Unmanned Maritime Systems Update

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Unmanned Maritime Systems (PMS 406)
**USV Systems Vision**

- **Large USV**
  - LUSV: Design and Construction/Test → Mission Op
  - Ghost Fleet Overlord, Prototype LUSV, Sea Hunter: Phase 2 Experimentation → Fleet Experimentation / Modular Payload Development

- **Medium USV**
  - Design/Fabrication/Test → Mission Opportunity - IO

- **Enabling Capabilities**
  - Int. Combat System, Payloads, Command and Control, Autonomy Experimentation: Development → Production and Delivery
    - Modular Payload / Elevated Sensors: Production and Integration
    - Common Control System (CCS) Implementation
    - Autonomy Standards: Autonomy Lab
    - Experimentation / CONOPS: Fleet Introduction / TTPs
    - Increasingly Complex Exercises

- **Small USV**
  - MCM USV: Testing/Initial Production → Full Rate Production/Fielding
  - MHU: Sweep → Sweep/Hunt, Sweep/Hunt/Neutralize
  - Fleet Operations and Sustainment – Sundown TBD

**DISTRIBUTION STATEMENT A. Approved for public release. Distribution is unlimited.**
MCM USV Testing and Integration

Sweep DT/OA Completed

Mine Hunting Integration Ongoing

Integration on LCS and VOO
Knifefish SMCM UUV

- DT/OA and Milestone C complete
- Low Rate Production Awarded
USV Experimentation and Technology Development

Maturing Key Technology Enablers and Developing TTPs and CONOPS

- Deliver Prototype MUUVs to the Fleet
- Deliver Prototype UUVs to the Fleet
- Deliver Sea Hunter II to the Fleet
- Transition Overlord Vessels to the Fleet
- SBIR Enabling Technology Projects
  - USV and UUV Autonomous Behavior Development
  - USV Bridge-to-Bridge Radio
  - Automated Management of Maritime Navigation Safety
  - Unmanned Passive Navigation without GPS

Exercise

Exercise

Exercise

Exercise

Exercise

Exercise

Transition Sea Hunter I

2020

2022

2024

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Unmanned Surface Warfare

Large Unmanned Surface Vessel (LUSV)

- FY20 Conceptual Design - Source Selection in progress
- Procuring additional experimentation vessels in FY20
- Revising plan for Detail Design and Construction

Medium Unmanned Surface Vehicle (MUSV)

- Prototype Design and Fabrication - Source Selection in progress
- Planned delivery in FY23
QUESTIONS?