Ready-to-Fight Force Conducts Amphibious Assault During RIMPAC 2022



Republic of Korea Marine Corps Amphibious Assault Vehicles cover and conceal during an amphibious raid for a multinational littoral operations exercise as part of Rim of the Pacific 2022, Aug. 1. U.S. MARINE CORPS / Sgt. Melanye Martinez

MARINE CORPS BASE HAWAII – With the theme of "Capable Adaptive Partners," the 2022 Rim of the Pacific exercise has featured a wide range of capabilities, projecting the inherent flexibility of maritime forces and helping to promote a free and open Indo-Pacific, culminating with an amphibious assault in Hawaii.

During the exercise, 26 nations, 38 surface ships, four submarines, nine national land forces, more than 30 unmanned systems, approximately 170 aircraft and more than 25,000 personnel trained together while operating in and around the Hawaiian Islands and Southern California, June 29 to Aug. 4. Following weeks of workups, and then intensive training together when the exercise began, RIMPAC amphibious forces conducted a simulated assault on a beach and airfield at Marine Corps Base Hawaii at Kaneohe Bay on the island of Oahu in Hawaii.

RIMPAC has been led by the commander of U.S. 3rd Fleet, Vice Adm. Michael Boyle. Republic of Korea navy Rear Adm. Sangmin An served as the commander of Combined Task Force 176, RIMPAC's amphibious task force, aboard his flagship, amphibious assault ship USS Essex (LHD 2). His deputy was U.S. Navy Rear Adm. Michael Baze, commander of Expeditionary Strike Group (ESG) 3.

In the scenario, a fictional armed radical organization known as Draco has captured a beach and airfield and adjacent areas from a fictional friendly nation called Orion. The amphibious task force employed a multi-domain assault to capture it back.

By definition, an amphibious assault involves the establishment of a landing force on a hostile or potentially hostile shore. An amphibious force consists of an amphibious task force and a landing force. Both partner and partner nations and allies provide the forces that are organized equipped and trained for these specialty mission sets.

According to Col. Ricardo Miagany, assistant chief of staff for operations with Marine Forces Pacific, the ship-to-shore phase showcases multilateral interoperability approach.

"A flotilla of coalition naval vessels is supporting this amphibious assault. Each ship possesses unique capabilities that will be harnessed to dislodge the occupying forces," he said.

In addition to Essex, the assault force included the ROKN landing helicopter platform ROKS Marado (LPH-6112); the Royal Australian Navy landing helicopter dock HMAS Canberra (L02); and the Mexican navy landing ship tank ARM Usumacinta (A412),

the ex-USS Frederick (LST-1184).

"Each ship possesses unique capabilities that will be harnessed to dislodge the occupying forces. Today's training highlights some of the capabilities of the forces of the amphibious partners in the region as we operate together for a collection of naval platforms and functioning as one joint naval task force," said Miagany.

USMC F/A-18 Hornets and AH-1Z and UH-1 aircraft provided fire support, and USMC CH-53E Super Stallions and MV-22 Ospreys delivered troops to the landing zone, USAF A-10 Thunderbolt IIs, a USAF MQ-9 Reaper and a USAF C-17 airlifter.

The ground assault included forces from Australia, the Republic of Korea, Mexico, Sri Lanka, Chile, Indonesia, Malaysia, the Kingdom of Tonga and the U.S.

Miagany said the "ready-to-fight force embarked on amphibious assault vehicles, small boats and aircraft, and attacked from the sea to the shore in one of the most complex and difficult form of maneuver and amphibious operations."

Force Modernization

"For years we have practiced amphibious operations together, and many of the participants in sporting experience have experience working with Marine Expeditionary Unites. These will remain key facets of our crisis response roles in support of our alliances and security partnerships in the years ahead," Miagany said. "These challenges in the constant evolution of military technology are focusing the Marine Corps and many of our partners on force modernization efforts. Marine Corps investment and experimentation efforts will enhance our collective security and improve U.S. crisis response capabilities."

Miagany said "the amphibious assault today demonstrates the flexibility and strength of integrated and interoperable

amphibious forces, the synergy of network allies and partners, the enduring value of amphibious crisis response capabilities, and provides a glimpse of the U.S. Marine Corps' emerging core mission of providing stand-in forces which defend our allies and partners."

According to Miagany, amphibious assaults are one of the most complex of all military operations.

"Only a small collection of militaries around the world are capable of planning and executing them. This form of a maneuver warfare projects naval forces from ship to shore into contested spaces. Accomplishing this requires a tremendous amount of professionalism, partnership, compatible operating concepts and interoperable technology. When training and practicing these maneuvers throughout Hawaii in preparation for this mission, our nations are building relationships with each other and strengthening our interoperability. For years we have practiced amphibious operations together, and many of the participants this morning have experience working with Marine Expeditionary Units. These will remain key facets of our crisis response roles in support of our alliances and security partnerships in the years ahead."

In addition to the operational demonstration, Marines from the 3d Littoral Combat Regiment displayed their tactical systems, including sensors such as the AN/TPS-80 Ground/Air Task Oriented Radar and weapons such as the High Mobility Artillery Rocket System.

At the conclusion of the demonstration, Lt. Gen. Steven R. Rudder, commander, U.S. Marine Corps Forces, Pacific and commanding general of Fleet Marine Force, Pacific, congratulated the forces that had been training on the ground for the past month and a half, and referred to the assault as the "RIMPAC graduation exercise."

"The blue water ops that have been that have been transpiring

has been shaping this environment so that we can conduct this amphibious assault today," Rudder said. "It's the first time we've done an amphibious assault with nine countries during the RIMPAC exercise. Although bilateral is such a key part of all of our nation's military exercising in the Indo-Pacific, the biggest operations are by nature joint, and are by nature multilateral."

Kearsarge ARG, 22nd MEU return to the Baltic Sea



U.S. Navy Ensign Glennalyn Ajero, assigned to the San Antonioclass amphibious transport dock ship USS Arlington (LPD 24), stands watch in the pilot house as Arlington transits the Danish Straits to enter the Baltic Sea, Aug. 2. U.S. NAVY / Mass Communication Specialist 1st Class John Bellino BALTIC SEA — The Kearsarge Amphibious Ready Group, with embarked 22nd Marine Expeditionary Unit, returned to the Baltic Sea, Aug. 2, to strengthen interoperability with key NATO allies and partners, the group's public affairs said Aug. 3.

Elements of the ARG-MEU include flagship Wasp-class amphibious assault ship USS Kearsarge (LHD 3), San Antonio-class amphibious transport dock ship USS Arlington (LPD 24), and Whidbey Island-class dock landing ship USS Gunston Hall (LSD 44), along with accompanying Arleigh Burke-class guidedmissile destroyer USS Arleigh Burke (DDG 51).

While in the Baltic Sea, approximately 4,000 Sailors and Marines of the combined ARG-MEU team will train and operate alongside allied and partner nations to preserve maritime security and stability in the region. Operating alongside allies and partners in the Baltic Sea again demonstrates the U.S. commitment to the region and to improving capability and capacity across like-minded nations.

"Our experience in the Baltics earlier in the year was extremely positive and we're looking to build upon the relationships that we established as well as establish some new ones," said Col. Paul Merida, commanding officer of the 22nd MEU. "We are ready to train and operate alongside our allies and partners and, of course, we are always ready to respond to crisis if required."

This marks a return to the Baltic Sea for elements of the ARG-MEU team, including Gunston Hall and Kearsarge, as both ships participated in the Estonian-led exercise Siil 22 in May and the annual joint, multinational exercise Baltic Operations (BALTOPS), the premier maritime-focused exercise in the Baltic region, in June. Arlington will be operating in the Baltic for the first time, re-aggregated with the Kearsarge ARG-MEU team following operations in the Mediterranean Sea since April 2022. Prior to returning to the Baltic Sea, the ships of the ARG concluded their mid-deployment voyage repair and maintenance periods in Brest, France; Rijeka, Croatia; and Copenhagen and Kalundborg, Denmark. Maintenance availability periods, termed MDVRs, allow U.S. Navy ships to accomplish necessary and preventative repairs to continue their missions in the region while simultaneously strengthening relationships with host nations.

"Following a successful mid-deployment voyage repair, the Kearsarge ARG and 22nd MEU remains committed to our allies and partners," said Capt. Aaron Kelley, commander of the Kearsarge ARG and Amphibious Squadron 6. "As our ships frequently operate in the region, the ARG-MEU team remains ready and returns to strengthen relationships with new and familiar Baltic allies and partners while ensuring maritime security throughout the region."

Navy Opens First Training Facility for Small Unmanned Aircraft Systems



Col. Victor Argobright, Navy and Marine Corps Small Tactical Unmanned Aircraft Systems (PMA-263) program manager, officially opens the Navy Training and Logistics Support Activity East July 27 at Joint Expeditionary Base Little Creek-Fort Story in Virginia Beach, Va. From right to left, he is joined by Frank Ball, director of operations, Air/Ground Systems Engineering Amentum; JEBLCFS Commanding Officer Capt. Michael Witherspoon, and Lee Hess Jr., Navy TALSA East project manager. U.S. NAVY

PATUXENT RIVER, Md. – The Navy opened a new facility at Joint Expeditionary Base Little Creek-Fort Story in Virginia Beach, Virginia, on July 27 that is dedicated to training Sailors who will operate the service's Family of Small Unmanned Aircraft Systems (FoSUAS), the Naval Air Systems Command said Aug. 2.

The facility, known as Training and Logistics Support Activity (TALSA) East, is the first dedicated Navy facility for unmanned aircraft operators to complete SUAS training.

Previously, Naval SUAS operators received training directly from the original equipment manufacturer, through contractorlead training, or at one of the four Marine Corps TALSAs when seats were available.

"Navy UAS training takes a leap forward today with the opening

of this first-of-its-kind facility," said Marine Corps Col. Victor Argobright, PMA-263 program manager whose team will manage training at TALSA East. "Our FoSUAS team has been working diligently for nearly two years to provide highquality training and certifications to our Navy personnel."

The TALSA is a central location for scheduling and formal entry-level SUAS courses that provide initial qualification training for systems currently in use by the operating forces. It also supports centralized storage of unit systems, supply, and maintenance services.

Scheduling at Navy TALSA East is flexible and tailored to student requirements. The first official course in the new facility will begin Aug. 8 for SkyRaider R80D.

"Being the first of its kind SUAS facility dedicated to training and logistics is a force multiplier for our Navy and Marine Corps," said Navy Capt. Michael Witherspoon, JEB Little Creek-Fort Story commanding officer. "This could not have been possible without the close coordination and collaboration of PMA-263, JEB Little Creek-Fort Story Public Works, the renovation team and the trainers here onboard the installation.

Navy TALSA East currently supports training for The Vertical Take-Off and Landing SkyRaider R80D, Skydio X2D and PD-100 Black Hornet 3. The Naval Expeditionary Combat Command will join the Naval Special Warfare community in fiscal year 2023 to also use the training and logistics support that the TALSA provides.

National Museum of the Surface Navy Selects Applied Minds LLC for Phase 1 Design



U.S. Marines with the Assault Amphibian School listen to David Ashman, a tour guide with the USS Iowa museum, during a tour of the museum at the Port of Los Angeles, San Pedro, California, July 22. U.S. MARINE CORPS / Lance Cpl. Hope Straley

SAN PEDRO, Calif. — The National Museum of the Surface Navy at the Battleship Iowa, the museum for America's Surface Navy located aboard the historic Battleship USS Iowa Museum, announced Aug. 1 the selection of Applied Minds LLC as designer for the first phase of the innovative museum.

Scheduled to open in 2025, the National Museum of the Surface Navy will be designed to raise awareness of the America's Surface Navy and its past, present, and future roles in maintaining freedom of the seas.

Led by Bran Ferren, formerly of Disney Imagineering, the team from Applied Minds will incorporate the historic Battleship USS Iowa as the platform for a unique, immersive experience. The team will be responsible for designing exhibits and experiences that educate visitors of the Surface Navy's role in maintaining safe and open sea lanes to ensure that our nation remains strong economically.

"The activation of the Iowa as the nation's first and only national museum dedicated to the men and women of the Surface Navy poses challenges from the standpoints of both creativity and technology," said retired Navy Rear Adm. Mike Shatynski, chairman of the board of the National Museum of the Surface Navy. "Retaining Applied Minds gives us a highly experienced team of creative and innovative professionals that is uniquely qualified and credentialed to design the world-class experience that our visitors will demand, and that the former, current and future Sailors of the Surface Navy deserve."

"The vision for the nation's first museum dedicated to America's Surface Navy is both exciting and forward-thinking, and we're thrilled to have been selected as the team to bring those ideas, concepts, and dreams to life," said Steven Hubrechts, chief of staff at Applied Minds. "Bringing together the extensive and proven experience in creativity and technology design at Applied Minds with the museum's visionary team will undoubtedly result in the development of a worldclass museum that will become the standard for the next evolution in museums."

In addition to the phase one design project to be undertaken by Applied Minds, space preparation and infrastructure improvements for the museum are already underway aboard Battleship USS Iowa Museum thanks to the generous donations of seed donors. For additional information about the National Museum of the Surface Navy and to become a Plank Owner, visit the website at https://surfacenavymuseum.org.

Indo-Pacific Maritime Security Exchange Provides Exclamation Point to RIMPAC



Ships sail in formation during sail in formation during Rim of the Pacific 2022, July 28. U.S. NAVY / Mass Communication Specialist 3rd Class Ian Thomas

HONOLULU – As this year's biennal, multinational Rim of the Pacific naval exercise is drawing to a close, naval experts will gather in Honolulu to conduct the 2022 Indo-Pacific Maritime Security Exchange, or IMSE, essentially punctuating the end of RIMPAC with an exclamation point.

The conference is hosted by the Honolulu chapter of the Navy League and is being held at the Hawaii Convention Center Aug. 4-5.

According to retired Capt. Larry Osborn, a combination of three things makes IMSE unique – the location, the hybrid format and the enduring theme of building partnerships while focusing each year on a pertinent issue. The focus area for IMSE 2022 is "information sharing."

As for location, "Honolulu, located in the mid-Pacific, is the only place where a U.S. combatant command is co-located with all its components," said Osborn.

Produced as a hybrid event, Osborn said, "IMSE reaches across the Indo-Pacific and around the world with a live webinar broadcast while the in-person participants and attendees gather in a non-threatening, non-government venue to network informally and strengthen relationships."



IMSE has no official relationship with RIMPAC, but it's not a coincidence that IMSE happens right after the exercise. The event will explore this "largest of all" multi-national exercise to learn how the maritime services from 26 nations share information and operate together effectively as a cohesive force.

Since it's a RIMPAC year, there will be representatives of a number of Indo-Pacific militaries already here. "We schedule

IMSE to follow right after the RIMPAC closing to take advantage of the many foreign leaders present in Honolulu at that time," Osborn said.

IMSE 2022 will feature a number of senior leaders from the region, to include remarks from the Australian and Korean heads of navy. Adm. Sam Paparo, U.S. Pacific Fleet commander, will open the conference with a luncheon keynote. Discussion about the Quadrilateral Security Dialogue will include perspective from Indian, Japanese and U.S. senior leaders. Finally, a panel of ship commanding officers from the U.S., Malaysia, Australia, Korea, and the Philippines will share their RIMPAC experience.

Anyone can register at <u>imsehawaii.org</u> to attend IMSE 2022 virtually via a live webinar or in person. Registration will stay open until the conference opening. Navy League members attending in person receive a discount.

Langley Confirmed to Head Africa Command as Four-Star General



Lt. Gen. Michael Langley. U.S. MARINE CORPS WASHINGTON – Lt. Gen. Michael Langley has been confirmed by the U.S. Senate to be the first African-American four-star general in the U.S. Marine Corps, Senate Majority Leader Chuck Schumer announced Aug. 1.

Langley was nominated to the be commander of U.S. Africa Command in Stuttgart, Germany, on June 9. He will be promoted to general at a ceremony in Washington, D.C., on Saturday, Aug. 6, the Marine Corps announced Aug. 2. Langley is currently serving as commander, U.S. Marine Corps Forces Command; commanding general, Fleet Marine Force Atlantic; and commander, Marine Corps Forces North, Norfolk, Virginia. "He's been a Marine for more than 35 years. He's led an impressive career. And he's now the first Black four-star general in the history of the Marines," Schumer posted on Twitter.

"It is a great honor to be the president's nominee to lead U.S. Africom," Langley said at his July 21 nomination hearing before the Senate Armed Services Committee. "I am grateful for the trust and confidence extended by him, the secretary of defense, the chairman of the joint chiefs of staff and the commandant of the Marine Corps."

A native of Shreveport, Louisiana, Langley graduated from the University of Texas at Arlington and commissioned in 1985. He commanded at every level from platoon to regiment, including Battery K, 5th Battalion, 11th Marines in support of Operation Wildfire in the Western United States; battalion and regimental commands in 12th Marines forward deployed in Okinawa, Japan; and both the 201st Regional Corps Advisory Command-Central and Regional Support Command – Southwest in support of Operation Enduring Freedom in Afghanistan.

As a general officer, his command assignments include deputy commanding general, II Marine Expeditionary Force and commanding general, 2d Marine Expeditionary Brigade; commander, Marine Forces Europe and Africa; and deputy commanding general, Fleet Marine Force, Atlantic and deputy commander, Marine Forces Command and Marine Forces Northern Command.

Langley holds multiple advanced degrees including Masters in National Security Strategic Studies from the U.S. Naval War College and Strategic Studies from the U.S. Army War College.

USS Fort Lauderdale Commissioned in Namesake City



The future USS Fort Lauderdale (LPD 28) currently moored in Port Everglades, in its namesake city Fort Lauderdale, Florida, getting ready for its commissioning ceremony. U.S. NAVY / Sgt. Gavin Shelton, USMC

FORT LAUDERDALE, Fla. – The U.S. Navy commissioned its newest amphibious transport dock ship, USS Fort Lauderdale (LPD 28), on July 30 in its namesake Florida city, Commander, Naval Surface Forces Public Affairs said July 30. "To the Sailors and Marines who will serve aboard USS Fort Lauderdale, thank you and your families in advance for the service you will fulfill and sacrifices you may endure," said Secretary of the Navy Carlos Del Toro, who spoke at the event. "The moment you bring this amphibious transport dock to life, you will strengthen the integrated deterrence capability of our entire joint force."

Guest speakers for the event also included Kari Wilkinson, president of Ingalls Shipbuilding; Gen. Eric Smith, assistant commandant of the Marine Corps and Fort Lauderdale Mayor Dean Trantlis. The principal speaker was U.S. Rep. Debbie Wasserman Schultz (D-Florida).

"It is such an honor to be involved in the commissioning of the USS Ft. Lauderdale. It's another chapter to the momentous history, friendship, and respect that the city has with the U.S. Navy," Schultz said. "As chair of the Military Construction and Veterans Affairs Appropriations Subcommittee, my support for our military is unwavering. I will always stand by our service members and veterans, and honor those who continue to serve."

Ship sponsor Meredith A. Berger gave the first order to "man our ship and bring her to life."

"The Navy names ships for people, places, and ideas that are special. The Navy certainly picked a special place when naming the USS Fort Lauderdale," she said. "I am honored to be the sponsor for this incredible ship."

Built by the Huntington Ingalls Industries in Pascagoula, Mississippi, Fort Lauderdale was launched March 28, 2020, and christened Aug. 21, 2021. The ship was delivered to U.S. Navy Nov. 30, 2021.

"Finally, if there is one thing that history has shown us from

the days of antiquity it is that the stakes of the competition for control of the seas are high and for our part, USS Fort Lauderdale stands ready to deliver on any day, and at any time," said Capt. James Quaresimo, the ship's commanding officer. "And those that may wish to challenge us – they should pause. For we are equipped with America's unstoppable secret weapon that our enemies will never be able to duplicate and that is the fierce, dedicated and unstoppable, men and women of the United States Navy and Marine Corps."

The ceremony marks the official transition of the USS Fort Lauderdale into the fleet and caps a weeklong series of events celebrating the ship and its namesake city.

Amphibious transport dock ships are warships that embark, transport and land elements of a landing force for a variety of expeditionary warfare missions.

USS Fort Lauderdale will be homeported at Naval Station Norfolk, Virginia.

L3Harris, US Navy to Demo Maritime Autonomous Capabilities at RIMPAC



The large unmanned surface vessel Nomad arrives at Pearl Harbor to participate in Rim of the Pacific 2022. U.S. NAVY / Mass Communication Specialist 3rd Class Demitrius J. Williams MELBOURNE, Fla. – L3Harris Technologies, in collaboration with the U.S. Navy, will demonstrate how unmanned surface vehicle technologies can provide critical support for traditional maritime forces during the Rim of the Pacific Exercise 2022, the company said Aug. 1.

RIMPAC is being held June 29 through Aug. 4 off the coast of Pearl Harbor, Hawaii.

The Navy will operate its medium-displacement unmanned surface vehicle, Nomad, outfitted with numerous L3Harris autonomous technologies that enable it to perform strategic missions safely and accurately without the need for onboard support staff. The technology includes L3Harris control, electrooptical and communications systems.

Nomad supports different maritime missions, including information, surveillance and reconnaissance, and maritime domain awareness missions It can operate in an autonomous mode, including maintaining vessel awareness and complying with international collision avoidance guidelines and can be remotely piloted from an onshore or ship-based ground control station.

"RIMPAC provides a great opportunity to demonstrate how unmanned autonomous technology can support maritime forces," said Rosemary Chapdelaine, president of Maritime at L3Harris. "Lessons learned from this exercise will enable us to continue developing and integrating autonomous capabilities in collaboration with the Naval Sea Systems Command, Unmanned Maritime Systems."

Twenty-six nations, surface ships, submarines, national land forces, aircraft and nearly 25,000 personnel are expected to participate in this year's RIMPAC.

Royal Navy's New Ship Will be an Autonomy and Lethality Accelerator



The U.K. Royal Navy's experimental vessel XV Patrick Blackett. U.K. ROYAL NAVY PORTSMOUTH, UK – The Royal Navy welcomed the experimental vessel XV Patrick Blackett (X01) on July 29 in a ceremony at Portsmouth, United Kingdom.

The Royal Navy refers to the new ship, which has the hull number X01, as an "autonomy and lethality accelerator" and a "maritime sandbox," dedicated to exploring and demonstrating new, innovative technology at sea.

The ship, designed as an offshore support vessel, was acquired from the Dutch shipbuilder Damen and optimized for Royal Navy use. Its inherent modularity allows various systems and capabilities to be installed in the Royal Navy's PODS (Persistently Operationally Deployed Systems), or secured on deck, and plugged in to the ship's network to be evaluated.

The 135-foot ship will have a top speed of about 20 knots and have a crew of five. It is not expected to be operated autonomously without a crew.

The ship's namesake, physicist Patrick Blackett, served in the Royal Navy in WW I and later made groundbreaking contributions during WW II in the field of operational research. He won a Nobel Prize for his work in 1948.

The vessel will be operated as part of the Royal Navy's "NavyX" organization, which, according to its website, "rapidly develops, tests and trials cutting-edge equipment, with the aim of getting new technology off the drawing board and into the hands of our people on operations at a pace. Operating across all maritime environments – over water, on water, underwater and the littoral. By empowering a team with diverse experience, NavyX will exponentially accelerate our speed of learning and our capacity to procure and integrate these best-in-class technologies."

Navy Conducts Unmanned Logistics Prototype Trials Aboard T-EPF Apalachicola

WASHINGTON — The future expeditionary fast transport ship USNS Apalachicola (EPF 13) is performing a series of planned test events assessing autonomous capabilities integrated into the shipboard configuration, demonstrating that a large ship can become a self-driving platform, Team Ships Public Affairs said July 29.

Known as Unmanned Logistics Prototype trials, each test event increases the perception capabilities and complexity of behaviors demonstrated by the autonomous systems. Test evolutions to date include point-to-point autonomous navigation, vessel handling and transfer of vessel control between manned to unmanned modes.

"The autonomous capabilities being demonstrated by this prototype system represent a major technological advancement for the EPF platform, the Navy at large and our industry partners. EPF 13 will be the first fully operational U.S. naval ship to possess autonomous capability including the ability to operate autonomously in a commercial vessel traffic lane," said Tim Roberts, Strategic and Theater Sealift program manager, Program Executive Office (PEO) Ships. "This testing is a game changer and highlights that there is potential to expand unmanned concepts into existing fleet assets."

Collaboration for the test events include team members from PEO Ships, PEO Unmanned and Small Combatants, Naval Systems Engineering and Logistics Directorate – Surface Ship Design and System Engineering, Supervisor of Shipbuilding – Gulf Coast, Naval Surface Warfare Center support from Carderock, Combatant Craft Division, Dahlgren and Philadelphia and the Navy's shipbuilding and industry partners, Austal USA, L3Harris and General Dynamics.

Future test events will add levels of difficulty and include night navigation, and differing weather and sea states. These trials will set crucial groundwork for autonomous vessel operations, to include vessel encounter and avoidance maneuvering and compliance with International Regulations for Preventing Collisions at Sea.

EPFs are shallow draft, commercial-based, catamaran designed for rapid, intra-theater transport of personnel and equipment. The EPF's high speed, shallow draft, and ability to load/unload in austere ports enables maneuver force agility in achieving positional advantage over intermediate distances without reliance on shore-based infrastructure. EPF 13 is scheduled to be delivered to the Navy later this year.