



# USS DAHLGREN

Naval Surface Warfare Center – Dahlgren Division (NSWCDD)  
 Naval Research & Developmental Establishment (NR&DE)  
 Naval Air Warfare Center – Aircraft Division (NAWCAD)

# 2016

## USS DAHLGREN NR&DE Kill-Chain Demonstration & Assessment

30 August 2016  
 NSWCDD – Dahlgren, Virginia

*An Integrated Laboratory  
 Environment for Surface Warfare*



### Event Focus

This year's demonstration is focused on improved surface/air warfighting effectiveness through netted manned/unmanned system integration and technology application for Surface Warfare (SUW).



# 2016

## USS DAHLGREN NR&DE Kill-Chain Demonstration & Assessment

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### USS DAHLGREN Capabilities

#### MODELING & SIMULATION

- Scenario Generation
- System Level
- Wrap-Around Combat System Simulators
- Lethality & Effectiveness
- Warfare Level

#### INTELLECTUAL CAPITAL

- Integrated Combat Systems
- Systems Engineering & Integration
- Surface Warfare RDT&E
- Weapon Systems Integration

#### CAPABILITIES & PHYSICAL ASSETS

- Virginia Capes Operating Area (VACAPES)
- Potomac River Test Range
- Restricted Airspace
- Controlled Surface Range
- Explosive Land Ranges
- Unmanned Systems
- Command & Control
- Radars/Sensors
- NR&DE Laboratories

#### CONNECTIVITY

- SIPRNET
- DREN
- JMETC
- JMN
- CEC/CTN/Link-16
- SDREN
- JIOR

#### ARCHITECTURE

- System-Specific View
- Operational-Specific View
- Systems of Systems Representative
- Platform & System Representative





## What is USS DAHLGREN?

USS DAHLGREN is a virtual ship that serves as a rapid prototyping and experimentation platform. USS DAHLGREN provides a naval venue for research, development, test, and evaluation that spans all aspects of the kill-chain.

### USS DAHLGREN Infrastructures

- Experimental test ranges, waterfront, airspace
- Tactical/Developmental command and control laboratories, sensors, manned/unmanned platforms and associated technology advancements
- Hardware in the loop and virtualized combat systems
- External connectivity via DoD networks and "over-the-air" connectivity

USS DAHLGREN provides for continuous testing across the acquisition lifecycle in a high-fidelity environment via distributed network architectures.

## FY16 Objective/Benefits

Demonstrate improved surface/air warfighting effectiveness through improved manned/unmanned system integration and technology application for Surface Warfare (SUW).

## FY16 Technologies/Capabilities

- Autonomy/perception for USVs
- Autonomous gunfire scoring system, "Visual Automated Scoring System" (VASS)
- Real-Time Integrated Sensor Suite (RISS)
- SBIR communications demonstration
- VASS integration with ScanEagle
- Unmanned Systems (UxS) integration with AEGIS and LCS

## USS DAHLGREN Mission

Provide a reusable, reconfigurable test environment for experimentation and integration of complex naval warfare systems and operating environments with systems of different levels of maturity to determine critical vulnerabilities and mitigate risk early in the development cycle.

## USS DAHLGREN Vision

To be the Navy's premier land-based test venue, USS DAHLGREN will provide a persistent, high-fidelity test environment enabling research, development, and early integration across the Naval Fire Control Loop and multiple mission threads.

