

# Marine Corps 'Monster Machine' Enters Full-Rate Production



Two of 13th Combat Sustainment Support Battalion's rough terrain container handlers posture at terminal 46 in Seattle, Wash. outside of CenturyLink Field Event Center where Soldiers are setting up a hospital in support of the Department of Defense COVID-19 response, April 4. U.S. Army Reserve / Maj. Brandon R. Mace

QUANTICO, Va. – A Marine Corps vehicle designed to transport International Standards Organization containers to supply Fleet Marines just reached a key acquisition milestone.

The Rough Terrain Container Handler moves 20-to-40-foot ISO containers and shelters on rough terrain, beaches and other surfaces to assist with land and amphibious missions. The machine can lift and transport objects weighing more than 50,000 pounds.

In September 2020, an upgraded version of the material handler reached full-rate production.

“The Rough Terrain Container Handler resupplies Marines during battle,” said Matt Wilson, project officer for the RTCH program at Marine Corps Systems Command. “It’s a big, monster machine that you’d have to see in operation to really appreciate.”

RTCH operates worldwide on rough surfaces, including sandy terrain, and is capable of ordnance ammunition handling operations. The vehicle can be quickly configured for transport by road, rail and marine landing craft, or by air in C-5 or C-17 cargo aircraft.

The vehicle is commonly used during amphibious landings, where engineer equipment operators can employ the RTCH to offload containers, stage them on the beach and push cargo and supplies out to Marines as needed. The machine can also travel through shallow waters and transport ISO containers onto floating bridges called causeways.

The Marine Corps began fielding the RTCH in 2006. While the vehicle has served Marines well, MCSC is always looking for ways to improve their technologies and maintain a competitive advantage over adversaries.

“We communicated with Fleet Marines to determine what they wanted to see improve within the Rough Terrain Container Handler,” Wilson said. “We also looked at what the manufacturer could improve on the system.”

After assessing this input, MCSC decided to upgrade the RTCH through the Service Life Extension Program as opposed to field an entirely new vehicle. The RTCH SLEP gives the RTCH at least another 10 years of operation, said Wilson.

The SLEP also saves the Corps time. Instead of beginning at the start of the process – Milestone Decision Authority – the program began at the Milestone C stage, just prior to the production and deployment phase.

“This has been a very streamlined process,” said Jarrett. “Instead of testing every part of this RTCH, which has already been done before, we only had to focus on the specific modifications to ensure those still met the requirements of the legacy vehicle and what we wanted to do with our SLEP program.”

Since MCSC awarded the RTCH SLEP contract in January 2020, both the Army and Navy have joined the Marine Corps’ SLEP to

acquire additional machines.

“The Army and Navy are now involved in the program,” said Wilson. “When the Marines, Navy and Army seek the same materiel solution for the RTCH, it benefits all in Acquisitions, Provisioning and sets the Marine, Sailor and Soldier up for success.”

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## **HMS Queen Elizabeth Embarks U.K., USMC F-35Bs for Major Exercise**



The British Royal Navy aircraft carrier HMS Queen Elizabeth (R08) steams alongside Pre-Commissioning Unit (PCU) Michael Monsoor (DDG 1001) during a recent underway exercise. Mass Communication Specialist 1st Class John Philip Wagner, Jr.

LONDON – HMS Queen Elizabeth has embarked the largest number of warplanes ever onto her deck as she prepares to take her place at the heart of a U.K.-led NATO Carrier Strike Group, the U.K. Ministry of Defence said in a Sept. 23 release.

Two squadrons of F-35B stealth jets, the RAF’s 617 Squadron (The Dambusters) and the U.S. Marines Corps Fighter Attack Squadron 211 (VMFA-21, the Wake Island Avengers), have joined the 65,000-ton carrier as she sails for exercises with allies in the North Sea.

With a total of 14 jets and eight Merlin helicopters, it’s the largest concentration of fighter jets to operate at sea from a Royal Navy carrier since HMS Hermes in 1983, and the largest air group of fifth generation fighters at sea anywhere in the

world.

In this month's group exercise, HMS Queen Elizabeth will be joined by seven Royal Navy destroyers, frigates and auxiliaries, plus other supporting units, to form a fully sovereign Carrier Strike Group, ready to fight on the surface and in the air.

The Carrier Strike Group will be put through its paces off the north east coast of Scotland as part of Joint Warrior, NATO's largest annual exercise.

"The United Kingdom's maritime renaissance has been unfolding over many years, as we introduced a new generation of ships, submarines and aircraft into service," said Commodore Steve Moorhouse, commander, U.K. Carrier Strike Group. "But this marks the first time we have brought them together in a cohesive, potent, fighting force. HMS Queen Elizabeth will be operating with the largest air group of fifth generation fighters assembled anywhere in the world. Led by the Royal Navy, and backed by our closest allies, this new Carrier Strike Group puts real muscle back into NATO and sends a clear signal that the United Kingdom takes its global role seriously."

Royal Navy Commander Mark Sparrow, 617 Squadron's commanding officer, added: "This is an incredibly exciting time for 617 Squadron as we begin a new era of partnership with the U.S. Marine Corps building towards next year's operational deployment with HMS Queen Elizabeth. You need to go back more than three decades to find the U.K. operating anything on this scale or complexity and this is a first for fifth-generation carrier capability. The era of big-deck, fast jet carrier operations is back".

Usually based in Marine Corps Air Station (MCAS) Yuma, Arizona, VMFA-211 arrived in the United Kingdom, just under two weeks ago. Landing at the home of the Lightning Force,

RAF Marham, after the trans-Atlantic flight, they worked up with 617 Squadron conducting the RAF led Exercise Point Blank before embarking in the carrier.

“The Wake Island Avengers are ready in all respects to work with the British sailors and aircrew on board HMS Queen Elizabeth,” said Marine Lt. Col. Joseph Freshour, commanding officer of VMFA-211. “We are looking forward to deploying alongside our British counterparts over the next few months, and we will work tirelessly as a part of this transatlantic naval force. We are proud to play such an important role in the generation of an allies’ carrier strike capability.”

Capt. James Blackmore, the U.K.’s Carrier Air Wing Commander, added: “We are going to learn a huge amount from operating F-35Bs at sea with the USMC, they have had them longer and we can share ideas and practices. But this is much more than that; this is the trans-Atlantic alliance in action, demonstrating that two close allies can not only fly from each other’s carriers, but can fight alongside each other should we need to. This level of integration offers a decisive flexibility in times of crisis, conflict or war.”

HMS Queen Elizabeth, along with her 1,680 sailors, aviators and marines, is due to return to her home port of Portsmouth next month.

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## **Marine Corps Fields New Service-Wide Pistol**



U.S. Air Force Senior Airman Michael Pritchard, 423rd Security Forces Squadron (SFS) patrolman, fires an M18 handgun during a

qualification course, at RAF Molesworth, England, July 28, 2020. The M18 is now being adopted by the U.S. Marine Corps. U.S. Air Force / Senior Airman Eugene Oliver QUANTICO, Va. – For the first time since former President Ronald Reagan’s Administration, the Marine Corps is fielding a new service-wide pistol replacement.

The M18 comprises capabilities previous pistols lacked. For example, the M9 – the most widely issued pistol among Marines – is a steel-framed, single-action/double-action hammer-fired pistol. This means it is a heavier, metal gun with two different trigger pulls for single- and double-action.

Conversely, the M18 is lighter and does not include two different trigger pulls.

“For some Marines, having two trigger pulls, like with the M9, is difficult to get used to because different forces are acting upon the gun,” said Sgt. Randall McClellan, pistol program manager with the Weapons Training Battalion aboard Marine Corps Base Quantico, Virginia. “With the M18, the trigger is going to be the same weight every time.”

The M18 has increased modularity when compared with previous pistols. The gun includes interchangeable components to fit small, medium or large hands. It comprises a receiver module inside the pistol grip that enables Marines to remove the trigger mechanism and insert it into a new grip size, said Nelson.

The weapon also includes an accessory rail that enables Marines to attach lights or lasers underneath.

“Marines can attach more things to the M18, such as a red-dot sight, once approved for use,” said McClellan. “The modularity and ergonomics of the gun benefits the warfighter, as they can change parts out more easily.”

## **Army collaboration**

The handgun is an Army-led program fielded in 2017. The program consists of the M17—the full-size pistol—and the M18. MCSC is only purchasing the M18, the compact variant, as well as holsters through the Army contract.

The Marine Corps' Combat Development and Integration collaborated with the Army on the development of the M18 requirement. CD&I requirements managers and other Marines actively participated in the assessment and selection of the MHS.

“The M18 is unique in that it is a utility player capable of supporting a broad range of missions in which a handgun is required,” said Billy Epperson, the Infantry Weapon Capabilities Integration officer at CD&I. “Because of this versatility, the M18 will replace the four pistols in the Marine Corps inventory.”

Tom Vass, the Army's project officer for the M18, believes the weapon will greatly benefit Marines, noting how it is a more reliable, accurate and effective pistol than previous ones.

“Overall, the adoption of the M18 by the Marine Corps is an extremely positive decision that will benefit the Corps and enhance Marines' safety and effectiveness when conducting missions,” said Vass.

## **'Very emotional' transition**

In June 2020, a group of Marines and civilians from various Marine Corps organizations, including PMO and Marine Helicopter Squadron One, converged upon a firing range aboard Marine Corps Base Quantico to learn and qualify with the M18 during the Instructor and Key Personnel Training.

After the two-hour event, Marines and subject matter experts spoke about the benefits of the system. Sgt. Journey Granados, a weapons trainer with MCB Quantico's PMO, said the M18 is much easier to grip and shoot than other Marine Corps pistols.

"I feel more comfortable holding the M18 than I do holding the M9, largely because of the interchangeable grip," said Granados. "This pistol is definitely easier to shoot, is a lot more accurate and should improve Marines' qualification score."

The requirement for Marines to qualify with a pistol will not change. Those required to qualify annually will still do so, said Nelson. Combat Marksmanship Trainers will qualify with the M18 during New Equipment Training, and these individuals are responsible for qualifying other Marines.

"The only thing changing in the qualification course now is the verbiage in regard to single action/double action and the decocking," said Nelson. "WTBN will hold the marksmanship symposium later this year, and they will review data to decide if the course as a whole will need to be changed."

Maj. Mike Brisker, weapons product manager in MCSC's Program Manager for Infantry Weapons, expressed excitement for the M18 because of its capabilities and its potential in helping Marines carry out their missions.

"This is the first service-wide replacement of the pistol since the M9 in the 1980s," said Brisker. "The M18 is important in terms of modernization and lethality."

Fielding the M18 is part of a larger effort to modernize and increase the lethality of Marines. The addition of the M18 to the Marine Corps inventory will be an exciting experience for

many Marines, said Nelson.

“This is the first new service pistol in more than 30 years, so it’s going to be a very emotional transition for Marines,” said Nelson. “Fielding the M18 is a big step for the Marine Corps.”

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## **Saab Receives Order for Radar System Components for the U.S. Marine Corps**



U.S. Marines with Marine Air Control Squadron 4, Marine Aircraft Group 36 set up the AN/TPS-80 G/ATOR radar system on Marine Corps Air Station Futenma, Okinawa, Japan, Feb. 26, 2019. U.S. Marine Corps / Lance Cpl. Leo Amaro

STOCKHOLM – Saab has received a \$36.7 million USD order for the U.S. Marine Corps’ AN/TPS-80 Ground/Air Task Oriented Radar (G/ATOR), the company said in a Sept. 23 release. Saab received the order from Northrop Grumman Systems Corp., the prime contractor for G/ATOR.

The order includes components and subsystems in support of the Full-Rate Production phase. Saab’s deliveries relating to this contract will take place between 2020 and 2021 from its facility in Syracuse, New York.

The initial full-rate production contract, awarded to Saab in 2019, also includes options for additional sets of assemblies and associated spares over a five-year period until 2024. Saab has been a major partner with Northrop Grumman Systems Corp. since the initial G/ATOR system design and development

contract award in 2007.

“Through Saab’s strong partnership with Northrop Grumman Systems Corp. we continue to advance the G/ATOR program in support of the U.S. Marine Corps. Each delivery of the G/ATOR system improves the capability and effectiveness of our Armed Forces and represents Saab’s enduring commitment to advancing the safety and security of our U.S. stakeholders,” said Erik Smith, president and chief executive officer for Saab in the United States.

The AN/TPS-80 Ground/Air Task Oriented Radar (G/ATOR) provides the U.S. Marine Corps with capabilities for air surveillance, air defense, and ground weapon locating missions in one single ground-based radar solution.

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## **Marine Corps Restores Priority to Ground-Based Air Defense**



Capt. Christopher Lowe, (left), assigned to the 26th Marine Expeditionary Unit (MEU), and Cmdr. Don Wilson, the chief staff officer of Amphibious Squadron (PHIBRON) 8, pose for a photo next to an L-MADIS aboard the amphibious assault ship USS Bataan. U.S. Navy / Mass Communication Specialist 2nd Class Anna E. Van Nuys

ARLINGTON, Va. – After two decades of land combat in wars with no air threat beyond small drones, the Marine Corps is putting a high priority to ground-based air defense (GBAD) as it redesigns its force for expeditionary advance base operations in an era of great power competition.

The Marine Corps used to have batteries of Hawk surface-to-air missiles and later the Avenger system, augmented by short-range Stinger man-portable air-defense missiles (MANPADs) in their low-altitude air-defense battalions. Only the Stingers survived by the mid-2000s. In Afghanistan and Iraq, with no credible air threat, GBAD fell in priority in budgets and development as the Corps focused on ground combat systems such as armored vehicles, artillery and tactical aircraft.

With the Force Design 2030 plan of the commandant, Gen. David H. Berger, to re-shape the Corps into a force that can operate and survive inside the area of operations of a peer competitor equipped with advanced manned and unmanned aerial systems and cruise missiles, GBAD has been restored to a higher priority in the defense budget and in the Corps' acquisition programs.

John Garner, program executive officer for Land Systems, has reorganized the PEO's program offices directorates to include one for GBAD. The four major GBAD programs being developed or deployed were outlined Sept. 22 by Garner in the Virtual Modern-Day Marine exposition:

- MRIC – Medium-Range Interceptor Capability
- MADIS – Marine Air Defense Integrated System
- L-MADIS – Light Marine Air Defense Integrated System
- Advanced MANPADS/Stinger

The MRIC is likely to be a vehicle-mounted missile system with a 360-degree fire-control radar to handle aircraft and cruise missiles at medium ranges.

Garner said the Corps expects to field a prototype of the MRIC "over the next two years."

The MADIS is mounted on a pair of Joint Light Tactical Vehicles, one with a turret launcher for four Stinger missiles and a 30mm cannon, as well as an optical sensor and shoulder-fired Stingers. The second vehicle is equipped with an RPS-42 360-degree radar, a 7.62mm M134 minigun, and electro-

optic/infrared sensors, as well as shoulder-fired Stingers. On both vehicles is the Modi II dismounted electronic countermeasures system, which can be used to disrupt enemy drones, communications, and radio-controlled improvised explosive devices.

The L-MADIS is a counter-UAS electronic attack system mounted on a Polaris MRZR all-terrain vehicle. It features a 360-degree radar, a direct-fire capability, radio frequency jammers and electro-optic/infrared sensors. The L-MADIS is credited with downing an Iranian drone that flew in the close vicinity of the amphibious assault ship USS Boxer in July 2019.

Garner said the GBAD systems will fill “a major void” in Marine Corps capabilities.

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## **Reinventing Logistics and Mobility are Key Elements to Force Design, Generals say**



Marines with 2nd Battalion, 5th Marine Regiment (2/5), 1st Marine Division, exit an MV-22B Osprey with Marine Medium Tiltrotor Squadron (VMM) 364 as part of a training mission in support of Exercise Winter Fury 18 at Marine Corps Air-Ground Combat Center Twentynine Palms, Calif., Dec. 7. U.S. Marine Corps / Lance Cpl. Nadia J. Stark

ARLINGTON, Va. – To meet the pacing threat of a near peer competitor like China by 2030 will require changes in Marine Corps platforms, equipment and, above all, changes in thinking about logistics and mobility, according to a panel of three-

star Marine generals.

Marine Corps Commandant Gen. David Berger's top priority for his five-year tenure is redesigning the force from its decades-long focus on countering violent extremists in the Middle East to great power, peer-level competition, with special emphasis on the Indo-Pacific region.

"We have to change by 2030, the year the decade of uncertainty begins," when Russia and China are projected to begin surpassing U.S. military advantages in technology, equipment and force size, Lt. Gen. Eric Smith, deputy commandant for Combat Development and Integration told the virtual version of the Modern Day Marine Expo on Sept. 22.

Smith, one of four deputy commandants and one assistant deputy commandant on a panel discussing what the Marine Corps will need from industry to accomplish the massive shift in less than 10 years, cited two major concerns. One is developing a combination of C5ISR with resilient sensing architecture that can operate forward deployed "in contact, in conflict, and still pass data to the joint forces and to ourselves."

The other is long range lethal fires that can "reach out and affect an adversary, make them respect our presence" but with lightweight mobility "so that we don't overburden the naval logistics or joint logistics footprint." He added that "the overarching theme" for both concerns is mobility.

While the other deputies listed specific capabilities needed or in the pipeline for aviation, information technology and ground forces, a common theme developed about logistics and how to deliver supplies, equipment and information across vast areas of contested space.

"We have to lighten the load," said Lt. Gen. Charles Chiarotti, deputy commandant for Installations and Logistics. Competitors' long-range missiles and sensors have eliminated "the luxury" of taking days to deliver an iron mountain of

supplies in a war zone. In fact, installations and infrastructures, once merely places where forces were trained and equipped, in the future will be “warfighting platforms from which we deploy from, but from which we need to maneuver,” Chiarotti said.

“We’re not organized to meet the future capabilities that we need for tomorrow,” he said, adding that inexpensive, expendable – or at least, risk-worthy – unmanned platforms could be one solution for long-haul supply in a large, contested environment. Other problems are more complicated, however. In a GPS- and communications-denied environment, “We have to be able to reduce the signature that the logistics force brings to the battlefield,” Chiarotti said.

Likewise, Deputy Commandant for Aviation Lt. Gen. Mark Wise noted that signature management was also an issue in his sector, noting that aviation has a transport and supply role, as well as air combat and defense. “How do I make myself hard to target if they see me, also, how do I keep them from seeing me?” Sustainability is a key issue for aviation, Wise said. “We need to make sure that we are focused on the sustainment. How do I move fuel and ordnance? That is a critical enabler that we’re spending a lot of time focusing on.”

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## **Marine Corps’ Amphibious Combat Vehicle Completes Initial Operational Tests**



BAE Systems’ ACV solution has completed thousands of miles of mobility testing and a full range of amphibious operations,

including demonstrations of launch and recovery. BAE Systems ARLINGTON, Va. – The Marine Corp’s new amphibious vehicle has completed a major step in its acquisition program and is on track for a full-rate production decision in November, a service acquisition official said.

The Amphibious Combat Vehicle (ACV), already in low-rate production by BAE Systems, completed its Initial Operational Test and Evaluation on Sept. 4, said John Garner, program executive officer for Land Systems, speaking Sept. 21 at the Virtual Modern Day-Marine Exposition.

Garner said early fielding of the personnel carrier version of the ACV to a Marine Corps amphibious assault battalion will begin in the first week of October and be completed by the end of that month. Other variants of the ACV under development include a command-and-control ACV; an ACV armed with a 30mm cannon; and a recovery version designed to tow damaged vehicles to repair facilities.

The ACV is replacing the AAV7 family of assault amphibious vehicles. Garner said he expects there will be a robust Foreign Military Sales potential for the retired AAV7 vehicles.

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## **Marines to Operate Armed Reaper UAS in ‘Coming Months’**



An MQ-9 Reaper taxis on the flightline prior to take off on Ali Al Salem Air Base, Kuwait, June 10, 2020. U.S. Air Force / Senior Airman Kevin Tanenbaum

ARLINGTON, Va. – The Marine Corps plans to deploy armed MQ-9

Reaper unmanned aerial vehicles in the “coming months,” the Navy’s program executive officer for Unmanned and Strike Weapons (PEO-UMW) said.

“The MQ-9 Reaper provides increased lethality to the Marine Air-Ground Task Force by providing persistent ISR [intelligence, surveillance and reconnaissance] and strike capability which the Marine Corps has not previously possessed in an unmanned system,” said Rear Adm. Brian Corey, program executive officer – Unmanned and Strike Weapons, speaking Sept. 9 at the Unmanned Systems Defense, Protection, Security virtual conference sponsored by the Association of Unmanned Vehicle Systems International.

The MQ-9 Reaper is a medium-altitude, long-endurance unmanned aerial vehicle used for surveillance and strike operations. The Reaper is a battle-proven development of the RQ-1 Predator, upgraded for longer endurance, a heavier payload, and the ability to launch heavier precision munitions in a benign aerial environment.

“Last year, in response to an Urgent Needs Statement from the U.S. Marine Corps, we helped them acquire an MQ-9 Reaper and operated it outside the continental United States in support of forces forward for persistent ISR,” Corey said. “We’ve recently transitioned to add a persistent strike capability which the Marines will operate in the coming months which will give them a capability that they have not had from unmanned systems.”

The Naval Air Systems Command ordered the two Reapers from General Atomics Aeronautical Systems Inc. (GA-ASI), of Poway, California, with a \$26.9 million firm-fixed-price contract, according to the June 22 Defense Department announcement. The contract also provides for one dual-control mobile ground-control station, one modular data center and one mobile ground-control station

The Marine Corps selected the Reaper in 2018 to fill an urgent needs request for intelligence, surveillance and reconnaissance (ISR) in support of forward operations in Southwest Asia. GA-ASI has provided ISR services since September 2018 through contractor-owned/contractor-operated (COCO) Reapers and their teams to support Marine Corp forces in Afghanistan. Marine UAV squadrons (VMUs) have been learning to operate the Reaper in preparation for the Corps' procurement of government-owned/government operated MQ-9s. On March 20, 2020, a Marine crew of VMU-1 controlled a COCO Reaper for the first time on an operational mission in support of forward-deployed ground forces.

Corey said the operation of the MQ-9 will help the Marine Corps learn how to operate a Group 5 UAS and inform its future MUX program.

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## **Navy Looking at Upgrades to RQ-21 UAS**



U.S. Marine Corps Lance Cpl. Dominick Rollan and Cpl. Jose Reyes, both with Air Combat Element, Marine Rotational Force – Darwin, place the RQ-21A Blackjack on the launcher in preparation for its first flight in Australia at Bradshaw Field Training Area, Northern Territory, Aug. 8, 2020. The RQ-21 provides the Marine Corps a rapidly deployable surveillance asset able to operate in austere forward environments. U.S. Marine Corps / Cpl. Harrison Rakhshani

ARLINGTON, Va. – The Navy is planning a series of upgrades to the Boeing Insitu-built RQ-21A Blackjack unmanned aerial system, an acquisition official said.

“We’re continuing to look at upgrades for the system,” said Rear Adm. Brian Corey, program executive officer – Unmanned and Strike Weapons, speaking Sept. 9 at the Unmanned Systems Defense, Protection, Security virtual conference sponsored by the Association for Unmanned Vehicle Systems International. “Some of our future initiatives include beyond-line-of-sight capability; a vertical-takeoff-and-landing kit; a bandwidth-efficient common data link, and a portable ground-control station.”

The Blackjack, built by Boeing’s Insitu, is a twin-boom, single-engine, small tactical unmanned aerial vehicle that carries modular payloads mostly for surveillance. It is pneumatically launched and is recovered using a skyhook arrestment system. A single Blackjack system includes five UAVs, two ground control stations, various payloads and a set of launch and recovery systems.

The fielding of the RQ-21A Blackjack unmanned aerial system achieved full operational capability in 2019. All 21 systems for the Marine Corps and 10 for the Navy have been delivered to fleet and training units.

The Blackjack now equips four Marine UAV squadrons plus a fleet replacement detachment. The Marine Corps deploys the Blackjack with its Marine expeditionary units onboard amphibious warfare ships. The 10 systems for the Navy have been delivered to Navy Special Warfare Command and made two deployments in 2019.

“The RQ-21 has flown over 14,000 hours and has seen some of the highest readiness rates in all of naval aviation,” Corey said.

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# Expeditionary Warfare Director: Marines Will Be Sinking Ships in Future War

ARLINGTON, Va. – The Marine general assigned to the Navy as its director of expeditionary warfare says that Marine Corps forces will be more in support of the Navy than being the supported force.

“We’re going to have Marines out there sinking ships,” said Maj. Gen. Tracy W. King, director, Expeditionary Warfare, speaking Aug. 27 in the Surface Navy Association’s First Waterfront Symposium webinar.

King was referring to the Marine Corps’ plans to acquire anti-ship missiles such as the Naval Strike Missile to stage at expeditionary bases and engage enemy naval vessels with those precision weapons in what the Corps calls Expeditionary Advanced Base Operations.

“Per the commandant’s [Gen. David Berger’s] guidance, we need to be an extension of the fleet,” King said. “It’s not, ‘What can the Navy do for the Marine Corps?’ It’s the exact opposite. If you just think of some of the missions that the Navy is going to have to do when she gets in close: fast FIAC [fast inshore attack craft] comes to mind. The Marine Corps can really help with [countering] that. If you get a Cobra [attack helicopter] on you, you are not getting away.

“Our examination of the coming fight is that it is going to begin in a very distributed fashion,” King said. “If we do come to blows with China, it’s going to be very confused for the first 30 or 45 days, but we must fight in a distributed fashion. ... It’s simply harder.”

King said that “one of the things the American joint force

does much better than its potential adversaries is that we don't culminate ... because of our logistic tails. If we have to distribute across an archipelago or wherever, that's going to become increasingly difficult, as is command and control.

"The Marine Corps' ability to project power over the shore stems directly from its relationship with the Navy," he said. "That's our center of gravity. What the Navy and Marine Corps team provides the Joint Force is the ability to do it at a time and place of our choosing, to use the oceans as maneuver space."

King said that distributed maritime operations "have all the benefits of mass absent the risks of concentration. ... That is going to be extremely difficult for our adversary to counter. We have to mess up the calculus of our adversaries. Being able to distribute and maintain the lethality that comes with the U.S. Joint Force is something we have not done normally. We normally concentrate to do that, and we don't want to do that in the coming fight with China."

King pointed to the Light Amphibious Warship (LAW) being developed by the Navy as a key tool in achieving distributed maritime operations. He said the LAW is not meant to replace the large amphibious warfare ships currently in the fleet but is meant to enhance the ability of the fleet to conduct distributed operations.

"The LAW is going to be a lily pad that carries excess fuel, that can make water, that Marines can actually live on," he said. "I see them as part of the crew."

Regarding the larger amphibious warfare ships in the fleet, King said they need increased lethality, particularly the San Antonio-class amphibious platform dock ships.

"We owe that to our Sailors and to our Marines. We're working on that as well."

King said the Navy and Marine Corps will continue to deploy amphibious ready groups with Marine expeditionary units embarked as a “force of presence, not a force to take into high-end combat.”