Good Retention Cushioning Recruiting Challenges, Marine Assistant Commandant Says

Staff Sgt. Albert Vargas, a landing support chief with Combat Logistics Battalion 13, 13th Marine Expeditionary Unit, re-enlists aboard the San-Antonio class amphibious transport dock ship USS Anchorage (LPD 23), May 1, 2018. *U.S. MARINE CORPS / Cpl. Austin Mealy*

WASHINGTON – The U.S. Marine Corps is focusing on retention of serving Marines as a way to mitigate the challenges of recruiting in today's American society, the Corps' assistant commandant said in recent public forums.

"Our recruiting challenges this year across the board are, in fact, difficult, which is why we're so focused on retention rather than recruiting," said Gen. Eric Smith, assistant commandant of the Marine Corps, testifying July 19 before the

House Armed Services Committee subcommittee on Readiness. “We will make or come very close to making our recruiting mission in ’22. It will come to a degree at the expense of the pool that we have ready for ’23. Any time you have less time in the delayed entry program, you will have a higher attrition rate at recruit training, which is unacceptable. So, the focus for us is retention, and then ensuring that the American people see the value proposition of service in the United States Marine Corps and the United States military writ large.”

Smith addressed the retention and recruiting challenge the day before during a July 18 webinar hosted by the Center for Strategic and International Studies and the U.S. Naval Institute and sponsored by HII.

“We cannot recruit our way out of our future challenges, but we can retain our way out,” he said. “If we have an individual who seeks to serve their nation, makes it through entry-level training, gets additional training, we want to keep that person. Why would I want them to go away, and them I have to go seek another person? That just adds to the problem. So, you can’t recruit your way out, but you can retain your way out.”

Smith, whose son currently serves as a Marine recruiter, discussed the value of the Marine brand.

“People say, ‘Other services are giving really big bonuses, $50,000 to $60,000; why aren’t you?’” he said. “Our biggest bonus we ever give – and we don’t give many to enlisted – is about $8,000, because the bonus is, you get to call yourself a U.S. Marine. And that’s not false bravado; it’s who we are, a brand; that’s who we recruit.

“What we do is we make sure that we are out there as a face,” Smith said. “71% of our enlistment contracts are [from] face-to-face contact from seeing a Marine with operational experience who is tough, tested, fit, ready to fight, who’s out there in the public square to engage with students. What I

think we can do and need to do for students and those who've already graduated is work closely with the Department of Education, administrators and educators to really enforce the value proposition of service."

The assistant commandant said the Corps needs to "counter the narrative that the Marine Corps service in general is not fulfilling. We're a valuable thing and it's a valuable service to the nation."

He pointed out a streamlining of the re-enlistment process has taken place.

"A year ago, there were 22 steps to take to re-enlist," he said. "That's down to one. We use technology to streamline [re-enlistment]. If you wish to re-enlist and you're a qualified Marine, the answer is yes."

Smith said the Corps should ask a potential re-enlistee, "What would it take to keep you? It's about managing talent as opposed to, 'Here's the cookie cutter.'"

He said the cookie cutter approach "will not work in the future environment where so many in our society are not qualified for enlistment or don't wish to enlist."

Artillery Rapid Mobility Key to Survival, Marine Assistant Commandant Says

U.S. Marines with 5th Battalion, 11th Marine Regiment, 1st Marine Division, set up high mobility artillery rocket systems (HIMARS) in front of an AN/TPS-80 Ground/Air Task Oriented Radar set to detect, identify and track airborne threats, during Valiant Shield 22, at Andersen Air Force Base, Guam, June 13. *U.S. MARINE CORPS / Lance Cpl. Tyler Andrews*

WASHINGTON — The Russian invasion of Ukraine is showing the value of the High Mobility Artillery Rocket System (HIMARS) in providing long-range precision fires while shifting positions to avoid counter-battery fire, a senior Marine Corps general said, showing its advantages over towed tube artillery and supporting the investment of HIMARS in Force Design 2030.

"What we're focused on is long-range fires, and longer-range fires is better," said Gen. Eric Smith, assistant commandant of the Marine Corps, speaking July 18 during a webinar hosted by the Center for Strategic and International Studies and the U.S. Naval Institute and sponsored by HII. "You want to be able to out-stick your adversary. The introduction of HIMARS for us is absolutely vital, as is our NMESIS — Navy-Marine Expeditionary Ship Interdiction System — [with the] Naval

Strike Missile, which [has a] range in excess of 100 miles.

“The capability that is brought by long-range fires is what we seek,” Smith said. “Towed artillery has a max range. It also has a mobility issue because towed things like boats, U-Hauls, things that are on a trailer are not as mobile as individual vehicles. That’s why the [HIMARS] is so good.”

Smith that artillery must be highly mobile to avoid detection and targeting by drones.

“You have to be able to fire and move immediately,” Smith said. “You no longer have six minutes, which is [the capability of] a really well-oiled gun crew from ‘pull last round’ till ‘you’re on the move.’ What we have to see now is that there are autonomous loitering munitions that are looking for that signature. And as soon as they see that signature – we call it a POO, a point of origin – they’ve already got lethal authority to strike that. You don’t have six minutes to move, whereas with a HIMARS you can shoot and be gone literally in seconds, less than a minute. So that is a key lesson learned for long-range fires.

Smith said the artillery has to contend with ubiquitous, inexpensive drones and you have to drop your signature, either because you radiate or you are physically seen, because you are targeted almost immediately.

Under Force Design 2030, the Marine Corps is increasing its HIMARS batteries and reducing its M777 155mm tube artillery batteries. Having decided initially to reduce the number of tube artillery batteries to five, experimentation led the Corps to increase the number of tube artillery batteries to seven.

The Defense Department has shipped a number of HIMARS and M777 systems to the Ukrainian armed forces to aid in their resistance to the Russian invasion.

Navy Rethinking ‘Full-Mission Capability’ Definition with F-35s in Distributed Ops, Whitesell Says

An F-35C Lightning II, assigned to the “Argonauts” of Strike Fighter Squadron 147 prepares to land on the flight deck of Nimitz-class aircraft carrier USS Carl Vinson (CVN 70) on June 17, 2021. *U.S. NAVY / Mass Communication Specialist Seaman Caden Richmond*

ARLINGTON Va. — The Navy’s “Air Boss” said fifth-generation strike fighters are redefining the concept of full mission capability and changing the way a four-plane division operates in distributed maritime operations.

Vice Adm. Kenneth Whitesell, commander, Naval Air Forces and commander, Naval Air Force, U.S. Pacific Fleet (the Air Boss),

addressed the concept while speaking July 13 at a naval aviation seminar hosted by the Center for Strategic and International Studies and the U.S. Naval Institute and sponsored by HII.

Responding to a question from moderator Ward Carroll about the full-mission-capable rates of Navy F-35Cs during the 2021 deployment on board USS Carl Vinson, Whitesell said taking a "30,000-foot view of the way the [carrier] air wing is going to be employed is going to be completely different."

"The air wing's not going to be employed the same way [as before]," Whitesell said. "The F-35 is the perfect exemplar of that. The way we employ that platform. … There is no defensive and offensive combat spread [where] you break out into some of the traditional missions that we would have done five or 10 years ago. Employing the Joint Strike Fighter as they employed it as a [four-plane] division [was] definitely more spread out. The way information is shared amongst the platforms makes up for any deficits that an individual aircraft may have.

"The way we think of mission capability and full mission capability – we have to think about it in a distributed and in this case in a full division or greater employment mode through Distributed Maritime Ops," the admiral said. "Fitting into the bigger vision of Distributed Maritime Ops, a single platform can have degradations, but because of the information sharing between the platforms, we have to think about how we're going to define full mission capability, not platform-specific, but truly mission specific. It's a different way of looking at things."

Sev1Tech Proposes Solutions for Moving Navy Shipyards into the Digital Age

USS Pasadena (SSN 752) arriving at Norfolk Naval Shipyard in 2020 for a Drydocking Selected Restricted Availability. *NORFOLK NAVAL SHIPYARD / Daniel DeAngelis*

ARLINGTON, Va. – As the U.S. Navy makes a huge investment in upgrading and modernizing its four public shipyards, one company is proposing ideas to move shipyard processes from the Industrial Age to the Digital Age using digital information technology.

The Navy is investing more than $20 billion over 20 years to modernize its shipyards under the Shipyard Infrastructure Optimization Plan, or SIOP. Much of the effort involves modernizing century-old dry docks and other heavy infrastructure.

Patrick Fitzgerald, senior vice president for Navy Missions of Sev1Tech, is a former Naval Information Warfare Center Atlantic Enterprise Systems Department Head and a manager with a long background in information technology. He told *Seapower* his company is well positioned to contribute to the SIOP the digital transformation of the Industrial-Age processes of Navy shipyards and to "generate a really significant return on investment" and enable the shipyards to "get the ships out to the fleet when needed and fully ready to perform their mission."

Fitzgerald said the SIOP is a "once-in-a-century thing that our country needs to safeguard itself. "Unfortunately, a lot of the federal government has not moved to the information age; it's still very Industrial Age processing."

Among the ideas Sev1Tech is floating is the use of augmented reality or virtual reality in training the shipyard workers. Fitzgerald said that technology makes for "much more effective training programs that improve knowledge retention."

The workers "make fewer errors when they actually perform the maintenance. They can verify that a part is being installed in the correct space, [which] will help eliminate re-work for a variety of tasks."

He also said applying data analytics would result in better parts-demand forecasting and help minimize issues with the global supply chain. Data analytics also would improve auditability, lower the warehousing complexity and costs and reduce or eliminate the time a ship waits for a part to arrive.

Digital twin modeling of the actual layout of the shipyard facilities as they evolve over time can improve shipyard processes.

"One we get that initial model set, you can start doing simulations on that for the evolving needs and the evolving

capabilities," Fitzgerald said. "It really optimized the layout for the workflow."

Use of drones is one way to save time and improve productivity, he said.

"The walking that the folks at the four public shipyards do every day is absolutely insane," Fitzgerald said. "At the end of the day you have to leave the security to get a part and then come back. That's a lot of lost labor time not directly serving the mission and helping us get that ship out on time. Having the networks in place where a person working on a ship realizes they needed a part that they didn't expect they needed – if it's a lightweight part – a drone could potentially fly out a five-pound package to the edge of the ship so they don't have to walk all the way across the base to get it from a warehouse."

Fitzgerald pointed out that the Navy owns the airspace over its shipyards and therefore could set the policy of drome operations within the yard.

"We could save hours of an employee's time every day walking back and forth to get parts or checklists," he said. "That's massive for what it could mean to getting a ship out of the shipyard on time and back to the fleet where it needs to be."

He also advocates leveraging 5G and other wireless communications and use of tablets and other support devices.

With a tablet that can go classified when [a worker goes] into a classified space – and given access to the data and drawings they need dynamically, and as soon as they walk out of that space, no longer have access to that information. That would reduce the complexity of managing them, reduce the risk of that information getting compromised, and give them what the need at the right time when they need it," he said.

“The investment in IT relative to the investment in the capital infrastructure is pretty small to get a really big yield,” Fitzgerald said.

Q&A: Rear Admiral Ronald J. Piret, Commander, Naval Meteorology and Oceanography Command

Rear Adm. Ronald J. Piret. *U.S. NAVY*

Rear Adm. Ronald J. Piret is a native of Chico, California, and graduated in 1993 from the U.S. Naval Academy with a Bachelor of Science in Physical Oceanography. He holds master's degrees in oceanography and meteorology from the Naval Postgraduate School and national security and strategic

studies from the Naval War College, where he graduated with distinction.

Upon commissioning, Piret served in various operational positions, most notably aboard the Royal Navy's HMS Herald as the Operations Officer, and the USS Abraham Lincoln (CVN 72), where he served as the Meteorologist and Oceanographer during a deployment in the Western Pacific.

Ashore, he served as forecast duty officer at Naval European Meteorology and Oceanography Center, Rota, Spain; tactical hydrographic and meteorological officer at the Royal Navy School of Maritime Operations, HMS Dryad, Southwick, England; associate chairman of the Oceanography Department at the U.S. Naval Academy; deputy director of Operations for Expeditionary Warfare, Naval Oceanography Operations Command; executive officer, Naval Oceanography Operations Command; deputy assistant chief of staff for Requirements, Programs and Assessments, Commander, Naval Meteorology and Oceanography Command; Arctic affairs officer for the Oceanographer of the Navy onboard the Chief of Naval Operations Staff; fellow to the Naval Command College Class of 2017, Naval War College's Senior Officer International Program; executive officer, Naval Oceanographic Office; and chief of staff, Naval Meteorology and Oceanography Command.

Piret commanded the Provincial Reconstruction Team Uruzgan in southern Afghanistan working alongside multinational and interagency partners in support of Operation Enduring Freedom. Additionally, Piret commanded the Naval Oceanographic Office at Stennis Space Center, Mississippi overseeing the operation of the Navy's six T-AGS survey vessels.

Piret assumed command of Naval Meteorology and Oceanography Command and simultaneously became the Oceanographer of the Navy, Navigator of the Navy, and Hydrographer of the Navy in July of 2021.

Piret discussed the missions of Naval Meteorology and Oceanography Command with Senior Editor Richard R. Burgess. Excerpts follow.

With the change in fighting land wars in Southwest Asia to the competition with Russia and China, how does that shift affect focus of the Naval Meteorology and Oceanography Command?

PIRET: Naval Oceanography operates simultaneously at the strategic, operational and tactical levels of warfare in every theater around the globe. We pride ourselves in our ability to characterize the battle space and then predict changes in the environment over time. As part of information warfare, we can analyze where the potential hot spots will occur and position assets accordingly. Certainly, wherever the fleet goes, we go. But often have already been there. In terms of fleet operations, whether it be in the Western Pacific or in the North Atlantic, we're an integral part of every warfighting kill chain, whether it is the submarine force, the surface force, special warfare forces or the aviation force.

With current events, we do see some uptick in requests for operational support, and we are making sure that those carrier strike groups or those combatant commanders have the best understanding of the battlespace's environmental conditions so they can best posture or employ their assigned forces.

Are the Distributed Maritime Operations and Expeditionary Advanced Base Operations concepts changing the focus and missions of Commander, Naval Meteorology and Oceanography Command?

PIRET: We've been thinking about Distributed Maritime Operations for a while now and adjusting our own alignment to better deliver meteorological and oceanographic effects to the fleet. We recently invested in and realigned some of our Sailors to stand up two commands, Strike Group Oceanography Team Norfolk and San Diego. Those commands deploy Sailors

ready to meet DMO requirements.

With this realignment, Naval Oceanography is well positioned for distributed naval operations. Our teams of Sailors complete workups with carrier strike groups and amphibious ready groups, and they deploy with those forces. At the same time, we embed Mobile Environmental Teams on independent deployers to deliver specialized environmental information. Whether full SGOT teams onboard aircraft carriers or small teams onboard independent deployers, our Sailors serve as the onboard subject matter experts who work within the planning process and leverage our reach-back capability and the deep knowledge base we have at the Naval Oceanography Operations Command (Anti-Submarine Warfare Reach-back Cell and the Electromagnetic Maneuver Warfare Reach-back Cell). Naval Oceanography's Reach-back Cells enable the deployed teams to bring full weight at what naval oceanography to the fight.

CNMOC supports groups such as explosive ordnance disposal (EOD), mine countermeasures and special operations forces. What kind of support do you provide them?

PIRET: When it comes to the expeditionary warfare – whether that be mine-countermeasures, EOD or special operations – we're really talking about assured access and ability to maneuver ingress and egress. We have a deep understanding of the nature of those missions, and our Sailors and Officers are well-trained and deliver critical information to assure success. It's really important to those forces to understand the conditions in which they're operating. They also need to understand what changes will occur during their mission and how to egress safely.

We have a wide variety of deployable Sailors who work alongside the special warfare, EOD and the mine-countermeasures groups. We have Sailors who are specifically trained in those missions and have a deep understanding of those mission requirements. We also have reach-back capability

with our team in the Warfighting Support Center at Stennis Space Center where remote-sensing capabilities are leveraged with other partners within the information warfare community to highlight and mitigate challenges in various areas of operation.

It’s not well known that we have the only operational geology lab in the Navy. We’re experts in analyzing bottom sediment and how that sediment moves, which is critically important when it comes to understanding how a mine on the seafloor would be best detected if it’s been buried.

Additionally, our Sailors are trained in the operational employment and piloting of unmanned underwater vehicles with side-scan sonar onboard, and able to map the ocean floor or in harbors as well and identify objects. Our Sailors can also access a robust historical database, and utilizing change detection algorithms, they can direct EOD units to areas where new objects can be investigated, and if needed, neutralized.

Piret discusses maritime strategy and cooperation with Denmark

Rear Adm. Martin la Cour-Anderson, Commander, Joint Arctic Command, at "The Geostrategic Importance of the Artic" panel during the Sea-Air-Space Exposition. *U.S. NAVY / Mass Communication Specialist 2nd Class Kyleigh Williams*

The change in the Arctic with the ice melting and the interest by the Navy in doing more operations up there, is that changing your tasking a lot, or is it something you pretty much always done?

PIRET: As an Arctic Nation, the Navy has maintained a consistent presence in this challenging battlespace. Our presence and capability are regularly demonstrated at the bi-annual exercise, run by the Arctic Submarine Laboratory called Ice Exercise, or ICEX. We completed the most recent ICEX in March 2022.

Often with change, comes new opportunity and risk. The Arctic is no different. As ice in the high latitudes recede, opportunities to access natural resources, fisheries and more expeditious trade routes are starting to become the new normal. Part of the Navy's mission is to maintain freedom of the seas, which includes the Arctic.

At the forefront of monitoring and tracking worldwide ice conditions is the National and Naval Ice Center [USNIC]. In partnership with NOAA [the National Oceanic and Atmospheric Administration] and the National Weather Service, specifically the Ice Services Branch of the Ocean Prediction Center, USNIC observes, analyzes and forecasts ice for the better part of the last 65 years. This highly skilled team provides commanders the information they require to successfully operate in the harshest environment on Earth.

With eight Arctic nations in the world and a global economy, maintaining a peaceful and free Arctic that conforms to international rules-based order is not possible without our domestic and international partnerships. Internally, we partner with the US Coast Guard, NOAA/NWS operating in the

Arctic in order to better understand this environment. Internationally, we have strong partnerships with the Canadian Ice Service, Danish Meteorological Institute, Sweden, Norway, Finland, Demark, Canada, and New Zealand and others through organizations such as the North American Ice Service, the International Ice Charting Working Group and the International Cooperative Engagement Program for Polar Research. These organizations, amongst others, are key to setting and maintaining international standards, collaborating to best understand this complex and rapidly changing environment, and creating the most effective conditions for mariners to safely operate.

CNMOC is one of the largest operators of unmanned undersea and unmanned surface vehicles in the world. How many of those vehicles do you operate and what do you do with them?

PIRET: Naval Oceanography maintains and operates an inventory of nearly 200 unmanned underwater vehicles. These unmanned vehicles range from deep sea 6,000-meter vehicles to ocean gliders that collect data within the water column to remotely operated surface vessels, but they all aid in enhancing safety of navigation for our fleet.

Our team has developed deep expertise in unmanned operations over the last two decades. We've been using unmanned systems not only to sense the ocean and collect data, such as conductivity, temperature, and depth – which we can then turn into sound propagation models in the ocean – to surveying the ocean floor collecting boundary conditions, not only for navigation purposes, but also to use in modeling ocean dynamics for safe fleet operations. And then, of course, we have some experience in unmanned aerial vehicles as well, but not to the extent we have in unmanned surface and underwater vehicles. The Fleet Survey Team uses some unmanned surface vehicles to then chart harbors and bays in shallow water.

Many of the UUV systems we actually command and control from

our Glider Operations Center headquartered at the Naval Oceanographic Office at Stennis Space Center. One of the lessons we have learned over time, of course, is with unmanned vehicles, you really need to understand the environment to operate them successfully. That is something that we've been able to help the broader Navy implement in their operations as well.

You're adding another Pathfinder-class T-AGS oceanographic survey ship to the fleet. Some of those are around 20 years old. Do you see any need to recapitalize the T-AGS fleet in the foreseeable future?

PIRET: Certainly, the Chief of Naval Operations has highlighted the requirement for T-AGS vessels in his testimony. We are looking at what does the next class of survey vessels need to meet current and future fleet requirements.

Our current Pathfinder-class vessels remain world-class military survey ships. We have reinvested in them throughout their service lives. They have state-of-the-art survey equipment ranging from deep-water multi-beams to sub-bottom profilers and moving vessel profilers, so they can do a broad range work. But we are looking at, what does the next class of ship need to address to encompass, to be more versatile and better integrate unmanned systems into those vessels?

One of the requirements that we're looking at in the next class is optionally manned hydrographic survey launches. We need the ability to operate fully manned hydrographic survey launches deployed from a T-AGS vessel and then shift to remotely operated survey launches capable of full spectrum surveys from deep-water to littoral.

Through experience, we've also refined our ability smoothly shift from a deep-water bathymetry mission to operating unmanned underwater vehicles in ports in a relatively quick

fashion as well.

Piret congratulates AGC Megan Morehouse following the 2021 U.S. Navy Chiefs pinning ceremony at the Naval Construction Battalion Center in Gulfport, Mississippi, Nov. 19, 2021. *NAVAL METEOROLOGY AND OCEANOGRAPHY COMMAND / Lt. Bobby Dixon*

The latest Pathfinder T-AGS, USNS Maury, and the next one being built have moon pools for UUV operations. Is that working out well?

PIRET: Yes. We've learned a lot of lessons with the development of the Maury and we're continuing to improve on that design. With the new T-AGS 67, we're looking at what that deployment system needs to achieve, as some UUVs have gotten a little bigger and we've increased their mission time and been able to integrate more types of sensors. That seems to be ever evolving but there's a lot of potential there.

How does CNMOC and NOAA divide up oceanographic work between the two organizations?

PIRET: NOAA is charged with the hydrographic surveys for the

nation in U.S. territorial waters. The Navy is charged with the military surveys and produce charts in in partnership with the National Geospatial-Intelligence Agency in satisfying the Defense Department's global safety-of-navigation requirement. Those are the different roles and responsibilities between NOAA and the Navy, but we really do have a tight working relationship in terms of the survey standards, so when it's appropriate, data as well as improvements in technology can be shared. Also, we cooperate in the international venues and we're part of a number of commissions to help build capacity with partners across the globe.

But that's not where our partnership with NOAA ends. We've actually had a longstanding partnership in terms of data exchanges that extends to our work in atmospheric modeling as well as unmanned systems. Over the past several years, we've actually been collaborating in the deployment of gliders to measure heat content in the ocean and do a better job in modeling hurricane intensification along the U.S. East Coast as well as the Gulf Coast. That's really been a fantastic relationship.

CNMOC and your warfare specialty have been part of the information warfare community more than a decade now. Has that integration gone well, and do you see it having a multiplying effect on the service you give to the fleet?

PIRET: Integrating the information warfare skills sets has improved the lethality of the fleet. Frankly, with better understanding the battlespace, we reduce uncertainty and enhance the fleet's ability to maneuver effectively in the physical environment. And so, we're really increasing the effectiveness of those independent Information Warfare capabilities by bringing them together to more accurately and completely define the state of the battlespace and predict how it will evolve over time. This predictive capability improves weapons system employment our can better assess an adversary's weapons systems ability to effectively operate below, on, and

above the sea. This is where information warfare can increase our fleets' lethality.

Integrating information warfare teams further left in the Navy kill chains, we effectively reduce uncertainty in the combatant commanders' decision space regarding when, where and how they may most effectively employ forces.

Analysts: Carrier Air Wings Need Sustained Extended Range to Counter China

The U.S. Navy's only forward-deployed aircraft carrier USS Ronald Reagan (CVN 76) steams through the Balabec Strait on July 12. Ronald Reagan, the flagship of Carrier Strike Group

5, provides a combat-ready force that protects and defends the United States, and supports alliances, partnerships and collective maritime interests in the Indo-Pacific region. *U.S. NAVY / Mass Communication Specialist 2nd Class Askia Collins*
WASHINGTON – The U.S. Navy's carrier air wings lack some of the characteristics needed to counter China in the event of a conflict, two naval analysts said in a webinar.

Bryan Clark, senior fellow and director of the Center for Defense Concepts and Technology at the Hudson Institute, and Timothy Walton, a senior fellow at the center, discussed in a July 12 webinar their report "Regaining the High Ground Against China," which presents their case that carrier strike groups are challenged by Chinese long-range missile threat and will need a longer-range carrier air wing to affect the battlespace.

The Chinese missile threat could force carrier strike groups to operate at ranges of 1,000 to 1,500 nautical miles away from China, reducing or negating the range with which carrier-based strike fighters could strike hostile forces, Clark said.

Clark noted that the carrier air wing is not set up for combat at sustained ranges and the U.S. Navy is "going to need some way to extend the range of the carrier air wing."

The carrier air wing's strike fighters, the F-35C Lightning II and the F/A-18E/F Super Hornet, need aerial refueling to operate at extended ranges. The forthcoming MQ-25A Stingray aerial refueling UAV will enhance the ranges of the strike fighters, relieve some Super Hornets from aerial refueling duties and provide a platform for sensors.

Fleet air defense also has become a capability demanding more attention in view of the Chinese missile threat. The F-14 Tomcat fighter and its Phoenix air-intercept missiles, designed during the Cold War to counter Soviet bombers carrying cruise missiles at long ranges, were retired from the

fleet in 2006 and the F/A-18 and F-35 do not have a similar long reach. Clark said the CSG needs a layered defense.

“We need to regain the ability to attack bombers before they can launch their missiles,” Clark said.

He advocated the use of electronic warfare in a more offensive way, including the use of UAVs to confuse enemy defenses. This would involve shifting away from the EA-18G Growler electronic attack aircraft to long-range UAVs, even expendable ones.

The analyst said the Navy needs to change the way it conducts airborne early warning and intelligence, surveillance and reconnaissance. Possible platforms include the MQ-9 Reaper UAV, stratospheric balloons and satellites.

Clark said the P-8A Poseidon maritime patrol aircraft would need to keep away from enemy air defenses and shift from an anti-submarine search and attack role to one of command and control of unmanned platforms and distributed ASW sensors.

A pdf of “Regaining the High Ground Against China” can be found here.

Australian Defense Minister: AUKUS Subs a Huge Project to ‘Pull Off’

The Virginia-class submarine USS Vermont (SSN 792) transits the Thames River while conducting routine operations in 2020. The AUKUS agreement with Australia would provide the country nuclear submarine capability. *U.S. NAVY / Petty Officer 3rd Class Christian Bianchi*

WASHINGTON — The new Australian government said it has no illusions of the immensity of the AUKUS plan to build nuclear-powered submarines and the effort required to make it come to pass.

Last September, Australia, the United States and the United Kingdom announced an agreement — AUKUS — to develop a nuclear-powered submarine capability for Australia.

"It will be a huge national project to pull this off," said Richard Marples MP, minister of defense and deputy prime minister of Australia, speaking July 11 at the Center for Strategic and International Studies, a Washington think tank. Marples was in Washington for a meeting with U.S. Defense secretary Lloyd Austin.

"For a three-ocean nation, the heart of deterrence is undersea capability," Marples said. "AUKUS will not only make Australia safer, it will make Australia a more potent and capable partner that the United States and the United Kingdom have agreed to work with Australia to meet our needs is not only a game changer, it illustrates why alliances help reinforce, not undermine, our country's national sovereignty. And I want to recognize the Biden administration and the strong support in Congress for helping bring this agreement to life.

“In determining the optimal pathway forward, the Australian government is acutely aware of the obligations of nuclear stewardship,” he said. “We are focused on the whole enterprise. Safely stewarding sensitive technology, building the workforce and industrial capacity to support the capability, and ensuring that this initiative sets the strongest possible non-proliferation standards.”

Marples said Australia, with Collins-class diesel-electric submarines, faces the challenge of an increasing capability gap.

“How do we get the new capability as soon as possible to minimize any capability gap and then what are we going to do to plug whatever gap exists?” he asked rhetorically.

“To move to operating a nuclear-powered submarine fleet is as big a national challenge, not just in defense, but in terms of really the whole breadth of government that our country has been presented with, almost at every level, not just in terms of developing the capability but building the industrial base, building the regulation, building the government structures around it,” he said, also noting the cost. “We need to work out how we build this into a budget which has a significant debt associated with it.

“At every level there are challenges,” he said. “That said, we mean to meet those challenges. This is a huge national challenge for the country but it’s one we’re going to meet.”

Berger: Marine Corps

Reinforcements to NATO Good Example of Stand-In Force Concept

U.S. Marines with Golf Company, Battalion Landing Team 2/6, 22nd Marine Expeditionary Unit, participate in a live-fire range in Setermoen, Norway, April 26. *U.S. MARINE CORPS / Cpl. Yvonna Guyette*

ARLINGTON, Va. — The rapid deployment of Marine Corps forces exercising in Norway to a real-world situation in eastern Europe to shore up NATO presence was a good example of a stand-in force operating inside a weapons engagement zone, the Marine Corps commandant said.

Speaking July 7 in a webinar of the Hudson Institute, a Washington think tank, Gen. David H. Berger, commandant of the Marine Corps, said the 2,000-plus Marines sent from the U.S. East Coast to Norway for a scheduled major exercise, as well

as others to an unrelated reconnaissance/counter exercise, were able to rapidly redeploy deeper in Europe in support of NATO forces when Russia invaded Ukraine in February.

The Marine Corps forces Europe at the time included a squadron of F/A-18C Hornet strike fighters and an air control squadrons detachment with a Ground/Air Task-Oriented Radar, plus information and intelligence units. KC-130J tanker/transport aircraft also were dispatched to the area.

The Marine units were in a "very forward posture inside the collection and weapons engagement zone, operating persistently all the time, not trying to hide, showing them that we're there," Berger said.

"The creativity of them [the deployed Marines] in terms of mobility and also understanding things like satellite vulnerability windows, the basics of camouflage – in other words, knowing when they can see me and how do I use that from an information perspective effectively," he said. "How do I confuse them [the adversary], how do I convince them that they're seeing is what they want to see but it's not really accurate?"

Berger praised the deployed Marines, noting their "just marvelous, magnificent, creative work by a bunch of Marines, all as stand-in force, all withing the range of weapons systems."

He noted that a similar demonstration from the Indo-Pacific region, where Marines were moving around between the first and second island chains by ship and ashore "constantly making sure the adversary knew we were there, constantly moving small elements, constantly repeating closing kill chains over and over – constructive ones – trying to cut the timeline down, down, down. Once you get it down and you're comfortable, start interdicting [our] different communications paths to make it harder on ourselves.

“The idea is just ‘give it to the operating forces, the fleet, and let them run with it,’” he said. “They will inform us what worked best in their neighborhood. I’m very comfortable what’s working in the Middle East may be a little bit different flavor and what’s happening in Europe may be different than what’s happening in the Pacific. We need to be flexible enough to allow for that, and we can.

“This isn’t a ‘go there for exercise and come home’,” the commandant said. “It’s ‘stay in their face the whole time.’”

Navy Orders Long-Lead Materials for Two Fleet Oilers, One Expeditionary Sea Base

General Dynamics NASSCO has been awarded two contracts for long-lead materials for two fleet replenishment oilers and one expeditionary sea base ship. *GENERAL DYNAMICS NASSCO*

ARLINGTON, Va. – The U.S. Navy has awarded two contracts totaling $600 million for long-lead materials for three ships to be built by General Dynamics NASSCO in San Diego. The materials will be used to build two fleet replenishment oilers and one expeditionary sea base ship.

The Naval Sea Systems Command awarded General Dynamics National Steel and Shipbuilding Co. a $500 million contract

modification for long-lead-time material in support of the seventh and eighth John Lewis-class fleet replenishment oilers T-AO 211 and 212, according to a June 28 Defense Department contract announcement. The company also was awarded a $100 million contract modification for long-lead-time material in support of Lewis B. Buller-class expeditionary sea base (ESB) 8, the sixth ship of the class.

The Lewis B. Puller class ESB is a development of the Montford Point-class mobile landing platform ship. The 784-foot-long ESB is equipped with a 52,000 square-foot flight deck that can handle H-1, H-53 and H-53 helicopters and V-22 tilt-rotor aircraft. The ship is a capable platform to support mine-countermeasures missions, special operations forces, patrol boat support and unmanned systems.

Three ESBs are serving in the fleet – USS Lewis B. Puller (ESB 3), USS Hershel "Woody" Williams (ESB 4) and the USS Miguel Keith (ESB 5) – and two more, the future USNS John L. Canley and USNS Robert E. Simanek (ESB 7), are under construction.

NASSCO is scheduled to deliver later this year the lead ship of the new 742-foot-long, 49,850-ton fleet oiler class, the John Lewis (T-AO 205). Three more are under construction – the future USNS Harvey Milk (T-AO 206), the future USNS Earl Warren (T-AO 207), and the future USNS Robert F. Kennedy (T-AO 208) – and two more are under contract. The oilers each will have a fuel capacity of 157,000 barrels of oil as well as other dry stores to replenish ships at sea.

"NASSCO shipbuilders are honored to build T-AO 211, T-AO 212 and ESB 8," Dave Carver, president of General Dynamics NASSCO, said in a release. "The NASSCO team is excited to work with our Navy partners to ensure the success of both historic programs which are critical in supporting the Navy's forward presence."

NASSCO said the construction of the three ships is planned for

third quarter of 2023 and continue into 2027. The company sees the contracts as helpful in sustaining and growing its workforce.

Two DDGs from Truman Strike Group Return Home

The Arleigh Burke-class guided-missile destroyer USS Gravely (DDG 107) returns to Naval Station Norfolk after a regularly scheduled deployment in support of maritime security operations and theater security cooperation efforts, June 23. *U.S. NAVY / Mass Communication Specialist 2nd Nathan T. Beard*

ARLINGTON, Va. — The USS Gravely (DDG 107) returned to Naval Station Norfolk June 24, becoming the first ship of the strike group to return home. USS Jason Dunham (DDG 109) followed on June 26, returning to its homeport of Naval Station Mayport,

Florida.

USS Gravely participated in numerous exercises during its time in European waters, including Neptune Strike 2022, Cold Response, Operation Songwright, Dynamic Manta, Neptune Shield 2022, and Hedgehog 22 with forces from Finland, France, Germany, Italy, Norway, Spain, Sweden, Turkey and the United Kingdom, according to a release.

“Exercises with our allies and partners allowed for a more cohesive alliance and fluid operations,” Cmdr. Hunter Washburn, Gravely’s commanding officer said in the release. “Operating with allies and partners is paramount to further developing our communication and operational capabilities to ensure mission readiness at a moment’s notice.”

USS Jason Dunham also operated in the U.S. 6th Fleet area of responsibility, but also spent part of its deployment perated with the U.S. 5th Fleet in the Middle East. The DDG escorted ships through the Bab-el-Mandeb Strait multiple times.

During operations in U.S. 6th Fleet, the DDG operated with Forward Deployed Naval Forces-Europe ships, the Standing NATO Maritime Group 2 and the Harry S. Truman Carrier Strike Group.

“In the Mediterranean, Jason Dunham took part in NATO-led activity Neptune Shield 22, demonstrating NATO’s ability to integrate the high-end maritime warfare capabilities of allied aircraft carrier strike groups, amphibious ready groups and marine expeditionary units to support the defense of the alliance,” according to a release.