Coast Guard Buoy Tender Departs San Francisco for Major Maintenance Period

The Coast Guard Cutter Aspen (WLB 208) departs the San Francisco Bay Area Nov. 29. The Aspen served the California coastline since Sept. 28, 2001. *U.S. COAST GUARD / Petty Officer 3rd Class Taylor Bacon*

ALAMEDA, Calif. – The Coast Guard Cutter Aspen (WLB 208) and crew departed the Bay Area Nov. 29 for the last time as a San Francisco-based cutter and are en route to the Coast Guard Yard in Baltimore to undergo major maintenance and overhaul, the Coast Guard 11th District said Nov. 30.

This marks the end of two decades of service along the California Coastline for the Aspen as one of 16 of the nation's Juniper class sea-going buoy tenders. The 225-foot ship and its 48-person crew have been stationed at Yerba Buena

Island since Sept. 28, 2001.

Aspen’s area of responsibility encompassed the coastal areas from the Oregon-California border to San Diego. In addition to its primary buoy tender operations, the cutter also has a long history in search and rescue, drug and migrant interdiction and marine pollution prevention and response missions. Since 2005, the cutter has worked with U.S. partners in Mexico to interdict tens of millions of dollars in illicit narcotics in support of U.S. Southern Command and Joint Interagency Task Force South objectives, most recently interdicting $3.2 million worth of cocaine in 2017. In 2007, Aspen responded to the Cosco Busan oil spill in San Francisco and the Deepwater Horizon oil spill in the Gulf of Mexico in 2010 to assist in oil spill cleanup efforts.

The crew is slated to travel approximately 6,000 miles over the course of 40 days and pass from the Pacific to the Atlantic by way of the Panama Canal. The Aspen is scheduled to undergo a $20 million, 12-month major maintenance availability (MMA) overhaul.

The MMA is a planned dry dock event at the Coast Guard Yard, the first such major availability in the life of this class of ship. The availability will recapitalize many of the ship’s critical systems, to include complete crane replacement, topside preservation work and technology modernization. The availability is designed to ensure that the cutter can reach its designed 30-year service life. Aspen will be the 11th 225-foot Juniper Class buoy tender to begin the MMA period.

The Coast Guard Cutter Alder (WLB 216) formerly homeported in Duluth, Minnesota, is slated to be brought back into service in summer of 2022 by the former Aspen crew and re-homeported in San Francisco. The Aspen’s scheduled final destination will be Homer, Alaska, in early 2023.

“It has been a privilege to serve along California’s rugged, oftentimes austere coastline; the beauty is without parallel, and the Pacific Ocean’s winds, current, fog and constant swells offshore continue to mold us as the stern teachers they are,” said Lt. Cmdr. Paul Ledbetter, the Aspen’s commanding officer. “The U.S. is and always has been a maritime nation, and my crew relishes the challenges of keeping the maritime transportation system up and running in our capacity as a WLB. We look forward to continuing to serve this great country when we return to San Francisco aboard the Coast Guard Cutter Alder next year.”

Coast Guard Aids to Navigation Team San Francisco will be standing by to perform routine maintenance on the Aspen’s buoys throughout the Bay Area. Additionally, the Coast Guard Cutter George Cobb, a 175-foot buoy tender homeported in San Pedro, is slated to maintain all aids to navigation south of San Francisco and the Coast Guard Cutter Elm, a 225-foot buoy tender homeported in Astoria, Oregon, is also slated to assist throughout Northern California in spring 2022.

Electrowatch Completes Revere Sensitization Treatments on USS Vicksburg

The Ticonderoga-class guided missile cruiser USS Vicksburg (CG 69), shown here awaiting dry dock flooding in June 2021. *U.S. NAVY / Mass Communication Specialist 3rd Class Brandon Roberson*

Norfolk, Va. – ElectraWatch, an Austal USA company, completed two successful reverse sensitization treatments of aluminum alloy in service on the U.S. Navy Ticonderoga-class guided missile cruiser USS Vicksburg (CG 69) in September 2020 and July 2021.

The process of reverse sensitization involves careful heating to restore shipboard aluminum to near-factory condition from a "sensitized" state, an out-of-spec condition susceptible to cracking that can develop at sea. This treatment reduces the need for replacement of the material or alternative surface treatment which is costly and time-consuming. Follow-up measurements verified the material had been returned to within specification.

"I'm proud of the hard work our engineering team has done to accomplish these treatments," ElectraWatch General Manager

Ryan Dunn said. “These results validate the Navy’s confidence in ElectraWatch and the process we have developed. Our cutting-edge tools and processes represent a major improvement over previous methods and will serve to extend the service life of the Ticondergoa-class ships.”

Donald Tubbs, ElectraWatch’s Senior Test & Research Engineer, explains: “These tests are the result of several years of collaboration with waterfront managers and the Navy’s technical and research and development communities.”

5000-Series Aluminum Alloy (Marine Grade) is used extensively on U.S. Navy guided-missile cruiser superstructures. The specific alloy used, AA5456, can become sensitized after long exposures to elevated temperatures, such as those that arise at sea during solar heating. Once sensitized, the combination of a corrosive environment like seawater and stress can lead to cracking of the plate.

By carefully controlling time and temperature, the reverse senstization treatment can return to near-factory condition or “heal” aluminum alloy that may have previously required costly complete replacement. Used in tandem with ElectraWatch’s proprietary non-destructive Degree of Sensitization Probe, which has been successfully used to conduct over 9,000 fleet-based sensitization measurements, the Navy now has a turnkey solution to conduct better-informed, cost-saving maintenance planning that limits scope creep and reduces the amount of aluminum replaced.

BAE Systems Provides First

Zero-Emission Fuel Cell Propulsion System for U.S. Vessel

BAE Systems successfully installed its zero-emission propulsion system in the first U.S. hydrogen fuel cell powered marine vessel, the Sea Change. *BAE SYSTEMS*

SAN FRANCISCO and ENDICOTT, N.Y. – BAE Systems successfully installed its zero-emission propulsion system in the first U.S. hydrogen fuel cell-powered marine vessel, the Sea Change, the company said Nov. 30.

BAE Systems provided its HybriGen Power and Propulsion solution to Zero Emission Industries for integration on the Sea Change vessel that will operate in the San Francisco Bay Area. The Sea Change project is funded and owned by SWITCH Maritime, an impact investment firm building the first fleet of zero-carbon, electric-drive maritime vessels for adoption by existing ship owners and operators.

BAE Systems' propulsion system interfaces with a hydrogen and

fuel cell system provided by Zero Emission Industries and lithium-ion batteries to power the vessel without the need for a traditional combustion engine. The all-electric system eliminates diesel fuel use and reduces engine maintenance to create a clean mode of transportation.

“We are committed to getting our customers to zero emissions with highly reliable and flexible systems that are proven on land and in the water,” said Steve Trichka, vice president and general manager of Power & Propulsion Solutions at BAE Systems. “This historic milestone is the next step on that journey, as we provide San Francisco with an innovative solution that reduces emissions and creates a new clean form of daily transportation for hundreds of commuters.”

BAE Systems worked with the vessel’s builder, All American Marine, and designer, Incat Crowther, after previously teaming with both companies on multiple projects. BAE Systems uses proven controls and components that have passed certification and inspection by the U.S. Coast Guard.

The project is also partially funded by a $3 million grant from the California Air Resources Board, administered by the Bay Area Air Quality Management District, that comes from the California Climate Investments initiative, a California statewide program that puts billions of cap-and-trade dollars to work reducing greenhouse gas emissions, strengthening the economy, and improving public health and the environment, particularly in disadvantaged communities.

Oshkosh Defense Receives

$591.6M JLTV Order for Army, Marine Corps, Others

U.S. Marines with Battalion Landing Team 3/5, 31st Marine Expeditionary Unit land on the beach in a joint light tactical vehicle (JLTV) to begin a light armored reconnaissance raid reherasal at Camp Schwab, Okinawa, Japan, June 19. *U.S. MARINE CORPS / Sgt. Daisha R. Ramirez*

OSKOSH, Wis. – The U.S. Army Contracting Command – Detroit Arsenal (ACC-DTA) has awarded Oshkosh Defense a $591.6 million order for 1,669 Joint Light Tactical Vehicles (JLTV), 868 companion trailers and associated packaged and installed kits, the company said Nov. 29.

The order includes Oshkosh Defense JLTVs for the U.S. Army, Marine Corps, Air Force and Navy. As part of the order, 125 vehicles will also be delivered to NATO and allied partners, including Brazil, Lithuania, Montenegro and Slovenia.

Since winning the competitive JLTV contract in 2015, Oshkosh Defense, a wholly owned subsidiary of Oshkosh Corp., has built

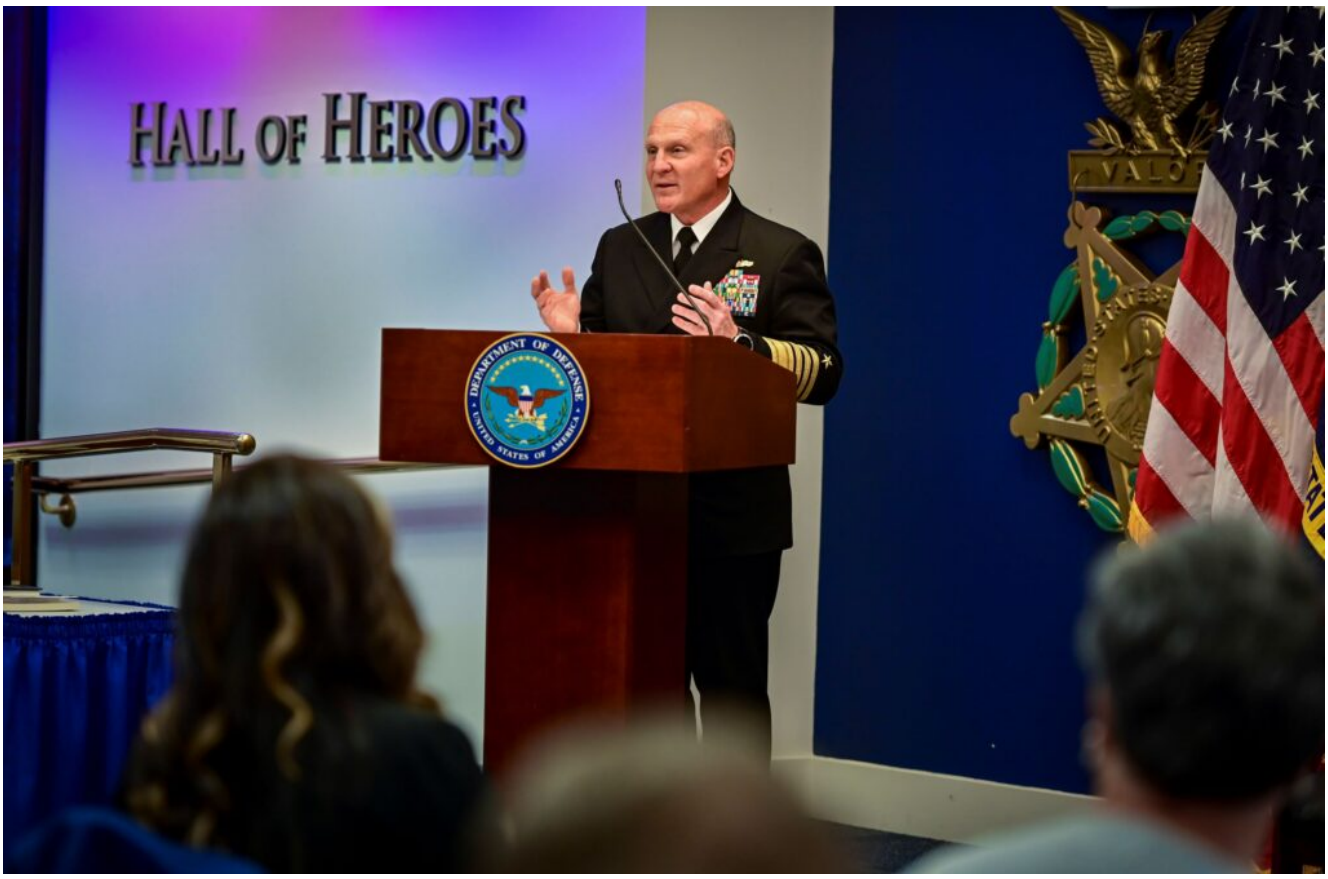
more than 14,000 JLTVs, and that number continues to grow.

“Our team takes great pride in designing and building a versatile platform that can survive the extreme demands of future combat,” said George Mansfield, vice president and general manager of Joint Programs for Oshkosh Defense. “That’s what we do and what we’ve been doing for decades. And Oshkosh’s vast tactical wheeled vehicle experience, expertise and knowhow grows with every vehicle that comes off our production line.”

International momentum surrounding the Oshkosh Defense JLTV also continues to grow as customers seek a light tactical vehicle with lethal capabilities, fleet commonality attributes and design flexibility.

“Integrated lethality on an agile and protected vehicle like the Oshkosh JLTV is quickly filling capability gaps that exist in many international militaries,” said John Lazar, vice president and general manager of International Programs for Oshkosh Defense. “This past year, we’ve seen an increased interest in the Oshkosh JLTV from international customers with dynamic demonstrations and live fires across Europe, with more planned for 2022.”

CNO, CMC: Training Systems Need to Be Linked Like Operational Systems



Chief of Naval Operations Adm. Mike Gilday, shown here delivering remarks during the Vice Adm. James Bond Stockdale Leadership Award ceremony in the Pentagon. *U.S. NAVY / Mass Communication Specialist 1st Class Sean Castellano*

ARLINGTON, Va. – The systems used to train Sailors and Marines need to be linked like their operational counterparts to make training realistic and relevant, the uniformed leaders of the Navy and Marine Corps said.

Chief of Naval Operations Adm. Michael M. Gilday and Commandant of the Marine Corps Gen. David H. Berger were participating Nov. 30 in a fireside chat at the Interservice/Industry Training, Simulation and Education Conference (I/ITSEC) in Orlando, Florida. They covered a wide range of topics related to training and simulation.

The two service chiefs said as their services proceed with increased integration and distribution and work together as a naval force, their training systems need to be linked to provide the realism needed to develop warfighting proficiency.

Berger pointed out that proprietary training systems pose the same challenge to integration as operational systems.

“How do we link them together?” he asked the audience.

Gilday pointed out the need for getting better at integrating lessons learned in exercises. He referred to the insights gained over the past year in fleet battle problems and fleet exercises, including a global large-scale exercise involving five fleets and 30,000 Sailors and Marines.

“As we develop those capabilities, there needs to be a continuous feedback loop … getting real-time feedback from operators,” Gilday said, noting the services also need the capability to record the training to enhance critiques and learning from the training.

What “live virtual constructive [LVC] training has allowed us to do is to test ourselves, to mature our warfighting concepts, to hone our skills, to sharpen those skills, to learn from them,” he said.

“We need the training capabilities that we’re going to invest in to be realistic and relevant,” he said. “So, to that end, they need to be based on physics-based performance aspects, not only of our forces but of potential adversaries.

“We need to rely on LVC more and more,” Gilday said, noting the increasing encroachment on training ranges “is just a fact of life” that can be accommodated by increased use of LVC.

He said it “is easy to take your eye off the training piece” in the competing demands of manning, training, equipping and supplying a warfighting force.

Berger stressed the urgency of increasing the pace of improving training capabilities, arguing, “we cannot be comfortable going at a comfortable, deliberate pace.”

The CMC also said training must be elevated in priority from

its current state, and personnel must not only train to become proficient on their platforms but be able to out-think adversaries.

Berger pointed out in aviation training, student pilots start together in training but proceed at different paces toward graduation according to their proficiency. He said other warfare communities may need to adopt the same concept. He also pointed out that in many training pipelines, there are no incentives to learn faster or learn more, saying “we’re not built for that right now.”

Marine F-35B Squadron Completes Historic Deployment on HMS Queen Elizabeth

U.S. Marines with Marine Fighter Attack Squadron (VMFA) 211 conduct pre-flight checks on an F-35B Lightning II on the flight deck of HMS Queen Elizabeth in the Mediterranean Sea on Nov. 24. VMFA-211 aircraft landed at Naval Station Rota as the first stop on their redeployment to Marine Corps Air Station Yuma, Arizona. *U.S. MARINE CORPS / 1st Lt. Zachary Bodner*

ARLINGTON, Va. – The U.S. Marine Corps F-35B squadron that deployed on board the U.K. Royal Navy aircraft carrier departed the ship last week for Naval Station Rota, Spain, from which the squadron would return to its home base of Marine Corps Air Station Yuma, Arizona.

Marine Fighter Attack Squadron 211 (VMFA-211) – known as the Wake Island Avengers – completed a six-month deployment on board HMS Queen Elizabeth to the Western Pacific, Indian Ocean, and Mediterranean Sea as a unit of the U.K. Carrier Strike Group.

According to a spokesperson of the HMS Queen Elizabeth, VMFA-211 and its Royal Air Force/Royal Navy counterpart, the Dambusters of 617 Squadron, flew 1,278 sorties, “clocking

up more than 2,200 hours in skies around the globe. They also carried out 44 missions in support of the U.S.-led Operation Inherent Resolve – conducting air strikes against Daesh [Islamic State]."

"The 10 F-35B of VMFA-211 undertook their final launch from HMS Queen Elizabeth bringing to a close 16 months of integration with the United Kingdom Carrier Strike Group," said Capt. James Blackmore, Royal Navy Air Wing and Strike Warfare Commander. "Embarked for the whole of CSG21, forging ever-greater links between the U.K. and the U.S., VMFA-211 and the 200-plus Marines have been an integral part of the inaugural deployment. Operating with a range of allies, especially the U.S., provides an invaluable opportunity to gain further experience of the highly capable Lightning F-35B with Merlin and Wildcat helicopters from the Queen Elizabeth-class carriers. I wish the Wake Island Avengers well with their future operations."

"The CSG21 deployment has seen VMFA-211, a U.S. Marine Corps F-35B squadron, integrated throughout," said Commodore Steve Moorhouse, commander, U.K. Carrier Strike Group. "It has been the most tangible demonstration of the U.K. and U.S. special relationship and our united efforts to ensure stability, security and freedom of the seas. As the U.K. Carrier Strike Group says farewell to our Marine Corps colleagues, I wish to thank them for their commitment, loyalty, professionalism and great humor. The achievements on this deployment have been ground-breaking and raised the bar in terms of integration. As the saying goes; if you want to go fast, go alone but if you want to go strong then go together. Semper fidelis."

Center for Maritime Strategy: Looking to History to Help Face the Threats Ahead

Cmdr. Robert J. Briggs and Cmdr. Richard D. Slye monitor the Chinese aircraft carrier Liaoning from the pilothouse of the Arleigh Burke-class guided-missile destroyer USS Mustin in April. *U.S. NAVY / Mass Communication Specialist 3rd Class Arthur Rosen*

The Navy League's Center for Maritime Strategy set sail on a following sea of supportive calls, emails, and letters. The urgent cause of our nation's maritime power resonates from commercial districts to the cargo terminals. With our ideal location inside the capital beltway, we will gather a coalition of maritime-minded business leaders, think tanks, concerned citizens and congressional leadership to drive the sea changes our maritime future needs.

Accordingly, I spent the first week in full "startup" mode, launching the office off the blocks while interviewing CMS candidates, fielding phone calls and taking CMS's message on the road. I had the pleasure of introducing our mission and vision on two popular podcasts hosted by Francis Rose of Fedscoop and Walker Mills of Sea Control (affiliated with the Center for International Maritime Security, or CIMSEC). Both interviews will give you an idea of where we want to take CMS in the months and years to come

Meanwhile, over the Thanksgiving break, I had some time to reflect on the past and the future as CMS endeavors to become a strong advocate of America's maritime power. In fact, just last month, I keynoted at Deep Blue 2021, a Canadian maritime conference. In preparing for my remarks, I harkened back to an assignment I undertook in the Pentagon in 1997 – a reflection indicative of the predictive errors that led how our maritime project decayed to its current state.

As a member of the staff of Dr. Paris Genalis, director of naval warfare in the Office of the Undersecretary of Defense for Acquisition and Technology (USD A&T), I served as a government adviser for the Defense Science Board Task Force on Submarines. The DSB's team of talented, bi-partisan scientists, industrialists, civilian policy makers and uniformed services representatives chartered to decide the direction the nation would take in our next generation of submarines.

The task force first needed a vision of the future resolving what capabilities our next generation submarine required. Over its first few months, the task force embarked on a mini futures study to predict the security environment in the maritime domain in 2020 and beyond. It's worthwhile to examine some of their conclusions, assess the accuracy of their predictions and then assess how we have done as a nation in responding to future threats.

The task force began with a prediction of the type of battlefield trends the military would face in 2020 and beyond. They envisioned:

- Multiple, simultaneous and shifting geographic foci
- Greater requirements for stealth, agility and self defense
- Proliferation of technology in sensing, guidance and targeting significantly increasing weapons effectiveness for all parties
- More effective coordination of sensors and shooters over longer ranges would allow smaller forces to conduct precision strike from greater distances
- Mission diversity would increase, requiring a greater variety of warfighter skills and tradecraft
- Reduced decision cycle would decrease warning time, intensifying the need for rapid response capabilities.

Twenty three years ago, the task force's future military trend predictions were spot on. We are deterring and defending against multiple adversaries on multiple axes in complex competitions which threaten to explode into conflicts fought over extreme standoff ranges. Agile hypersonic weapons and stealthy, long-range and accurate weapons in the hypersonic family of missiles slash commanders' available warning time and necessitate the evolution from simple Aegis-like decision systems to artificial intelligence assistance to the warfighter's decision cycle.

The nature of the battlefield determined, the task force imagined the Navy's role in 2020. A quick review of the U.S. Navy's latest maritime strategy paper, "Advantage at Sea," reveals the DSB's assessment of the Navy's mission priorities in 2020 and beyond was remarkably similar. You can read them at this link to "Advantage at Sea."

Unfortunately, like many other future studies of the same era, the DSB's geopolitical analysis of the "World from DoD's

Perspective – in the next 10 to 20, then 50 years" fell lethally short – wrong by either misestimation or misplaced optimism.

In 1998, the DSB predicted America would face "no plausible strategic competitor" in 10 to 20 years, beset instead by an increasing number of diffuse regional threats. This was dead wrong, even though the signs were predicted. The DSB noted the one-sided superiority of U.S. weapons systems will be reduced, that traditional alliances will become weaker and American overseas basing would decrease with more restrictions or national caveats on their use. DSB understood and reported technology diffusion would make our deterrence more challenging, especially as regional conflicts drew focus – all devastatingly true. Despite these trends, looking to the future from the heights of American power, we couldn't conceive of a strategic adversary emerging before 2050.

While the DBS was dead wrong in its prediction of "no plausible strategic competitor" by 2020, the DSB was far from alone in banking on continued American global hegemony for another half century. Our inability as a nation to predict these threats 20 years ago suppressed our ability to act. America singularly focused on its fight against violent extremism across the Middle East and Africa to the exclusion of all else, assuming our competitive advantage would last. As we lay entrenched, other's stole a march on us, filling the vacuums we left and grasping at the mantles we let droop.

So where do we go from here? Our strategic competitor out-paced our predictions by 30 years; and 20 years of counter-insurgency stymied our recognition and reaction. More than our future investments, our investment now must bias toward sea, air, space and the enabling signals domains. According to the Congressional Research Service, China will increase its fleet to 425 ships by 2030, with six carriers by the mid 2030s. The U.S. Navy will globally disperse only 300-305 ships, while the People's Liberation Army Navy (PLAN) sits en masse on the

WESTPAC doorstep. Even if estimations of the PLAN threat are overwrought, which they are not, a recapitalization of the fleet and bets on commercial maritime power still provide guaranteed economic improvement and a mobile deterrent hedge against any forward threat against American national interests.

Efforts like the $25 billion Shipyard Infrastructure Optimization Plan must be accelerated to improve the maritime industrial base over a decade, not two. We need the capability and capacity to build, modernize and repair our ships now. Doing anything less will leave our Sailors and national security within a lethal margin for potential defeat from which there will be no second chances.

Let’s act now and restore the great reserve of sea power our nation needs, sooner than later!

The DSB Report summary was published online in 1998 by the Defense Technical Information Center (DTIC).

DOT, MARAD Release Assessment of US Merchant Marine Academy

Midshipmen and plebe candidates stand in formation at the U.S. Merchant Marine Academy at Kings Point in 2018. The Plebe candidates are congressionally nominated and are starting indoctrination, a rigorous, 20-day regimen of academic, military, and physical training. *U.S. NAVY*

WASHINGTON – The U.S. Department of Transportation (USDOT) and Maritime Administration (MARAD) released Nov. 24 a new report titled, "Organizational Assessment of the U.S. Merchant Marine Academy: A Path Forward" and an accompanying implementation plan prepared by the National Academy of Public Administration (NAPA).

"USMMA students are remarkable leaders committed to serving the nation and supporting positive change," said Acting Maritime Administrator Lucinda Lessley. "They deserve a modern, safe, and inclusive learning environment where they have the training and resources that will prepare them to succeed in the U.S. merchant marine and in our armed forces. We acknowledge, and have been working to address, the many

urgent issues raised by NAPA's report and to put USMMA on a path to modernization."

NAPA's assessment affirms that USMMA faces "longstanding systemic issues" across almost all areas of its operations, including educational programs; facilities maintenance and capital management; sexual assault and sexual harassment prevention and response, including during the Sea Year; diversity, equity, and inclusion; and internal and external governance.

The assessment further warns that, "Because of the magnitude and fundamental nature of the challenges USMMA faces, the greatest risk to USMMA's future is doing nothing to significantly address its challenges and the causes of those challenges."

NAPA's report also makes clear that these challenges have worsened over many years and that under-resourcing – particularly unmet personnel needs – makes many of these challenges more difficult to resolve.

The Way Forward

Since the start of the new administration, USDOT and MARAD leaders have been focused on the most urgent issues facing the USMMA. USDOT and MARAD will establish a task force, as recommended by the NAPA report, to develop recommendations that help chart the Academy's future.

USDOT and MARAD also have numerous efforts underway to address challenges identified in the NAPA report. For example, USDOT and MARAD have announced a temporary pause in Sea Year training and are developing new requirements for commercial vessels that carry cadets to protect the safety, security, and well-being of cadets.

In alignment with the reports' recommendation that USMMA should engage a facility executive to direct and coordinate

maintenance and capital efforts, USDOT has detailed a senior federal official to direct ongoing efforts to address the Academy's maintenance backlog and lead capital efforts.

In addition, leadership is working to finalize and implement a campus-wide maintenance contract.

Consistent with the NAPA recommendation that USMMA accelerate investments in information technology, the USDOT Office of Chief Information Officer will work to identify options to upgrade information technology systems.

USDOT and MARAD remain committed to ensuring training and resources are available to graduate licensed merchant marine officers who can meet the national security, economic, and transportation needs of the nation. The recommendations provided by NAPA will assist the administration in supporting a campus where midshipmen learn to become exemplary leaders in a safe, secure, and modern environment.

For more information, the assessment and implementation plan are available for download.

The U.S. Merchant Marine Academy was founded in 1956 with a mission to educate and graduate leaders to serve the national security, marine transportation, and economic needs of the United States as licensed merchant marine officers and commissioned officers in the Armed Forces. USMMA provides students with a degree and credentials that allow them to embark on a career in public service.

The NAPA assessment was directed by the 2020 National Defense Authorization Act to provide an analysis of the operations of the USMMA and offer modernization recommendations for implementation consideration.

Think Tank: USAF MQ-9 Reaper Drones Could Assist Arctic, Maritime and Littoral Operations

The Marine Corps' first MQ-9A at an undisclosed location in the Central Command area of responsibility. The MQ-9A completed 10,000 flight hours in support of Marine Corps Forces, Central Command operations on March 31, 2021. *U.S. MARINE CORPS*

ARLINGTON, Va. — The U.S. Air Force wants to retire its MQ-9 Reapers by 2035 but an aerospace think tank says the drone

fleet should be retained and modernized for new missions already challenging the sea services, such as maintaining domain awareness in the Arctic.

Facing severe future budget constraints while trying to fund modernization programs like the B-21 long range strike bomber, Air Force planners are considering retiring legacy aircraft they believe cannot survive in a high-end fight, like General Atomics Aeronautical Systems' intelligence, surveillance, reconnaissance (ISR) and targeting drone.

While armed with Hellfire missiles, as well as ISR sensors and cameras, the RQ-9 has no defensive measures, except a counter-jamming pod, to keep it safe in contested airspace.

Rather than send its entire 280-Reaper fleet to the boneyard by 2035, the Air Force should upgrade it for a list of new missions such as air and missile defense, and communications relays, the Mitchell Institute for Aerospace Studies recommends in a paper, "Reimagining the MQ-9 Reaper," by retired Air Force Major Gen. Lawrence Stutzriem.

"Reaper is more relevant today than most of the other aircraft that are in development or on the ramp," Stutzriem, the institute's director of research, told a livestreamed audience at the paper's Nov. 19 virtual rollout. "And there's a broad range of existing and new requirements that it could be used to fill in the future."

The Navy and Coast Guard are focusing on the Arctic region as a contested area fraught with extreme weather conditions, immense distances and limited infrastructure – there is no port for deep water vessels within 1,000 miles of Alaska's Arctic coast. Coast Guard officials have said communications are sketchy or nonexistent in the latitudes above 72 degrees north, and the Navy has no ice-hardened ships. The Coast Guard has just one heavy ice breaker, and new ones authorized by Congress won't be ready for several years.

Meanwhile, Russia has built or reopened several military bases on islands along its Arctic coastline. Both Russia and China have built new fleets of ice breakers, some of them nuclear powered. Russia's new Ivan Papanin-class multirole, icebreaking patrol vessels can be equipped with cruise missiles.

Recent technological enhancements to the MQ-9 "make it an attractive option for improving Arctic domain awareness," Stutzriem's paper says. General Atomics has tested an extended-wing variant of the Reaper that increases the drone's endurance from 27 to over 40 hours. That would be a significant step for conducting ISR in the vast Arctic region. The MQ-9B SkyGuardian variant features an electro-expulsive de-icing system and an anti-ice heated engine inlet, important qualities for Arctic operations.

The MQ-9 can contribute to emerging high end missions as the U.S. military shifts to a mobile, widely dispersed force in the Indo-Pacific region to counter and deter adversaries, said Bryan Clark of the Hudson Institute, one of three other think tank analysts at the roll out who supported the continuing need for the MQ-9. To impose deterrence by detection, "I think the MQ-9 could contribute there quite a bit," since it has targeting as well as ISR capabilities, Clark said. The Marine Corps has acquired three Reapers after three years of testing and planning with leased aircraft to see how they will fit into the commandant's force design of small units, widely dispersed and armed with long-range fires to control access to sea lanes.

With a targeting mechanism for counter maritime operations, "they've got the whole kill chain with missiles ashore, with the naval strike missile, that will allow them to close that kill chain and actually achieve some of that deterrent effect that detection might provide," Clark said.

Navy Awards Austal Service Contract for Westpac LCSs

Royal Malaysian Navy Sailors play music as the U.S. Navy Independence-variant littoral combat ship USS Tulsa (LCS 16) arrives at Lumut, Malaysia, following Maritime Training Activity (MTA) Malaysia 2021. *U.S. NAVY / Mass Communication Specialist 1st Class Devin M. Langer*

Mobile, Ala. – Austal USA has received a contract from the U.S. Navy to provide services and support for littoral combat ships (LCS) deployed to the Western Pacific and Indian Ocean, the company said in a Nov. 24 release.

This is the third major U.S. Navy service contract for Austal USA following the company's significant investment in its service business and service centers in Mobile, Alabama, San

Diego and Singapore over the last four years.

The $72.5 million single award, indefinite-delivery/indefinite-quantity contract provides for emergent repair and continuous maintenance for littoral combat ships deployed to the Western Pacific and Indian Ocean and the countries and ports therein. If all options are exercised, the contract will be for five years and bring the total value to $215.8 million.

This award, which supports Navy requirements within the Western Pacific and Indian Ocean, complements recent awards for littoral combat ship repair and maintenance on the east and west coasts, the Sustainment Execution-East and Sustainment Execution-West contracts. In addition to the three major contract awards, Austal USA recently announced the approval of a lease for a waterfront repair and maintenance facility in San Diego. This provides Austal the capability to support both variants of the littoral combat ship globally.

“We’ve made it clear to our customer that we are committed to the continued service and support of the LCS throughout its lifecycle,” Austal USA President Rusty Murdaugh said. “We’ve demonstrated this commitment through our continued investment in our people, processes, and facilities – and our customer has responded with confidence.”

Currently, the U.S. Navy has multiple Independence-variant LCS deployed to the Western Pacific. This contract positions Austal USA to be the prime contractor for all continuous and emergent maintenance on the LCS as they transit and operate in the region.

In 2017, Austal USA established a service center in Singapore adjacent to the Changi Naval Base to support deployed LCS and Austal-built Expeditionary Fast Transports. Over the last four years, Austal USA’s service and support business has grown in

size and scope with continued investment from the company.

In 2018, the company expanded its presence in San Diego adding more engineering and technical expertise to support the continued delivery of the LCS homeported in San Diego.

In September 2020, Austal USA purchased additional waterfront, facilities, and equipment along the Gulf Coast in Mobile, Alabama. The new Austal USA West Campus Ship Repair facility includes 15 acres of waterfront property; a pierfront capable of mooring vessels up to 1,000 feet; a 20,000-ton Panamax-class floating dry dock; 300,000 square feet of outside fabrication space; and 100,000 square feet of covered repair facilities.