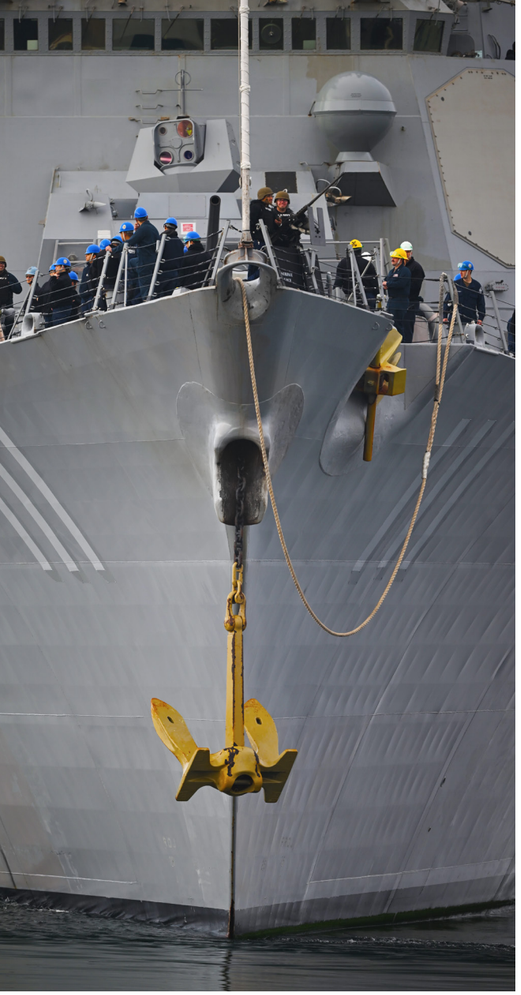
YEAR IN REVIEW

2025

NAVSEA

NAVAL SEA SYSTEMS COMMAND

WARFARE CENTERS
PORT HUENEME



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2025 YEAR IN REVIEW

FORCE BEHIND THE FLEET

LOE 1
ACCELERATE FORCE GENERATION

FLEET ENGAGEMENT

145
test events conducted

487
alterations/installations

64
Logistics Supportability Assessment team events

21
Combat Systems Assessment Team events

6
Combat System Ship Qualification Trials

LOE 2
GENERATE READINESS

$25.5M
NISE PROGRAM OUTCOMES

29
ships supplied with Augmented Reality Maintenance Systems

10K
documents analyzed with new artificial intelligence tools

75%
reduction in modeling time with advanced 3D technology

3
automated tools decreased data processing time

356
organizations collaborated via Advanced Naval Technology Exercises

Live, Virtual, Constructive integration expanded

14
patent applications with **$57K** in patent awards to workforce

499
Fleet Coordinated Shipboard Allowance Lists resolved

682
Model-based Product Support Workfile Change Notices processed, decreasing late notices **25%**

4.4K
lines of deadstock material processed for reutilization

LOE 3
GENERATE, CAPTURE AND USE DATA

850
contracting actions completed with

$433M
using agility to manage business capacity

LOE 4
STRENGTHEN THE NAVY TEAM

105
leadership, coaching and mentorship courses delivered, reaching **4.3K learners**

Safety and Environmental

0 noncompliance notices

0 Class A or B mishaps/accidents

1.6K bargaining unit employees successfully converted to the Demonstration Project Compensation system

$64.9M in non-labor cost transfers reviewed and executed

8.5K travel vouchers executed, totaling **$23M**

12K purchase requests reviewed, totaling **$560M**

36 technology transfer partnership agreements managed, furthering an innovative culture

8 Cooperative Research and Development Agreements

7 Educational Partnership Agreements

3 Work For Private Party agreements completed

31 distinguished visitors hosted

2 Government Accountability Office cases successfully defended

Exceeded small business obligation goals in all socioeconomic categories

LOE 5
STRENGTHEN THE FOUNDATION

Infrastructure Support

4.3K
service tickets completed

1.3M
square feet of building space managed

1.8K
space management tasks completed

3.7K
analog lines transitioned from legacy phones to Voice over Internet Protocol

2.4K
government employee assets and **35.6K** operating materials and supplies assets inventoried with **100%** accuracy

NSWC PHD STRATEGIC GOAL

Drive Results to Fleet Systems

NAVSEA LOE 1: Accelerate Force Generation — Deliver Ships and Combat Systems

NAVSEA LOE 2: Generate Readiness — Maintain, Modernize and Sustain Platforms

NSWC PHD Designs and Creates New Breakthrough MK 341 VLS Missile Simulator

NSWC PHD launched an advanced Vertical Launching System (VLS) missile simulator that processes faster, weighs less, transports easily and lasts longer with fewer obsolescence issues than prior models, thanks to state-of-the-art technology. The revolutionary MK 341 missile simulator is the brainchild of NSWC PHD's test equipment branch, which designed and manufactured the device to test and ensure VLSs can successfully launch live missiles once installed on ships.

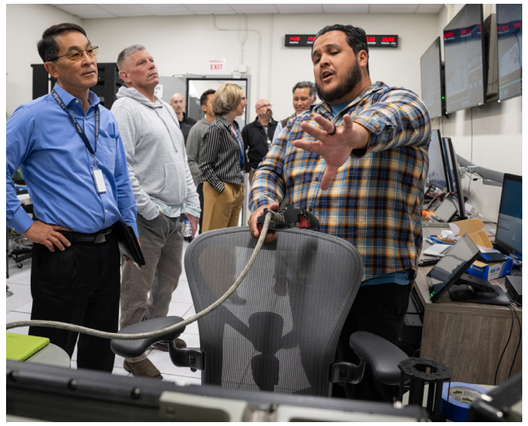
USS Cincinnati (LCS 20) Visits NSWC PHD for Combat System Checkup

NSWC PHD Supports First-Ever CSAT Event for DDG 1000-Class Destroyer

NSWC PHD workforce members and technicians from other warfare centers in January performed the first Combat Systems Assessment Team (CSAT) event for Zumwalt-class destroyer USS Michael Monsoor (DDG 1001) in record time at Naval Base San Diego. The CSAT involved 23 subject matter experts from NSWC PHD, Naval Surface Warfare Center, Philadelphia Division and Naval Information Warfare Center Pacific who assessed, documented and repaired 12 combat system and logistics elements to bolster the ship's wartime readiness.

NSWC PHD Helps USS Tulsa (LCS 16) Get Combat Ready

USS Fitzgerald (DDG 62) Returns to NSWC PHD for Combat Systems Checkup



Directed Energy Team Fires Up SSL-TM Laser System for High-Stakes Test Event

NSWC PHD's Directed Energy Systems Integration Laboratory (DESIL) team ramped up efforts to restore critical functions of the Solid State Laser Technology Maturation (SSL-TM) system since early March, when the Office of the Under Secretary of War for Research and Engineering requested that the one-of-a-kind directed energy demonstrator play a role in its Crimson Dragon 2025 test event in September.

First Augmented Reality Maintenance Systems Operational on Five Ships

In March, NSWC PHD's Augmented Reality Maintenance System (ARMS) team outfitted five ships in less than a week with the first fully operational remote viewing equipment. The technology could reduce the number of onboard technical assistance visits by connecting Sailors and subject matter experts through augmented reality and audio.

Engineering Development Lab Rapidly Creates Head-Mounted Camera Kit to Support Fleet

The command's Engineering Development Lab (EDL) engineers helped the ARMS team meet deadlines and urgent requests while also saving the Navy about 90% in labor and material costs. The EDL team and the lab's additive manufacturing capabilities produced the Additive Manufactured Camera for the ARMS team so it could meet its deadlines.

NSWC PHD's ARMS Team to Send Kits to Global Naval Forces

NSWC PHD's ARMS team sent out more than 20 ARMS kits to the fleet in August, putting it closer to meeting command leadership's goal of ARMS on every deployed ship.

Employee Tours, Sailor Training on Tap as USS Spruance (DDG 111) Visits NSWC PHD

USS Pearl Harbor (LSD 52) Comes in for Ship Groom, Hosts NSWC PHD Employees for Tours

First CONSOL Refueling of Amphibious Assault Ship a Success, Thanks to Sailor Training, Preparation

Thanks to specialized training at NSWC PHD's Underway Replenishment (UNREP) test site, Sailors aboard USS Tripoli (LHA 7) refueled the ship from a commercial oil tanker while at sea in late May — the first time for a ship of its kind. The process used the consolidated fuel delivery system, commonly referred to as CONSOL.

NSWC PHD Tests Installation of Portable Missile Launch Platform on Small Boats

USS Carl M. Levin (DDG 120) Departs With Nearly All Combat Systems Fully Operable

NSWC PHD Supports Navy Exercise Formidable Shield 25

The Combat Systems, Test and Evaluation Team successfully executed multiple test events at Norwegian Ministry of Defense Andøya Space Center Range, Norway, and the United Kingdom Ministry of Defense Hebrides Range in Scotland, May 4-20 in support of Formidable Shield 25 (FS-25).

White Sands Detachment Launches Targets for U.S. 6th Fleet, NATO Event

NSWC PHD's White Sands Detachment (WSD) personnel worked simultaneously with U.S. 6th Fleet and Naval Striking and Support Forces NATO to launch five targets during the joint exercise At-Sea Demonstration/ FS-25, which brought together 11 countries to participate in a series of live-fire operations against subsonic, supersonic and ballistic targets from May 3 to 23 in Scotland, Norway and the Northern Atlantic Ocean.

Command Team Moves Testing Combat Systems in a Virtual Space Forward

The command's Navy Continuous Training Environment team successfully connected inside a digitally constructed space with Sailors aboard two U.S. Navy destroyers while recently in port, and more virtual training and test events are in the works — including participating in a ship's Combat System Ship Qualification Trials (CSSQT) next year.

USS Frank E. Petersen Jr. (DDG 121) Visits Command for Combat Systems Checkup, Cyber Discussions

Combat Systems Assessment Team Event Provides Stewardship for USS Charleston (LCS 18)

Test and Evaluation Staff Joins Other Warfare Centers to Implement Mission-Based Testing Method

NSWC PHD's Test and Evaluation (T&E) team has begun learning a new testing method called Mission-Based Test Design to meet new Department of War (DOW) expectations, establish the command as a center of excellence for the method, and more effectively support the fleet.

Workforce Members Explore In-House Solution for SPY-6 Maintenance Tool Failure

NSWC PHD team members with the SPY-6 radar maintenance training program are developing a potential in-house solution for a maintenance tool that consistently causes problems for Sailors in the training school.

Peter Reddy, Deputy Assistant Navy Secretary, Tours NSWC PHD Testing and Fleet Support Facilities

Command Team Members Help Bring New, Lethal Capability to Aegis Destroyers

A more than seven-year project to increase the lethality of U.S. Navy Aegis destroyers against emerging hypersonic threats has been certified for fleet delivery, thanks in part to NSWC PHD team members across the command. Five destroyers have already received Capability Package 24 (CP 24), combined with Ballistic Missile Defense (BMD) 5.1.5, a combat systems upgrade to the BMD system specifically for Integrated Air Missile Defense missions. NSWC PHD workforce members made critical contributions to the certification and fielding of CP 24 and BMD 5.1.5, which has the Sea Based Terminal Increment 3 program embedded into it, allowing the combat system to counter hypersonic threats.

Autonomous Vehicles Take the Stage at Fathomwerx Lab's Innovation Event

ESSM Team Achieves Breakthrough in Shipboard Missile Reprogramming

In October, NSWC PHD's Evolved Seasparrow Missile (ESSM) all-up round subject matter experts executed the first-ever shipboard reprogramming of an ESSM using the latest version of the Common Munitions Built-In Test Reprogramming Equipment aboard USS Jack H. Lucas (DDG 125), a move that kept the asset readily available versus being out of commission for months. Capt. John Bowman, NATO Seasparrow major program manager with Program Executive Office Integrated Warfare Systems 12.0, stated the team's "exceptional efforts exemplify the spirit of commitment, consensus and cooperation that continues to drive NATO's largest and most successful cooperative weapons project."

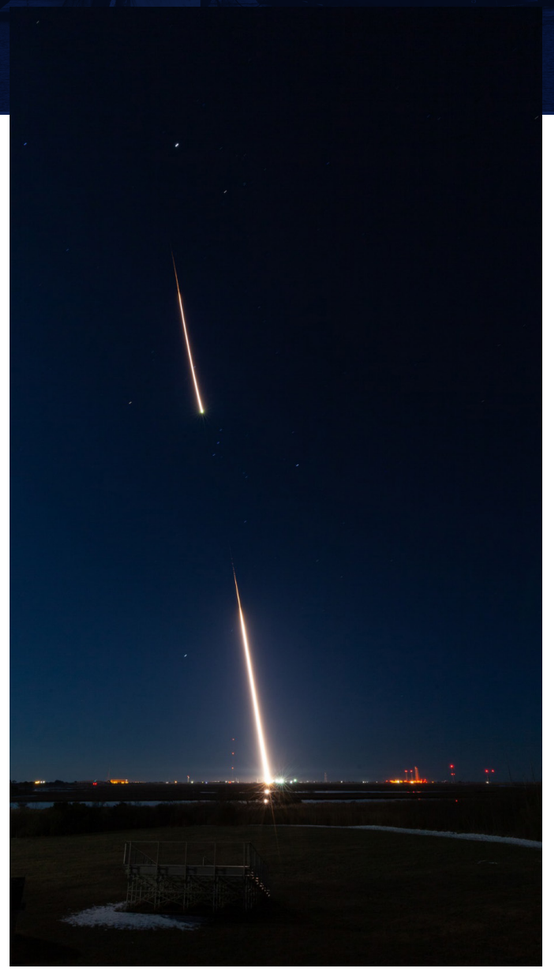
USS Mustin (DDG 89) Visits NSWC PHD for Combat Systems Tuneup, UNREP Training

Command Delivers Combat System Support, Cargo Training for USS John Paul Jones (DDG 53)

NSWC PHD STRATEGIC GOAL

Improve Through Innovation

NAVSEA LOE 3: Generate, Capture and Use Data — Drive Innovation with Data



White Sands Detachment Tests Hypersonic Capability in Second Test Bed Flight

WSD executed Hypersonic Test Bed-2 (HTB-2) at NASA's Wallops Flight Facility on Jan. 13. Detachment subject matter experts showcased the team's capabilities and strong partnership with NASA for this hypersonic vehicle launch. During HTB-2, NSWC PHD launched a three-stage rocket equipped with a flyer into a hypersonic regime to observe how the vehicle responds to hypersonic environments. HTB-2 followed the successful flight of HTB-1 in June 2024 and featured new experiments.

Team RAMADA Wins TD Challenge With Hit-to-Kill Counter Drone Idea

A mechanism to engage enemy unmanned aerial vehicles (UAVs) with high-speed drones won first place in NSWC PHD's Technical Director (TD) Challenge. The competition challenged the workforce to develop a strategy to take down an enemy UAV while limiting collateral damage and costs. The winning idea utilized existing Rolling Airframe Missile canisters to deploy drones against enemy UAVs.

Modernization Summit Prompts Dialogue, Spotlights Community Achievements

NSWC PHD hosted the biannual Navy Modernization Process Alteration Installation Team Summit in February, bringing together hundreds of Navy experts to address the need to rapidly and efficiently equip ships with cutting-edge technologies.

White Sands Detachment Gathers Key Data During Railgun Testing

WSD tested a railgun to collect critical information about high-velocity firing during a three-day campaign at White Sands Missile Range (WSMR) in New Mexico. The testing in February was a joint effort between WSD and NSWC Dahlgren Division in Virginia and conducted for Naval Sea Systems Command (NAVSEA)'s Joint Hypersonics Transition Office.

Logistics Specialist Unveils New Maintenance System for Unmanned Vehicles

Vice Adm. James Pitts, Deputy Chief of Naval Operations for Warfighting Requirements and Capabilities, Tours USV C2 Lab at Surface Warfare Engineering Facility

Technical Lunch-n-Learn Showcases Benefits and Possibilities for 3D Printing

Engineering Development Lab mechanical engineer Joyceanne Sim talked about the different applications of additive manufacturing, also known as 3D printing, during a Technical Lunch-n-Learn on April 23.

Solar-Powered Drone Returns to Stratosphere in White Sands Test

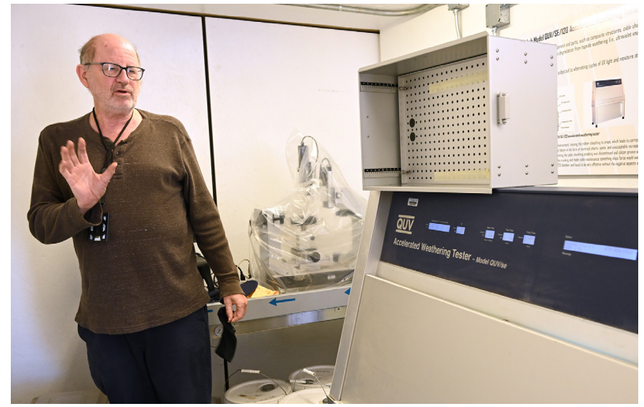
In June and July, WSD sponsored the Persistent High Altitude Solar Aircraft-35 (PHASA-35) program from Spaceport America. The aircraft, with its 35-foot wingspan, is seen by the Office of the Under Secretary of War (Research and Engineering) as a potential multidomain component and a long duration theater asset. The first test in 2023 was successful at over 25 hours of flight, four hours in the stratosphere, and achieving a max altitude of 66,000 feet above sea level.

New High Speed Digital Data Transfer System Gets Data to Ships Faster

The command's SPY-1 radar reference calibration team completes reports for ships much faster lately, thanks to a new system across the warfare centers that transfers classified data in record time. The new digital file transfer system, called the Common Data Repository (CDR) system, enables warfare centers to quickly send and receive extremely large digital files of confidential data. CDR enables the team to process reports for the fleet significantly faster.

AI, Unmanned Vehicles Work in Sync During ANTX Event

Eight companies tested unmanned and autonomous systems off the coast of Port Hueneme in early August, offering the Navy a glimpse at new and emerging technologies. NSWC PHD hosted the Coastal Trident series of Advanced Naval Technology Exercises (ANTX-CT) INDIA event from Aug. 4 through 8 at Fathomwerx Lab and the Port of Hueneme.



UNREP Division Teams With Command's Materials Expert to Modernize Replenishment Components

Team members at NSWC PHD's UNREP division observed that on some ships used to replenish Navy ships while underway, a small but crucial part degraded faster than expected, so they decided to find a sturdier version, and turned to the command's materials degradation expert for testing and feedback.

Product Support Forum Showcases Logistics Technological Advances, Digital Data Integration

Over 250 members of the logistics workforce convened at NSWC PHD on July 30 to see hands-on demonstrations of the latest innovations in data-driven decision-making, digital thread integration and collaborative initiatives designed to optimize fleet readiness.

Command Team Supports Testing, Monitoring of First-of-Its-Kind Unmanned Demonstrator Ship

A new medium-sized USV called USX-1 Defiant kept NSWC PHD team members in the USV C2 lab busy during its weeklong visit in September as the demonstrator ship parked at Naval Base Ventura County after its first open-ocean transit, sailing autonomously more than 1,100 nautical miles from Port Angeles, Washington.

White Sands Team and NASA Break New Ground in Studying Solar Activity with Sounding Rocket Launch

Looking to deepen its understanding of the sun's chromosphere, NASA teamed with WSD to launch a sounding rocket equipped with a next-generation solar spectrograph at WSMR on July 18.

Crimson Dragon Exercise Puts Prototypes Through Weeklong Combat Scenario

The Navy's SSL-TM system shot down four aerial drones during the Office of the Under Secretary of War for Research and Engineering's weeklong exercise in September that united about 20 defense contractors and their prototypes in a simulated combat environment. The multi-unit exercise at DESIL tested the effectiveness of drones, counter-drone weapons and surveillance sensors in scenarios that simulated military base defense, long-range fires and integrated BMD.

Navy's Principal Cyber Advisor **Anne Schumann** Visits NSWC PHD to Discuss Cyber Hygiene Efforts

NSWC PHD First NAVSEA Cybersecurity Penetration Test Team on West Coast

NSWC PHD became the first warfare center on the West Coast to be a NAVSEA-certified cybersecurity penetration test team, enabling the existing cyber penetration team to build out the command's strategic cybersecurity vision and conduct penetration tests for other systems and on behalf of NAVSEA.

NSWC PHD STRATEGIC GOAL

Build a Sustainable Organization

NAVSEA LOE 4: Strengthen the Navy Team — Attract, Retain and Grow Our Workforce

NAVSEA LOE 5: Strengthen the Foundation — Enhance Critical Infrastructure

NAVSEA Naval Reservists Train at NSWC PHD to Support Command

Hailing from more than 20 states, 42 naval reservists visited NSWC PHD to be ready to support the command in the event of mobilization. The former engineering duty officers belong to the NAVSEA Naval Reserve Program Engineering Unit based at the Navy Reserve Center in New Castle, Delaware. They trained for wartime readiness at NSWC PHD from Jan. 26 to Feb. 2.

Electronics Engineer Earns Prestigious Award for Rapidly Solving Combat System Issues in Red Sea

Jorge Velazquez-Rojas, electronics engineer, received the Meritorious Civilian Service Award on Jan. 27 after he and his team were called to the Red Sea when USS Laboon (DDG 58) experienced faults in its combat system and needed rapid assistance in the environment. The team also assisted USS John S. McCain (DDG 56) and USS Mason (DDG 87). Velazquez-Rojas' contribution played a pivotal role in maintaining fleet readiness during strenuous real-world challenges.

NSWC PHD Launches PHD University, Offering One-Stop Learning Resource for Workforce

The command launched PHD University (PHDU) on Oct. 16, a comprehensive, online learning hub, offering NSWC PHD employees an extensive range of training resources and learning opportunities. PHDU is designed as a go-to resource for career growth and professional development.

Ventura County Students Begin Engineering Education at Fathomwerx Lab

Financial Management Symposium Launches Training Qualification Standards

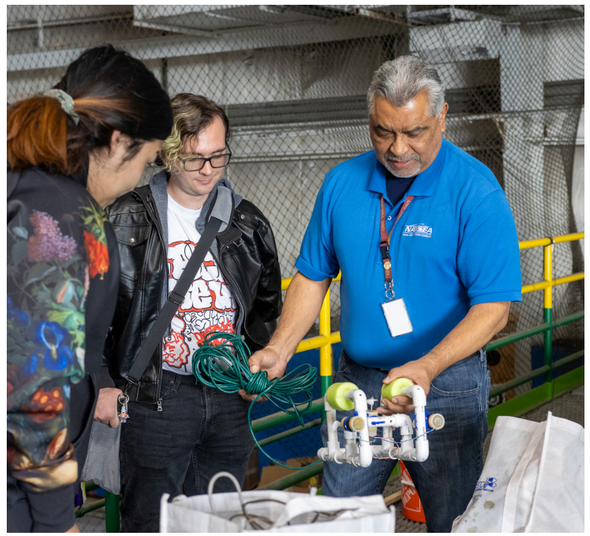
About 160 financial program analysts will begin training with the financial management Training Qualification Standards, a professional program that will give the analysts new standards to measure skills they use to support command programs, budget planning and execution.

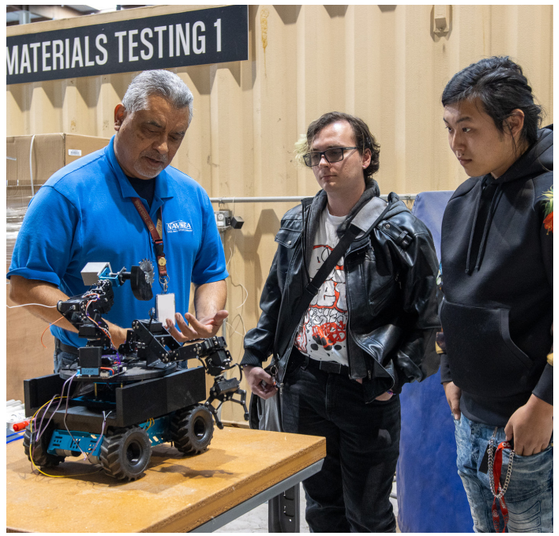
NSWC PHD Executes Education Services Agreement with Local University, Increasing Education Opportunities

The command recently executed an Education Services Agreement (ESA) with California State University Channel Islands in Camarillo, adding to a list of ESAs with several other colleges, to provide NSWC PHD employees additional opportunities to pursue certifications and advanced degrees directly aligned with mission needs.

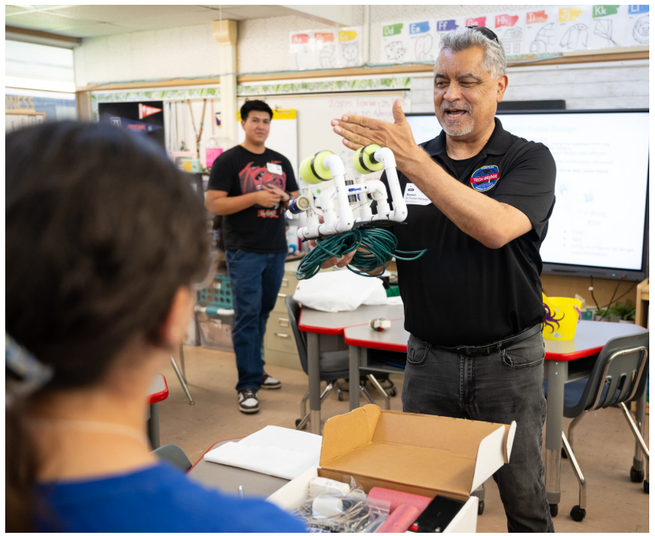
NSWC PHD Launches First of Its Kind Self-Assessment

Command leadership implemented the new Employee Competency Assessment program in January to help team members and leadership evaluate their proficiency in key command competencies, identify areas for growth, guide individual training and improve leadership skills.





College Student Mentors Expand Capabilities for the Command's **Educational Outreach Programs**



STEM Program Expands to Teach Engineering Basics to Grade School Students

Departments Connect With Command Employees During **Engineers Week**

Santa Paula Students Test **SeaPerch** Vessels During STEM Outreach Program Launch

Development Workshop Showcases Career Planning Strategies

High Schoolers Tour Fathomwerx Lab to Learn About NSWC PHD Student Programs, Internships

Rancho Campana High School's Engineering Academy program students heard from NSWC PHD STEM Coordinator Ramon Flores as he explained the multitude of internships and other opportunities to work with the command, including the high-school level Pre-Engineering Program, during the students' visit to Fathomwerx Lab at the Port of Hueneme March 21.

Engineering Athletes Take the Field at FIRST Robotics Regional Competitions

The command's Fathomwerx Lab hosted the For Inspiration and Recognition of Science and Technology Robotics Ventura County Regional competition March 8. Cmdr. Warren Bong, Combat Systems, Test and Evaluation Department officer, talked about his coding and engineering background, explaining that NSWC PHD operates the only remote-controlled warship in the Navy and comparing it to the students' remote-controlled robots in the competition.

Rear Adm. William Greene, Commander, Navy Regional Maintenance Centers, Talks Wartime Readiness, Distance Support During Visit

Alan Jaeger Represents U.S. in NATO Unmanned Systems Meeting in Romania

NSWC PHD Office of Research and Technology Applications Manager Alan Jaeger spoke during the NATO Joint Capability Group for Maritime Unmanned Systems plenary meeting in Constanta, Romania, March 20. The group aims to improve the operational effectiveness, interoperability and interchangeability of unmanned systems within the allied maritime warfighting structures.

Ventura Defense Industry Forum Showcases Government Opportunities and Stresses Collaboration

The Ventura Defense Industry Forum drew more than 600 attendees to foster engagement and collaboration between local industry and the DOW to help meet the growing, ever-changing needs of the fleet.

NSWC PHD Celebrates Chief Petty Officer Rank's 132nd Birthday; Military Members Honored

NSWC PHD Military Shines for Photos

Command Employees Honor Those Fallen in the Line of Duty at **Memorial Day Observance**

NSWC PHD VLS ISEAs Participate in the MK 41 VLS Foreign Military Sales Users Group Conference

Self Defense Test Ship Undergoes Much-Needed Maintenance, Prepares for Possible Service Extension, in San Diego

Self Defense Test Ship Returns Home After Refurbishing in San Diego

NSWC PHD's Self Defense Test Ship returned June 12 to its home at Naval Base Ventura County's Wharf 6-South after a 14-month Selected Restricted Availability for maintenance, repairs and modernization.

Command Employees Display Their Creative Side in Hack 3 Event

College Students Build Engineering, Business Skills in Fathomwerx Fridays Team Project

Students were challenged to replicate a military-grade communications junction box without the original wiring schematics in eight weeks, including to design, build and test the component to create a replication process record. NSWC PHD also worked with the local college STEM mentors on management, business and engineering skills for the project.

Cmdr. Patrick Smith Takes the Reins at White Sands Detachment Change of Charge

NSWC PHD Welcomes Naval Sea Logistics Center Personnel to Command

62nd Anniversary Cake-Cutting Ceremony Stirs Reflection on Command Growth and Appreciation

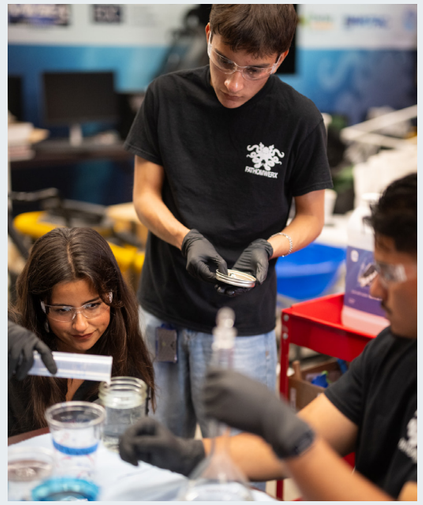
62nd Anniversary Week Kicks Off With Exercise, Cheering and Camaraderie at 5K Fun Run/Walk

CO's and TD's Cup Sparks Competition, Cheering, Camaraderie and Fun

NSWC PHD Families Gather for Afternoon of Activities at **Command Picnic**

Hundreds Turn Out for Fun at **Bring Your Kids to Work Day Event**

Service Dog George Offers Workforce a Respite from Stress



Summer Interns Research Corrosion Resistance for Ship Camera Mounts

Interns Were Front and Center This Summer With Command's Mission, Navy Priorities

Directed Energy Team Builds DESIL's Critical Infrastructure

After recent significant upgrades, DESIL is becoming a key enabler for advancing Navy lasers and other leading-edge technologies in a maritime environment. Since opening DESIL's doors about three years ago, the NSWC PHD team has ramped up the facility's physical and digital infrastructure to accommodate all types of directed energy lasers, high-power microwave weapons, and intelligence, surveillance and reconnaissance systems — and customers have responded.

Seal Beach Facility Meets Recertification Quotas Despite Construction Project

The command's team at Naval Weapons Station Seal Beach met or exceeded last fiscal year's quotas for missile recertifications despite a critical construction project that reduced its work capacity and subsequent output for 20 months. The project enables the site to achieve more throughput of recertified missiles for loading on ships.

Rear Adm. Peter Small, NAVSEA Chief Engineer and Warfare Centers Commander, Visits NSWC PHD for Full Day of Briefs, Tours

Renovated Courtyard With Outdoor Furniture, Shade Opens to the Workforce

Plank-Holding Competition Honors the **Navy's 250th Birthday**

NSWC PHD Celebrates Navy's 250th Birthday With Cake-Cutting Ceremony

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FORCE BEHIND THE FLEET