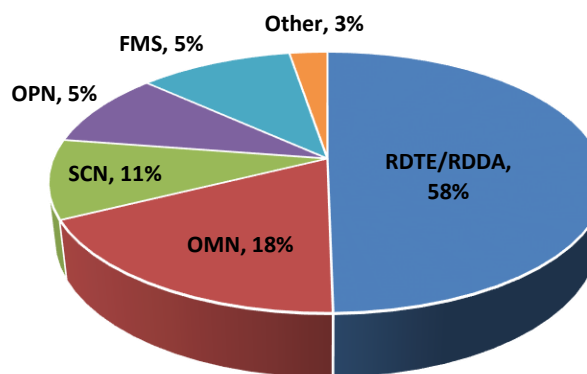
USW Platforms & Payload Integration Department - Code 45 Overview (cont'd)



Warfare Center Technical Capabilities

- NP09 – USW Launcher Systems and Payload Integration
- NP10 – Submarine Tactical Missile Integration
- NP11 – USW Autonomous Vehicles
- NP20 – Subsea and Seabed Systems

Customers: COMSUBFOR, PEO SSN, PEO UWS, PEO USC, PEO U&W, PEO IWS, SSP, NAVSEA 05, USSOCOM, DARPA, ONR, others...



C45 Demand Increase Summary



NP09 - USW Launcher Systems and Payload Integration

- Growth across the customer base in support of multiple new TEMPALT efforts and increases in SSN(X) tasking, Virginia Payload Module analytical requirements, continued integration efforts of Undersea Dominance Payloads and Dry Deck Shelter (DDS)

NP10 – Submarine Tactical Missile Integration

- Strategic System Programs All Up Round simulator efforts leveraging Tomahawk MK112
- Foreign Military Sales efforts remain stable and Allied support growth anticipated due to AUKUS

NP11 - USW Autonomous Vehicles

- Growth across the customer base for payload and sensor development and integration, Large Vehicle Integration, Full Spectrum Undersea Warfare Innovative Naval Prototype and Joint Undersea Surveillance and Targeting support, Autonomy integration and Digital Engineering Efforts, along with increasing requirements associated with C45's UUV Software Support Agent Role

NP20 - Subsea and Seabed Systems

- Growth across the customer base for payload, sensor and platform development and integration

Contracts Overview



C45 Contract Portfolio

C45 Contract Portfolio

			CY24				CY25				CY26				CY27				CY28				CY29				CY30					
			FY24				FY25				FY26				FY27				FY28				FY29				FY30					
Contract Type	Contract / Order or PID	Description	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Date	
	EXISTING	Today																														End
Seaport	N0017819D8089 / N6660420F3004	C45 Lab Complex																												07/10/26		
MAC	N6660420DK001 thru 20DK007	Rapid Prototype MAC																												09/29/25		
MAC	N6660418DC801 - 828	UUV Family of Systems (FOS) MAC																												07/29/27		
MAC	N6660419DL901 - 3 N6660420DL904	DDS Payload Intg MAC (DSS-SOC/non-SOC)																												09/29/29		
MAC	N6660420DD001, 2, 3 N6660424DD004, 5	SUBSAFE HW and SVCs MAC (SS/non-SS)																												11/28/29		
	PENDING																															Start
Seaport	N66604-24-RFPREQ-NPT-45-0315	C45 Lab Complex Follow-On																												07/11/26		
MAC	N/A	Rapid Prototype Follow-On																														
MAC	PID TBD	UUV FOS Follow-On																												07/30/27		
MAC	PID TBD	DSS-SOC Follow-On																												09/30/29		
MAC	PID TBD	SUBSAFE Follow-On																												11/29/29		

KEY:

- Existing contract with remaining term
- Projected Need
- Anticipated RFP

Today

SEAPORT

- **Lab Complex** – Based upon current tasking C45 is currently extending by one year. LRAE will be updated accordingly.

NON-SEAPORT MULTI-AWARD

- **DDS Payload Integration** – Current ordering period has been extended thru Nov 2029. Rolling Admissions/On-Ramp is being considered for this MAC with a sources sought planned in FY25.
- **SUBSAFE Hardware and Services** – Epsilon Systems Solutions, Inc. and Delphinus Engineering, Inc. have been awarded contracts via on-ramp in Dec 2023. Current ordering period for this MAC is currently being extended thru Nov 2029.
- **Rapid Prototype** – No Planned follow-on at this time.
- **UUV Family of Systems (FoS)** – Follow-on is planned for award in Jul 2027. Assessment/rework of functional areas, open beyond UUV (i.e. Platform and Payload FoS MAC), and provisions for limited quantity prototypes for system validation/verification is currently underway.

C45 Laboratory Complex Engineering and Technical Services



Summary of Contract Scope: 5 year Seaport order for engineering, technical, design, field services, and integrated logistics support services in for the C45 Laboratory Complex and related programs which require the use of the C45 Laboratory Complex. Support provided under this contract includes:

- Operational, documentation, logistics and maintenance support for C45 Launcher Lab equipment, including upgrade and repair of components, as well as relocation, installation, and removal of laboratory support equipment.
- Engineering and technical services for development of test plans and procedures, development and production of prototype, shipboard, and laboratory hardware, simulators and related equipment.
- Configuration management of C45 missile, launcher and payload system documentation.
- Remote field services for installation, removal, loading/unloading, repair and test and evaluation of those systems.

C45 Laboratory Complex Engineering and Technical Services (cont'd)



Contracting Method: SeaPort

Anticipated Period of Performance: 5 year PoP

Acquisition Strategy: TBD; Sources Sought / Pre-Sol Conf planned

Level of Effort: 404,000 hrs / ~\$30M with approximately ~36% ODCs

Anticipated work location: 75% on-site / 25% contractor site

Contract Type: Cost Plus Fixed Fee (CPFF) and Cost Reimbursement (Cost Only) provisions for ODC's along with FFP for yearly HAZMAT tasking.

C45 Laboratory Complex Engineering and Technical Services (cont'd)



Unique Characteristics

- **Key Personnel requirements:**

- Mechanical technicians may be required to maintain, repair, or otherwise handle equipment designated as SUBSAFE, SUBSAFE/MIC LEVEL I and LEVEL I material during the performance of tasking
- Personnel that are trained and qualified to the requirements of Craftsmen or Controlled Material Handlers (CMH) per the SUBSAFE/Level I (SS/L1) requirements of NUWCDIVNPT SOP 8.
- Category II and III Crane Operator certification
- OSHA/HAZMAT certification

- **Facility requirements:** Secret.

Follow on ? Yes. SeaPort N0017819D8089/N6660420F3004 with McLaughlin Research Corporation

Does OCOI clause apply? Yes

Expected RFP release: FY25Q4

C45 SUBSAFE Hardware and Services



Summary of Contract Scope: 5 year IDIQ MAC to support high criticality submarine safety (SUBSAFE) / LEVEL 1 (L1) engineering and technical services for systems engineering, technical analyses, mechanical and electrical design, manufacturing, installation, test and evaluation, and repair services of tasks which may include SUBSAFE/L1 components or assemblies.

- This scope encompasses efforts for both SUBSAFE and non-SUBSAFE hardware and systems.
 - SUBSAFE efforts will require NAVSEA Note 5000 certification.
 - Non-SUBSAFE efforts will require skills and expertise integral to development and integration of submarine launcher and payload systems

C45 SUBSAFE Hardware and Services (cont'd)



Contracting Method: IDIQ MAC

Anticipated Period of Performance: 5 year PoP

Acquisition Strategy: Unrestricted; Sources Sought / Pre-Sol Conf planned

Level of Effort: ~260,000 hrs / ~\$60M total ceiling

Anticipated work location: 40% on-site / 60% contractor site

Contract Type: Cost Plus Fixed Fee (CPFF) and Firm Fixed Price (FFP) provisions for hardware/supplies/material. CPFF services and Cost Reimbursement (Cost Only) provisions for ODC's (Travel only).

C45 SUBSAFE Hardware and Services (cont'd)



Unique Characteristics

- **Qualifications:**
 - NAVSEA Note 5000 (SUBSAFE/L1 Only)
- **Key Personnel requirements:**
 - Personnel that are trained and qualified to the requirements of Craftsmen or Controlled Material Handlers (CMH) per the SUBSAFE/Level I (SS/L1) requirements of NUWCDIVNPT SOP 8.
 - Additional key personnel may be requested covering designated areas of expertise; if requested, a resume will be necessary for each key person
- **Facility requirements:** Secret

Follow on ? Yes.

- N6660420DD001, 2, 3 with Electric Boat Corporation, Huntington Ingalls, Inc., and Oceaneering International, Inc.
- N6660424DD004 and 5 with Epsilon Systems Solutions, Inc. and Delphinus Engineering, Inc. via on-ramp

Does OCOI clause apply? Yes

Expected RFP release: FY29Q1

C45 DDS Payload Integration Hardware and Services



Summary of Contract Scope: 5 year IDIQ MAC contract providing engineering and technical services supporting the development of Deep Submergence Systems Scope of Certification (DSS-SOC) UUV systems, as well as the Dry Deck Shelter (DDS) platform.

- This will include DSS-SOC tasking such as equipment integration and/or fabrication, controlled material handling, equipment test/inspection/troubleshooting/grooming, installation/removal activities, and DSS-SOC storage.
- This will also include Non-DSS-SOC tasking such as concept/design development, engineering and technical services for the performance of ship checks, Temporary Modifications, Field Changes, Carry on Hardware, and Major Altercations (TEMPMOD / FC / COH / TEMPALT / SHIPALT) development, receipt inspection, and development of life cycle support plans.

C45 DDS Payload Integration Hardware and Services (cont'd)



Contracting Method: IDIQ MAC

Anticipated Period of Performance: 5 year PoP

Acquisition Strategy: Unrestricted; Sources Sought /Pre-Sol Conf planned

Level of Effort: 98,500 hrs / ~\$49.5M total ceiling (labor and material) with approximately 12% ODC for travel

Anticipated work location: 30% on-site / 70% contractor site

Contract Type: Cost Plus Fixed Fee (CPFF) provisions for hardware/supplies/material. CPFF services and Cost Reimbursement (Cost Only) provisions for ODC's (Travel only).

C45 DDS Payload Integration Hardware and Services (cont'd)

Unique Characteristics

- **Qualifications:**
 - NAVSEA Note 5000 (required for DSS-SOC tasking)
 - CMMI Level 3 or equivalent
- **Key Personnel requirements:**
 - A group of key personnel may be requested covering designated areas of expertise; if requested, a resume will be necessary for each key person.
- **Facility requirements:** Secret
- **Software Development Plan:** Yes

Follow on ? Yes.

- N6660419DL901, 2, 3 with American Systems Corporation, Oceaneering International, Inc., and Serco, Inc.
- N6660420DL904 with Systems Engineering Associates Corporation.

Does OCOI clause apply? Yes

Expected RFP release: FY28Q4

C45 UUV FoS – Current Contract N66604-18-D-C8XX



Summary of Contract Scope: The scope of this contract covers systems and subsystems required to support the advancement of the UUV Family of Systems (FoS), including current UUV systems and subsystems as well as any future UUVs systems and subsystems.

Contracting Method: IDIQ MAC

Period of Performance: 5-year base with 4-year option (PoP End Date: 29 July 2027)

Current Awarded Values:

Level of Effort: 1,518,273 Hours

Number of awardees: 22 (awarded with 23 but due to merger now at 22)

Dollar Value: \$794,530,000

Current Execution Summary:

Level of Effort Executed to date: 819,815 Hours

Number of Orders to Date: 46*

*Includes kick-off meeting and minimum guarantee

C45 UUV FoS – Current Contract

N66604-18-D-C8XX (cont'd)



VENDOR	CONTRACT	# of Orders*
Aerojet Rocketdyne	C801	0
SERCO	C802	2
AMERICAN Systems	C803	0
BAE Systems	C804	1
DRAPER	C806	2
DRS Naval Power Systems	C807	0
General Atomics	C808	1
General Dynamics	C809	1
Hamilton Sundstrand UTC Aerospace	C810	0
HII Fleet Support Group LLC	C811	2
HII Unmanned Systems	C812	0
L-3 Technologies	C814	0
Lockheed Martin	C815	3
MOOG	C816	0
Northrop Grumman	C817	2
Oceaneering	C818	1
Raytheon	C819	0
Rite Solutions	C820	2
SAIC	C822	0
SEA CORP	C823	1
Southwest Research Institute	C825	0
Teledyne Brown	C826	0
Woods Hole Oceanographic Institute	C828	5

Twelve (12) Functional Areas:

1. Payloads
2. Hull & Structure
3. Propulsion
4. Energy Storage/Conversion
5. Electrical Power
6. Vehicle Controller
7. Software
8. Non-Payload Sensors
9. Vehicle Controller Systems
10. Host Platform Elements
11. Ashore Elements
12. Internal Architecture

*Does not includes kick-off
meeting / minimum guarantee

C45 Platform & Payload Family of Systems Multi-Award Contact



Summary of Contract Scope: The scope of this contract covers systems and subsystems required to support the advancement of Platform and Payload Family of Systems (FoS), including current systems and subsystems as well as any future systems and subsystems. Functional areas are under review and provisions for limited quantity prototypes for system validation and verification are being included.

Contracting Method: IDIQ MAC

Anticipated Period of Performance: 5-year base with 4-year option

Acquisition Strategy: Unrestricted; Sources Sought / Pre-Sol Conf planned

Level of Effort: TBD

Anticipated work location: TBD

Contract Type: Cost Plus Fixed Fee (CPFF) Services & Supplies, Firm Fixed Price (FFP) Supplies, Cost Reimbursement (CR) ODCs

Anticipated Sources Sought Release Date: FY25Q2

Anticipated RFP Release Date: FY26Q1

C45 Platform & Payload Family of Systems Multi-Award Contact (cont'd)



Unique Characteristics

- TBD, Under review

Key Personnel Requirements: TBD

Security Requirements: Secret

Facility Requirements: TBD

Does OCOI clause apply? Yes