# Future Maritime Center of Excellence to Transform Coast Guard Academy Waterfront

The U.S. Coast Guard Academy is situated along the Thames River in New London, Connecticut. *U.S. COAST GUARD*

NEW LONDON, Conn. – A more than $23 million project is now underway at the U.S. Coast Guard Academy that will transform the waterfront area of the 90-year-old campus, the academy's public affairs office said in a July 29 release.

The future Maritime Center of Excellence (MCOE) will enhance the waterfront facilities at the Academy by offering interactive and high-tech classrooms for a variety of educational and leadership development courses.

The 20,000 square foot structure will be the Academy's first Leadership in Energy and Environmental Design (LEED) certified building and will highlight the unique waterfront leadership programs and nationally prominent intercollegiate sailing program.

In a twist on the traditional groundbreaking ceremony, leaders signed a ceremonial steel beam which will be used in the construction of the future center during a July 29 event to commemorate the start of the project.

Present at the event were Rear Adm. Bill Kelly, superintendent of the Coast Guard Academy, retired Coast Guard Capt. Andrea Marcille, president of the U.S. Coast Guard Academy Alumni Association and retired Coast Guard Vice Adm. Manson Brown, chair of the Alumni Association Board of Directors.

The modern design of the MCOE includes ambitious sustainability design goals in line with coordinated climate

resiliency efforts across the service, and one of several lines of effort that the Department of Homeland Security and its component agencies have taken to address the dangers posed by global climate change.

The construction is targeting LEED Gold certification. LEED certification involves a set of rating systems for the design, construction, operation, and maintenance of modern buildings to achieve sustainability and resource efficiency goals.

“This LEED certified, multi-purpose facility will serve as gathering spot for cadets and officer candidates from across our great nation,” said Rear Adm. Kelly. “It will be a space where young women and men can gather to learn and grow and I am certain it will serve as a facility that will enhance an appreciation for the water and all its power and beauty and ultimately it will help us instill a liking for the sea and its lore.”

The interior spaces of the future center have been designed with access to daylight, and natural ventilation to minimize reliance on artificial lighting and air conditioning. Double-height spaces for vessel maintenance, office space, and an atrium will provide natural ventilation. Other sustainability goals include the exploration of ground-source heating and cooling, solar panels, and rainwater harvesting. The building exterior will also feature durable, resilient materials that are easily maintained.

With a curvilinear vaulted roof, wooden decks, and true north orientation the building is designed to highlight the waterfront landscape. The new facility will also feature interactive and high-tech classrooms such as the Science and Engineering Innovation Laboratory designed to encourage collaboration in areas of digital processing, robotics, alternative fuels and emissions, and environmental and coastal resiliency among others.

This represents a significant step forward as the Academy works to recapitalize 1930's infrastructure and build modernized training and education venues to deliver the knowledge, skills, experience and values necessary to develop the future Coast Guard workforce.

---

# Jones Act Seen as Key Hedge Against China's Growing Merchant Might

Naval Air Crewman (Helicopter) 2nd Class Benjamin Whitney, from Syracuse, New York, lowers a litter during rescue training with a merchant ship in the Gulf of Aden, March 1, 2019, during Lucky Mariner 19. Lucky Mariner is an annual exercise led by Naval Coordination and Guidance for Shipping (NCAGS) alongside shipping and coalition maritime forces designed to exercise command and control and provide standardized direction during periods of increased tension to protect the free flow of commerce. *U.S. NAVY / Mass Communication Specialist 2nd Class Logan C. Kellums*

The Jones Act and commercial cargo operations in general must be strengthened to avoid further erosion of U.S. shipping strength versus commercial powerhouse China, said speakers at a Navy League Sea-Air-Space Prequel "Lunch and Learn" virtual session on July 21.

Dr. Sal Mercogliano, associate professor of history at Campbell University in North Carolina and a former merchant mariner, led a panel discussion entitled "The Jones Act, Where Commerce and Defense Converge."

Mercogliano and the speakers sounded the alarm about the

status of the U.S. merchant marine, particularly when compared to China.

“Are we a true proponent of sea power if we have the No. 1 Navy in the world and the No. 21 merchant marine in the world, when China is basically No. 2 in both and growing?” Mercogliano asked.

China has the largest merchant fleet, “which dwarfs ours,” the largest coast guard, the world’s only maritime militia, produces 96% of the world’s shipping containers and owns seven of the 10 busiest ports in the world, said panelist Tony Padilla, director of the Office of Cargo and Commercial Sealift at the Department of Transportation’s Maritime Administration.

On an average day in the United States, 23 U.S.-flagged vessels call at ports, compared with 2,800 foreign-flagged vessels, he said. In the critical Indo-Pacific region, 35 U.S.-flagged vessels call at ports on an average day, compared with 20,000 foreign-flagged vessels.

“This should be a wake-up call,” he said. “This is a major issue that we need to get to like yesterday, like last year, like 10 years ago.”

Panelist Mike Roberts, senior vice president of government relations for Crowley Maritime Corp. and president of the American Maritime Partnership, joined Padilla in pointing out the dangers posed by China, an authoritarian country.

“China’s advantage in the commercial maritime sector is simply overwhelming in sheer numbers. The Navy League reported last December that there were roughly 6,000 large commercial ships controlled by China internationally. The corresponding number of American-flagged ships is below 200 and that includes ships operating in U.S. domestic trades,” Roberts said.

“It’s all about policy – laissez faire on steroids on the U.S.

side, versus mercantilism on steroids on the China side."

The Jones Act – officially known as the Merchant Marine Act of 1920 – ensures that only U.S.-built, flagged and crewed ships can operate in domestic commerce, although it does allow for waivers of those requirements. Roberts said it is sometimes derided as a protectionist law aimed at bolstering the defense market, but one big value is promoting U.S. industry and workers.

"Foreign ships don't obey American rules, hire American workers or pay American taxes. They should not be allowed to trade in our domestic markets, and that's simply a function of American sovereignty, and not protectionism," he said.

Costs are higher using U.S. workers versus developing nations' labor, but "it's simply not OK to replace American workers with foreign workers right here in America," he said. "Those who complain about the cost of the Jones Act invariably miss that point."

Jennifer Carpenter, president and CEO of the American Waterways Operators, a trade association for the tugboat, towboat and barge industry, said the U.S. commercial fleet showed its worth during the darkest days of the COVID-19 pandemic by keeping goods flowing.

Throughout the worst days of the pandemic, "tugboats, towboats, barges and other domestic vessels continued to move the commodities that kept a weakened economy afloat," not least by delivering equipment to fight the virus.

"How much worse could things have been if we'd had to rely on foreign vessels to move supplies on our domestic waters and if we had to deal with the potential to the disruption to our maritime commerce in the middle of contending with COVID?" Carpenter said. "Thanks to the Jones Act, we didn't have to find out."

Carpenter said commercial shipping can respond quickly in the case of disaster, such as when ships stepped up to deliver oil to riverine ports in the wake of the Colonial Pipeline shutdown. Jones Act opponents sometimes call for waivers in the wake of such events, but she said the recent National Defense Authorization Act puts new requirements on such waivers and includes transparency and accountability as to who is asking for them, "so Congress can provide oversight."

The act also specifies that renewable energy projects — mainly, offshore wind farms — are subject to the Jones Act, just like oil and gas work is.

Building wind farms is a "generational opportunity," Carpenter said. "Let's let American maritime companies and American mariners make this tremendous investment that is going to serve our country and our economy and our security so well."

---

# SECDEF Announced Flag JAG Flag Nomination

ARLINGTON, Va. — Secretary of Defense Lloyd J. Austin III announced July 23 that the president has made the following nomination:

Navy Capt. David G. Wilson for appointment to the rank of rear admiral (lower half). Wilson is currently serving as assistant judge advocate general (Operations and Management), Washington, D.C.

---

# Sea-Air-Space 2021 Prequel: Sea Services Can Provide Great Opportunities, but More Work is Needed to Ensure Diversity, Speakers Say

Outgoing Defense Information Systems Agency (DISA) Central Field Command, commander, U.S. Army Col. Corey L. Brumsey, passes the command flag to director, DISA and Commander, Joint Force Headquarters – Department of Defense Information Network, U.S. Navy Vice Adm. Nancy A. Norton, during a change of command ceremony at U.S. Central Command Headquarters, June 28, 2019. *U.S. CENTRAL COMMAND PUBLIC AFFAIRS / Tom Gagnier*

Three top female service officials said the sea services and military can provide great opportunities for women and minorities, but more work needs to be done to encourage those people to join the armed forces and help them meet their goals once inside.

“I think it’s really important for us to recognize the value and significance of the leadership opportunities that we get in the military and in the Department of Defense as civilians, at a much more junior age, much younger than our civilian counterparts ever would,” said Vice Adm. Nancy Norton, who retired as vice director of the Defense Information Systems Agency and commander of the Joint Force Heaquarters Department of Defense Information Network after a 34-year career.

“What we want to do, as women, is be great leaders, just like any man or woman in the military, and look for opportunities to better enable men and women across the board in all leadership opportunities,” she said.

Norton spoke on the “Women and Warfare” session as part of the Sea-Air-Space 2021 Prequel, along with Rear Adm. Melissa Bert, judge advocate general for the U.S. Coast Guard, and Col. Kelly Frushour, deputy director of the Communications Directorate at Marine Corps headquarters.

All the women said they weren’t expecting to make a career of it when they joined the military, but once inside what kept them going were the opportunities and the people.

“I never actually made a conscious decision to stay in the Navy, I just kept doing things that I loved, and the Navy kept giving me opportunities to do new things and to see new places, to go places I would never have had the opportunity to experience,” Norton said.

Bert joined the Coast Guard at a time when it was only 10 percent female and did two tours on ships where she was the only woman on board. That helped her decide she didn’t want a seagoing career, so the Coast Guard sent her to law school.

“Through a lot of great friends and mentors and coaches, I just stayed with it, and it’s been fun. My closest friends are in the Coast Guard and I met my husband, who is not in the Coast Guard, but I met him through the coast guard, so it’s just a second family to me, that’s why I stayed,” Bert said. “It wasn’t even the mission as much as the people.”

Frushour said she was an Air Force brat who attended a “hail and farwell” ceremony at the U.S. embassy in Norway, her father’s last posting, for a departing Marine and his replacement.

For the new arrival, “it didn’t seem like a start over for him, it seemed like he had moved into a new family, into a new group of friends. As a military brat who had grown up all over the place, that really stayed with me. What a great thing, to be able to join an organization that is doing good work, to be able to serve my country, be able to travel, and wherever you

go, you’re just joining friends and family that are already there.”

Norton said the military really is a meritocracy, and “frankly, one of the reasons I’ve loved being in the military is from the time I started I’ve always felt like the military has led society in diversity and equality in many, many ways … If you work hard and are dedicated to the people and the mission, you can be successful, and I think it’s important that we in the military, and those of us who are retired and continue to influence the Department of Defense, continue to make it a leader in our social change and social justice across the board.”

However, changes still need to be made, Bert said.

“We still have model, because it was formed by men, we have a model that is for a stay at home person, whether it’s a husband or wife, who’s raising the kids, we don’t really acknowledge that having a family is part of most people’s lives,” Bert said. “It should not be a choice … either six years at sea as a SWO [surface warfare officer] and then deciding, I can’t have this lifestyle, or just moving all the time.”

That model is “a great way to drive out really talented people, not just women. It’s not a lifestyle choice [where] we’re going to get the best in American society. … We need to start listening to women and underrepresented minorities and look at ways we can change.”

# Sea-Air-Space 2021 Prequel: Cooperation is Key for Maintaining Maritime Security, International Navy Chiefs Say

A member of Explosive Ordnance Disposal Mobile Unit (EODMU) 8, performs mine recovery training as part of BALTOPS 50. The 50th BALTOPS represents a continuous, steady commitment to reinforcing interoperability in the Alliance and providing collective maritime security in the Baltic Sea. *U.S. NAVY / Mass Communication Specialist 1st Class Christopher Hurd*

Top officials from several allied navies said cooperation and collaboration is one key way to bolster their capability in tough budget times.

U.S. Navy Rear Adm. Francis D. Morley, director of the Navy International Programs Office, led a Sea-Air-Space 2021 Prequel virtual session in July with international heads of navy, including speakers from the United Kingdom, Sweden, Spain and Japan.

Vice Adm. Nick Hine, second Sea Lord of the Royal Navy, said where possible, allies should move beyond interoperability and embrace interchangeability.

That is “not about individual naval units working together operationally, indeed tactically, but a strategic conversation about how we consider our entire approach to collaboration. This is about using our collective resource better to be more productive and deliver better security outcomes,” Hine said. “We have started that journey, but to be truly interchangeable with our allies, we must align strategic visions, cohere our

planning and resources, jointly plan and execute operationally and technically, not only acting together but acting as one."

That could include common doctrines, systems architecture, supply chains, data sharing as well as "common platforms and weapon systems that can be jointly developed and delivered to sovereign units," he said.

As an example, he cited the U.K.'s Carrier Strike Group 21, led by the aircraft carrier HMS Queen Elizabeth, that has U.S. Marine Corps, Royal Navy and Royal Air Force F-35 pilots "flying and fighting together," as the recently did in strikes against Daesh, the terrorist group also known as ISIS.

Another example he cited is the London Tech Bridge, an incubator which highlights American and British technology and rapidly exploits it.

"Even if we are unable to achieved interchangeability in full, the ambition and the drive towards it will strengthen interoperability between allied navies," Hine said.

Rear Adm. Ignacio Villanueva Serrano, force commander of the Spanish navy, said a medium-sized navy such as his own needs to enhance several capabilities to stay relevant, including leveraging space as an extension of the air and sea, new "connectors and vectors for seapower projection" and unmanned systems, all of which, "one way or another, will be required in the new security and defense environment."

Serrano and Hine both noted that technology is becoming more widely available across the board, to large navies and small actors alike.

The current environment is "marked by a struggle for technological superiority and easy access by all to emerging and advanced technologies, where it can be difficult to gain advantage in direct confrontation," Serrano said. "In this context, the use of hybrid strategies will prevail and

opposing actors will try to act at the limit of international legality, covered by fake news to manipulate public opinion and provoking critical doubts on the use of all military forces and capability."

Navies such as those of Spain and Sweden need to modernize and beef up their capabilities, said Serrano and Rear Adm. Ewa Skoog Haslum, chief of navy for the Swedish Navy, the first woman to lead a branch of the country's armed forces.

"Interoperability requires us to find both technology solutions and the continued develop of sharing recognized maritime picture with our different partners," she said. "Together, we are not only stronger, but better."

She cited the recent Baltic Operations (BALTOPS) exercise, which celebrated its 50th anniversary this year and included 16 NATO nations and two partner nations, including Sweden.

Sweden is embarking on a military buildup that will see mid-life updates on corvettes, including adding electronic warfare suites and air defense missiles, four new surface combatants, with two arriving by 2030, operationalizing a fifth new submarine and re-establishing a marine regiment on the country's west coast, among other changes.

Next year will mark the 500th birthday of the Royal Swedish Navy, she noted, and a new defense resolution gives a clear growth goal for 2025 and beyond, "and we are now eager to grow."

Spain wants to lean in to new credible landing forces and littoral strike capabilities, Serrano said, using short takeoff and landing aircraft and small landing platforms, as well as underwater vehicles for mine detection and unmanned surface vehicles for force protection.

"In our navy, we are aiming for those systems and concepts,"

he said.

In a pre-taped segment, Adm. Hiroshi Yamamura, chief of staff of the Japanese Maritime Self Defense, said the Indo-Pacific region is “vitally important for our security.” To that end, the Japanese defense ministry recently unveiled a “free and open Indo-Pacific vision” to enforce regional prosperity and security in the Indian Ocean and Pacific Ocean.

It would do this through defense cooperation and exchange activities and through active engagement in the region in cooperation with partner countries, Yamamura said.

Yamamura noted the many challenges in the region, from more assertive and aggressive actions by China and Russia to ongoing tensions in the Middle East to a “still unpredictable” North Korea.

As an “overreaching capability” to help counter these threats and defend Japan’s surrounding waters and territories, Yamamura said Japan will bolster its information warfare capability and its strategic communications.

“I am confident that the backbone of global security is to maintain the international maritime order of the world,” he said. “Cooperation and exchanges with neighbor partners are more effective that promoting efforts on our own.”

---

# AeroVironment Debuts Crysalis Ground Control System

The new Crysalis ground control station, shown here in its Ultralight form. *AEROVIRONMENT*

Unmanned aircraft maker AeroVironment announced Crysalis, a new flexible, cross-platform ground control system the company says will form the command-and-control basis for all its products going forward.

Company President and CEO Wahid Nawabi and other company officials announced the product in a live video press conference on July 6, saying the goal is to make command and control much simpler for the warfighter and provide a "window" to all the systems they control, eventually including air, ground and maritime equipment.

"With the introduction of Crysalis, we are streamlining command and control of our small UAS and empowering warfighters with actionable intelligence at the speed of war to increase their tactical decision making," Nawabi said. "Crysalis can be integrated into our portfolio of intelligent, multi-domain robotic systems and deliver easy-to-use, yet powerful new capabilities that enable our customers to succeed in full spectrum operations."

Crysalis, which the company calls "ground control, simplified," is built around hardware, software and antennas and comes in four sizes: RVT, or remote video terminal, the smallest, wearable, phone-based system; Ultralight, also wearable, but which adds joysticks and physical controls and is the smallest size that allows full command and control; Tactical, which adds a battery splitter for hot-swapping batteries for longer power life; and Command, a laptop-based variant intended for a fixed or semi-fixed command post location.

It's cross platform with Windows, Android and Linux, and is flexible in that an Android-powered Crysalis system on a phone could interact with a Windows system on a laptop.

Ease of use is key to reduce "cognitive load" on warfighters, Nawabi said, and the system is designed to put critical

information front and center. Size was also a key driver for the system because, as Chief Software Engineer Mark Graybill said, “Weight is about how much ammo you can’t pack.”

---

# Two Marines Nominated for Lieutenant General, Deputy Commandant Assignments

ARLINGTON, Va. – Secretary of Defense Lloyd J. Austin III announced today that the president has made the following nominations:

Marine Corps Maj. Gen. David J. Furness for appointment to the rank of lieutenant general, and assignment as deputy commandant for plans, policies, and operations, Headquarters, U.S. Marine Corps, Washington, D.C.  Furness is currently serving as assistant deputy commandant for plans, policies, and operations, Headquarters, U.S. Marine Corps, Washington, D.C.

Marine Corps Maj. Gen. Matthew G. Glavy for appointment to the rank of lieutenant general, and assignment as deputy commandant for information, Headquarters, U.S. Marine Corps, Washington, D.C.  Glavy is currently serving as commander, Marine Corps Forces Cyberspace Command, Fort George G. Meade, Maryland.

---

# U.S. Navy Launches First Flight III DDG, the Future USS Jack H. Lucas

The future guided-missile destroyer Jack H. Lucas (DDG 125) is launched, June 4, 2021, at Huntington Ingalls Industries, Ingalls Shipbuilding division in Pascagoula, Mississippi. *U.S. NAVY / HUNTINGTON INGALLS INDUSTRIES*

PASCAGOULA, Miss. – The first DDG 51 Arleigh Burke-class guided missile destroyer to be built in the Flight III configuration, the future Jack H. Lucas (DDG 125), was successfully launched at Huntington Ingalls Industries, Ingalls Shipbuilding division, June 4, the Navy said in a June 7 release.

The DDG 51 Flight III upgrade is centered on the AN/SPY-6(V)1 Air and Missile Defense Radar and incorporates upgrades to the electrical power and cooling capacity plus additional associated changes to provide greatly enhanced warfighting capability to the fleet. The Flight III baseline begins with DDGs 125-126 and will continue with DDG 128 and follow-on ships.

"Flight III ships will provide cutting edge integrated air and missile defense capability to include significantly greater detection range and tracking capacity. Launching the first Flight III ship, the future Jack H. Lucas, is another important step to delivering Flight III to the Navy," said Capt. Seth Miller, DDG 51 Arleigh Burke-class program manager.

The DDG 51 Arleigh Burke-class guided-missile destroyer (DDG 51) is a multi-mission guided missile destroyer designed to operate offensively and defensively, independently, or as

units of Carrier Strike Groups, Expeditionary Strike Groups, and Surface Action Groups in multi-threat environments that include air, surface and subsurface threats. These ships will respond to low intensity conflict and coastal and littoral offshore warfare scenarios, as well as open ocean conflict, providing or augmenting power projection, forward presence requirements and escort operations at sea. Flight III is the fourth flight upgrade in the 30-plus year history of the class, building on the legacy of Flight I, II and IIA ships before it.

HII is currently constructing four other DDG 51 class ships, including the future Frank E. Petersen Jr. (DDG 121) and Lenah Sutcliffe Higbee (DDG 123) in the Flight IIA configuration, and the future Ted Stevens (DDG 128) and Jeremiah Denton (DDG 129) as Flight III ships. There is a total of 20 DDG 51 class ships under contract at both new construction shipyards.

---

# GDMS to Retrofit Knifefish Surface Mine Countermeasure UUVs for Navy

A Knifefish unmanned undersea vehicle (UUV) training model undergoes crane operations aboard the Military Sealift Command expeditionary fast transport vessel USNS Spearhead (T-EPF 1) in 2019. *U.S. NAVY / Master-at-Arms 1st Class Alexander Knapp*

FAIRFAX, Va. – General Dynamics Mission Systems announced June 7 it was awarded a $72.8 million contract from the U.S. Navy to retrofit five Block 0 Knifefish surface mine countermeasure unmanned underwater vehicle (SMCM UUV) systems, which

comprises 10 Knifefish SMCM vehicles. The retrofit requirements will enhance Knifefish operations at deeper depths, identify more complex target environments and provide more precise localization.

Once complete, all 10 Knifefish Block 0 UUVs will be upgraded with the new requirements integrated and redelivered in the Block 1 configuration.

Knifefish SMCM is a medium-class mine countermeasure UUV intended for deployment from the Navy's littoral combat ship and other Navy vessels of opportunity. Knifefish SMCM will reduce risk to personnel by operating within minefields as an off-board sensor while the host ship stays outside the minefield boundaries.

"General Dynamics Mission Systems is honored to extend our support to the U.S. Navy with this increased capability on all five Knifefish SMCM systems," said Carlo Zaffanella, vice president and general manager at General Dynamics Mission Systems. "We are proud to provide the Navy with advanced, state-of-the-art unmanned underwater vehicles, and we are dedicated to delivering this technology safely and quickly to our sailors."

---

# New AMRAAM Variant Completes Two Free Flight Test Shots

An AMRAAM launched from an F/A-18F Super Hornet. *U.S. NAVY*

EGLIN AIR FORCE BASE, Fla. – The Advanced Medium-Range Air-to-Air Missile (AMRAAM) joint program office completed the second live fire test of the new AIM-120D-3 missile variant,

incorporating upgraded hardware into the guidance section on May 12, the Naval Air Systems Command said in a release.

The weapon safely launched from an F/A-18F Super Hornet and flew the expected flight path over the Point Mugu Sea Test Range in California. Preliminary analysis provided by the prime contractor, Raytheon Missiles & Defense, indicates all primary and secondary objectives of the shot were met.

“Completing the first two free flight shots of upgraded hardware and software is a significant milestone in the integration and test phase of the new AIM-120D-3 missile,” said Col. Sean Bradley, AMRAAM Senior Materiel Leader at the U.S. Air Force’s Armament Directorate. “These successes are important to the overall execution of the Form, Fit, Function Refresh (F3R) program; a program implemented to address an increasing number of production challenges due to obsolescence of various electronic components within the AIM-120.”

Combined with software upgrades, AIM-120D-3 will deliver advanced capabilities to improve missile effectiveness against advanced threats for Air Force, Navy, and Allied Partners. This missile shot from an F/A-18F Super Hornet tested the missile’s safe separation autopilot and free-flight navigation capabilities.

Together, with the first shot on Dec. 9, 2020, these shots represent a critical first in a series of developmental flight tests that provides crucial data to assess the missile’s ability to acquire, track and guide to targets.

AMRAAM is the world’s most sophisticated, combat-proven air dominance weapon.  With AIM-120D-3 production deliveries beginning in 2023, the AIM-120 missile will continue to meet warfighter requirements in all weather and beyond visual range engagements. Its capabilities have been fully demonstrated in over 4,900 test shots and more than 13 air-to-air combat victories.