Navy to Demo New Mine Countermeasure System on MQ-8 Fire Scout

The MQ-8 Fire Scout, with mass shapes attached, conducts low airspeed flying qualities testing in February at Webster Field, Maryland, to prepare for upcoming the Single System Multi-Mission Airborne Mine Detection demonstration. *U.S. NAVY*

PATUXENT RIVER, Md. – The Navy is working to develop a new mine countermeasure sensor suite for the MQ-8C Fire Scout that that will enable the unmanned helicopter to detect and localize mines and obstacles on land and at-sea, Naval Air Systems Command said March 2.

The Fire Scout program office, in conjunction with the Office of Naval Research and Program Executive Office Unmanned and Small Combatants, have partnered with the Naval Air Warfare Center Aircraft Division's AIRWorks, Aircraft Prototype Systems Division, Webster Outlying Field and Air Test and Evaluation Squadron Two Four (UX-24) to execute the final phase of the Single System Multi-Mission Airborne Mine

Detection Future Naval Capability Program, or SMAMD.

SMAMD will be the first mine countermeasure system flown onboard the MQ-8C Fire Scout as well as the airframe's heaviest payload carried to date. The SMAMD system, developed by BAE Systems, uses an airborne optical sensor suite that will have the ability to have real-time onboard processing coupled with low false alarm rates, enabling the warfighter to respond swiftly to detected threats. Current mine countermeasure technologies require post-mission analysis that lengthens the threat detection and mitigation timeline.

"This capability is extremely important as we see future fights occurring in the littoral waters where mine warfare is prevalent," said Capt. Thomas Lansley, Fire Scout program director. "A mine warfare capability will greatly reduce risk for LCS and other vessels in the littoral."

In February, UX-24 conducted flying qualities and performance testing with the MQ-8C using mass equivalency models in place of the prototype system pods, which mimic the size and weight of the SMAMD System. The testing is performed to collect data to allow for the evaluation of air vehicle performance and handling to assess safety of flight assessment and airworthiness.

This spring, the joint team will hold a land-based demonstration of the mine countermeasure prototype at the Naval Surface Warfare Center in Panama City, Florida. The demo will stretch from the beach zone, drifting mines and moored mines both in shallow water and deep water up to 10 kilometers offshore. The objective of the demonstration is to gather performance data for both the MQ-8C Fire Scout and SMAMD to inform future integration efforts.

The SMAMD will prove that a podded MCM system can operate as intended on the MQ-8C without causing adverse effects to the vehicle or significantly diminish its time on station.

“The program office will continue to gather information to inform future integration efforts of the COBRA Block II System onto the MQ-8C,” said Lansley.

The MQ-8C Fire Scout is currently deployed aboard USS Milwaukee (LCS-5) to support operations in the U.S. 4th Fleet area of responsibility.

Rep. Wittman Responds to CNO’s 500-Ship Fleet Aspirations

U.S. Rep. Rob Wittman (R-Virginia) has lunch with Sailors aboard the Wasp-class amphibious assault ship USS Kearsarge (LHD 3) on Aug. 10, 2021. *U.S. NAVY / Mass Communication*

Specialist 3rd Class Nick Boris
WASHINGTON, D.C. – Rep. Rob Wittman (R-Virginia), ranking member of the House Armed Services Committee's Seapower and Projection Forces subcommittee, released the following statement in response to Chief of Naval Operations Adm. Michael Gilday's recent assertion the Navy needs a 500-ship Navy to meet the Biden Administration's forthcoming National Defense Strategy:

"We are at a critical junction in our nation's history: We must decide if the United States will retain its global primacy or concede to the Chinese. Presently, China has the largest navy in the world and if we do nothing to change our fleet trajectory, China will fully modernize its military and outpace the United States militarily.

"I am supportive of Chief of Naval Operations Gilday's affirmation of the previous administration's force structure objectives, and I am incredibly supportive of a larger, more robust naval fleet that will position the United States to maintain presence necessary to dissuade conflict and if necessary, win in war. However, we have heard these calls for a larger fleet before without any substantive follow through. CNO Gilday's call for a 500-fleet navy is a welcomed aspiration, but it must be backed by President Biden's budget request to ensure our Navy and entire military has what it needs to maintain readiness, improve our systems, and outpace our competitors. In my estimation, real world dynamics require at least 5% real growth in our national security in fiscal year 2023.

"I continue to be concerned as to how CNO Gilday's plan aligns with the Biden Administration's forthcoming National Defense Strategy. Last year, this administration did not even provide Congress with a five-year investment vision. Without a credible 30-year shipbuilding plan, the industrial base has no real map to invest for the future. Additionally, the 'divest to invest' approach of this administration presumes a benign

China response in the short term. We need to be ready for conflict in five years, not in some fairy tale Battle Force 2045. The administration needs to be forthright with Congress in the fiscal year 2023 budget request and their intent to dissuade future conflict now."

General Atomics Delivers First of Two Bearing Support Structures for Columbia-Class Subs

SAN DIEGO – General Atomics Electromagnetic Systems announced March 2 it has delivered to the U.S. Navy the first of two Bearing Support Structures for installation in the first Columbia-class ballistic-missile submarine currently under construction.

GA-EMS has been under contract with Naval Surface Warfare Center, Carderock Division since 2019 to fabricate and deliver the support structures according to exacting Navy specifications and construction schedules.

"For a project involving the size and complexity of a BSS, we brought the technical strength of our manufacturing engineering, machining, welding and quality expertise together to successfully execute the deliverable on spec and on time," stated Scott Forney, president of GA-EMS. "We are extremely proud of our team as we continue to manufacture and deliver these critical structures to support the Navy's Columbia-class submarine program."

GA-EMS was awarded the second BSS delivery order in September 2021. Manufacturing activities have started at GA-EMS' facilities in Tupelo, Mississippi. GA-EMS will deliver the second BSS at the end of 2023 to support the full construction start date of the Navy's second Columbia-class submarine in fiscal 2024. The Navy intends to build 12 Columbia-class submarines over the next 20 years.

"The Navy has stated that the BSS is the largest nickel-copper weldment built to such exacting specifications ever created in the U.S.," said Forney. "The BSS is indeed one of the most significant projects we've undertaken and demonstrates our extensive technical expertise and unique manufacturing capabilities to meet the needs of the Navy for a variety of complex components."

MQ-9A RPV Passes 2 Million Flight Hours

The MQ-9A remotely piloted vehicle has surpassed 2 million flight hours in support of global customers. *GENERAL ATOMICS AERONAUTICAL SYSTEMS*

SAN DIEGO – The MQ-9A remotely piloted aircraft has surpassed 2 million flight hours in support of global customers, General Atomics Aeronautical Systems Inc. said March 2. The workhorse unmanned aircraft combines unmatched persistence and mission flexibility with a greater than 90% mission capable rate.

"We developed the MQ-9A to set the standard for persistent surveillance and rapid strike capability, and it's delivered on expectations," said GA-ASI Vice President of DoD Strategic Development J.R. Reid. "The effectiveness of a military aircraft can be measured in how often its used [total flight hours] and in its readiness to perform, and the MQ-9A exceeds in performance on both metrics."

Combined with the flight hours of other GA-ASI aircraft, including Predator A and Predator XP; Predator B Extended Range, Guardian, Gray Eagle and Gray Eagle ER; Predator C Avenger; and MQ-9B SkyGuardian and SeaGuardian, the total flight hours for the GA-ASI fleet exceed 7.2 million, supporting close to 500,000 missions.

GA-ASI aircraft average more than 48,000 hours per month supporting the U.S. Air Force, Army, Marine Corps, NASA, the Italian air force, the United Kingdom Royal Air Force, the French air force, the UAE armed forces, the Indian government, and new MQ-9As are being delivered to the Royal Netherlands Air Force now. Missions include helping protect ground units on the battlefield, supporting first responders in the wake of natural disasters and providing critical ISR around the world. With a host of additional reconnaissance, surveillance, and communications payloads in development and early fielding, GA-ASI UAS continue to demonstrate exceptional value across the full spectrum of current and future operations.

The MQ-9A Block 5 has endurance of over 27 hours, speeds of

240 KTAS and can operate up to 50,000 feet. It has a 3,850-pound (1,746-kilogram) payload capacity that includes 3,000 pounds (1,361 kilograms) of external stores. It provides a long-endurance, persistent surveillance capability with full-motion video and synthetic aperture radar/moving target indicator/maritime radar. An extremely reliable aircraft, MQ-9A Block 5 is equipped with a fault-tolerant flight control system and triple redundant avionics system architecture. It is engineered to meet and exceed manned aircraft reliability standards.

Navy's Second F-35C Fleet Squadron Declared Safe for Flight

A Navy F-35C Lightning II is drogue refueled by a KC-10A during a training mission near Eglin Air Force Base, Florida, in 2015. *U.S. AIR FORCE /Staff Sgt. Brian Kelly*

ARLINGTON, Va. — The Navy's second fleet squadron to operate the F-35C Lightning II strike fighter has been declared safe for flight in that aircraft.

Strike Fighter Squadron 97 (VFA-97) — the Warhawks — reached that status Feb. 18, a few days after VFA-147, the first fleet F-35C squadron, returned on board USS Carl Vinson (CVN 70) from the first F-35C deployment.

The first Marine Corps F-35C squadron, Marine Fighter Attack Squadron 314, currently is deployed to the Indo-Pacific region on board USS Abraham Lincoln (CVN 72).

VFA-97, which began transition to the F-35C in February 2021, had operated the F/A-18E Super Hornet strike fighter since 2013, when it had upgraded from the F/A-18C version.

The Warhawks were established on June 1, 1967, as an A-7 Corsair II squadron and were deployed the next year to the

Vietnam War.

Coast Guard Cutter Polar Star Reaches Southernmost Navigable Waters on Earth

U.S. Coast Guard Cutter Polar Star (WAGB 10) transits away from the ice shelf near the Bay of Whales, Antarctica, Feb. 17. Polar Star navigated to the Southernmost navigable seas and entered uncharted waters, reaching the edge of the ice shelf. *U.S. COAST GUARD / Petty Officer 3rd Class Diolanda Caballero*

MCMURDO STATION, Antarctica – The U.S. Coast Guard Cutter Polar Star (WAGB 10) reached the southernmost navigable waters on the planet Feb. 17 while underway in the Bay of Whales,

Antarctica, the Coast Guard Pacific Area said March 1.

Polar Star reached a position of 78 degrees, 44 minutes, 1.32 seconds south latitude at 12:55 p.m. New Zealand time, holding a distance of approximately 500 yards from the edge of the Ross Ice Shelf, further south than the current Guinness World Record holder.

While underway, Polar Star sailed in waters previously charted as part of the ice shelf that are now navigable waters. Today, portions of the Ross Ice Shelf deviate approximately 12 nautical miles from the positions depicted on official charts.

During Polar Star's transit to and from the Bay of Whales, Polar Star surveyed 396 nautical miles of the ice shelf for potential future navigational use.

Crewmembers aboard the cutter are working with the staff at Guinness World Records to officially become the new record holders.

On Feb. 7, 1997, U.S. Coast Guard Cutter Polar Sea (WAGB 11), Polar Star's sister ship, reached 78 degrees, 29 minutes south latitude.

In 1908, Ernest Shackleton gave the Bay of Whales its name during the Nimrod Expedition on the basis of the numerous whales he and his crew sighted. Three years later, Roald Amundsen established a base camp in the bay, from which he set out on his successful endeavor to become the first person to reach the South Pole. Years later, U.S. Navy Rear Adm. Richard E. Byrd established Little America in the Bay of Whales during his first, second, and third Antarctic Expeditions, exploring more than 60% of the Antarctic continent.

"The crew of Polar Star is proud to follow in the footsteps of legendary Antarctic explorers like Shackleton, Amundsen, and Byrd," said Capt. William Woityra, commanding officer of Polar

Star. “Even today, more than a century later, we carry on that legacy of exploration, reaching new places, and expanding human understanding of our planet.”

HII Completes Inaugural Maintenance, Modernization Period for USS Gerald R. Ford

The aircraft carrier USS Gerald R. Ford (CVN 78) departs HII’s Newport News Shipbuilding division on Friday, Feb. 25 after its planned incremental availability. *HII / Ashley Cowan*

NEWPORT NEWS, Va. – The first planned incremental availability for the aircraft carrier USS Gerald R. Ford (CVN 78) has been

completed, Huntington Ingalls Industries' Newport News Shipbuilding division announced March 1.

Gerald R. Ford is the first ship in a new class of aircraft carriers that incorporates 23 new technologies, designed to support the Navy's air wing of the future.

"It is truly an honor and a privilege for our shipbuilding team to ready this most technologically advanced aircraft carrier for the Navy fleet," said Lucas Hicks, vice president of the Gerald R. Ford and John F. Kennedy (CVN 79) aircraft carrier programs. "We look forward to folding what we learned into the entire Gerald R. Ford class, extending the Navy's power projection advantage around the globe."

Gerald R. Ford-class aircraft carriers incorporate new technologies such as electromagnetic catapults and weapons elevators, a redesigned flight deck and island, and more than twice the electrical capacity of Nimitz-class carriers. These aircraft carriers are designed to be the centerpiece of the Navy's deployed battle force and alongside allies and partners, they defend freedom, preserve economic prosperity and keep the seas open and free.

The planned incremental availability involved six months of modernization and maintenance work to ensure Gerald R. Ford has the most current upgrades prior to the carrier's first deployment. The ship entered the PIA in September 2021 after completing full ship shock trials and a successful post-delivery test and trials period.

Three other Gerald R. Ford-class aircraft carriers are currently under construction at Newport News Shipbuilding. They include John F. Kennedy, Enterprise (CVN 80) and Doris Miller (CVN 81). In addition, Newport News Shipbuilding is conducting mid-life refueling complex overhauls on two Nimitz-class aircraft carriers – USS George Washington (CVN 73) and USS John C. Stennis (CVN 74). These overhauls will extend the

service life for each platform by another 25 years, ensuring the Navy is positioned to deploy a fleet of aircraft carriers ready to support national security requirements.

CNO and Connecticut Congressman Visit Commands and Industry Partners

Chief of Naval Operations Adm. Mike Gilday departs from the Virginia Class submarine USS South Dakota (SSN 790) after a tour of the submarine. Gilday and Connecticut Rep. Joe Courtney visited the Naval Submarine Base New London waterfront and Naval Submarine School after touring nearby General Dynamics Electric Boat Shipyard submarine construction facilities. *U.S NAVY / Mass Communication Specialist 3rd Class Maxwell Higgins*

GROTON, Conn. – Chief of Naval Operations Adm. Mike Gilday and Connecticut Rep. Joe Courtney traveled to Rhode Island and Connecticut to visit with Sailors, tour Navy commands and meet

with industry partners on Feb. 28, the CNO's Public Affairs office said in a release.

Together, they visited General Dynamics Electric Boat shipyards at Quonset Point, Rhode Island, and Groton, Connecticut, where they received updates about Virginia-class and Columbia-class submarine construction.

"These submarines need to be delivered on time, on budget, and ready for the fight – we have no margin to fall behind," Gilday said. "Columbia-class is our number one acquisition priority, and Virginia-class submarines are our advantage at sea. Working together with our industry partners, we will get them into the fleet where they belong."

"Activity around the globe and calls for support from our allies has really put eastern Connecticut in the spotlight in terms of delivering on the most important needs of the U.S. Navy," said Courtney. "Our region's shipbuilders and manufacturing industries keep our Navy unrivaled on and beneath the waves. Today CNO Gilday saw the high-tempo production in southern New England that is meeting the Navy's demand signal. Our region's manufacturing and building trades workforce continues to illustrate that the Navy's targeted investments are paying off, and preparing us for tomorrow's challenges."

Columbia-class ballistic missile submarines (SSBN) are the nation's future Sea-Based Strategic Deterrent and will provide the most survivable leg of the Nation's strategic triad. As set forth in the 2018 Nuclear Posture Review, the program will consist of a minimum of 12 submarines to meet U.S. strategic deterrent force structure requirements.

Columbia SSBNs are replacing Ohio-class SSBNs and will be a vital part of the fleet, remaining in service until 2080. The Ohio-class SSBNs will begin to reach their end of service life in 2027.

During the visit, Gilday visited Quonset Point and Groton facilities and interacted with employees.

“The work being done here in partnership with General Dynamics Electric Boat is shaping the future of the Navy and will deliver cutting edge capabilities and strategic deterrence,” said Gilday.

During the visit he spoke with employees and told them, “You are like world-class Olympic athletes, with your unrelenting dedication and expertise to build the world’s best submarines. Thank you for your efforts to make sure tomorrow’s Sailors have what they need to deter aggression and win the fight.”

Gilday and Courtney also visited the Virginia-class fast-attack submarine USS South Dakota (SSN 790) at Naval Submarine Base New London, where they ate lunch with the crew, talked with Sailors and toured the submarine.

Next, Gilday and Courtney visited the Undersea Warfighting Development Center to hear a tactics brief and the Naval Submarine School Submarine attack center where they met with Sailors.

Atlantic Fleet Name a No-Go, for Now

Vice Adm. James Kilby, deputy commander, U.S. Fleet Forces Command, departs the Ticonderoga-class guided-missile cruiser USS Gettysburg (CG-64), following a visit to the ship, Feb. 10. Plans to redesignate Fleet Forces Command as the U.S. Atlantic Fleet appear to have been abandoned. *U.S. NAVY / Mass Communication Specialist 1st Class Jacob Milham*

ARLINGTON, Va. — Just over a year ago, the president approved the proposal to re-designate the U.S. Fleet Forces Command as the U.S. Atlantic Fleet. The proposal — for now, at least — is in the dustbin of history.

In January 2021, shortly before leaving office, the re-designation was approved by then-President Donald Trump. Now, more than a year later, the proposal has not been enacted.

"From my understanding, that proposal was not forwarded following the Global Posture Review," said Capt. Jereal Dorsey, special assistant for public affairs for the secretary of the Navy, in response to a query from *Seapower*.

The Defense Department's Global Posture Review was ordered by President Joe Biden on Feb. 4, 2021, and its recommendations

were approved by him in November 2021. The Navy said in the interim that the renaming proposal for U.S. Fleet Forces Command would depend on the results of that review.

The original commander, U.S. Atlantic Fleet staff, had a long pedigree that began in 1906, when the North Atlantic Squadron and South Atlantic Squadron were combined. The fleet existed in various forms until 2006, when the chief of naval operations renamed Commander, U.S. Atlantic Fleet, to Commander, U.S. Fleet Forces Command, which assumed the duties of the former fleet plus the mission of the former Commander, Fleet Forces Command, which was "to serve as the primary advocate for fleet personnel, training, requirements, maintenance and operations issues," according to the U.S. Fleet Forces Command website.

The re-designation plan originally was announced by then-Navy Secretary Kenneth J. Braithwaite, testifying Dec. 2, 2020, before the Readiness and Management Support subcommittee of the Senate Armed Services Committee, noting the changing world requires that the Navy must evolve to meet the threat.

Atlantic Theater Challenges

"Our existing structure operates on the premise that we still live in a post-9/11 state, where NATO's flanks are secure, the Russian Fleet is tied to the pier, and terrorism is our biggest problem," Braithwaite said. "That is not the world of today. As the world changes, we must be bold, evolved, and change with it. Instead of perpetuating a structure designed to support Joint Forces Command, we are aligning to today's threat.

"To meet the maritime challenges of the Atlantic Theater, we will rename Fleet Forces Command as the U.S. Atlantic Fleet and will refocus our naval forces in this important region on their original mission, to controlling the maritime approaches to the United States and those of our allies," he said. "The

Atlantic Fleet will confront the reassertive Russian navy, which has been deploying closer and closer to our East Coast with a tailored maritime presence, capability and lethality."

Speaking Jan. 11, 2021, in a webinar of the Surface Navy Association convention, CNO Adm. Michael Gilday discussed the pros of the redesignation.

"It underscores the importance of the Atlantic in a way that the title 'Fleet Forces' doesn't," Gilday said. "It actually is a testament to recent tangible decisions that we made to increase our power in that body of water, to include bringing 2nd Fleet back, standing up SubGru 2 [Submarine Group 2]. It will also include standing up [NATO's] Joint Force Command Norfolk, which is focused on the Atlantic."

Gilday said, "in a day and age when the homeland is no longer a sanctuary, and homeland defense is at the fore of every plan the combatant commanders have put together, the name 'Atlantic Fleet' always carries some gravitas with respect to defense of the nation."

He noted the complexity of the re-designation, saying the command "also has responsibilities as a component [command] for [U.S.] Northern Command and the Eastern Pacific that extend up to the Arctic as well as their role as component of the [U.S] Strategic Command. They really have a global responsibility with respect to the command and control of our SSBNs [ballistic-missile submarines]."

Adm. Christopher W. Grady, then-commander, U.S. Fleet Forces Command, seconded the complexity in a Jan. 13, 2021, webinar at the convention, noting the downside "might be that we would lose emphasis on what we do for the homeland. Indeed, I control forces in both the Pacific and down south [in U.S. Southern Command area of responsibility].

"So, we will balance all that, and in the end the name change

is an important branding opportunity, and we will move out on that," Grady said.

Grady is now vice chairman of the Joint Chiefs of Staff.

University of Maine Manufactures World's Largest 3D-Printed Boat for Military

The University of Maine's Advanced Structures and Composites Center in Orono has printed two of the largest 3D-printed vessels for the U.S. Marine Corps for testing. *UNIVERSITY OF MAINE AT ORONO*

ORONO, Maine – The world's largest polymer additive manufacturing machine printed the world's largest 3D printed

vessel at the University of Maine's Advanced Structures and Composites Center in Orono, Maine. In fact, it printed two of them.

The prototype vessels were built with Marines in mind. One of the two logistics support vessels can carry a pair of 20-foot shipping containers, while the other can transport a Marine rifle squad with three days of food, water and supplies.

This isn't the first time the UMaine Composites Center printed a vessel. In 2019, the Center printed 3Dirigo and earned two Guinness World Records – the world's largest 3D printed boat and the world's largest 3D printed object. The 25-foot, 5,000-pound boat was printed in 72 hours. "Dirigo" is the motto of the State of Maine and means "I lead" in Latin.

The two new vessels are multi-material composites with engineering polymer and fiber reinforcement. The composites center fabricated and assembled one of the vessels in a month instead of up to year, which is typical using traditional methods and materials.

The university hosted a ceremony attended by the state's two senators, Republican Susan Collins and Independent Angus King, along with representatives from the Defense Department on Friday, Feb. 25, to mark the production of the vessel. In a statement issued by the senators and university, the achievement was called "a significant milestone towards demonstrating advanced manufacturing techniques to rapidly constitute critical DoD assets closer to the point of need."

Due to national security concerns, no photos or video of the boats was allowed.

'The Future of Manufacturing'

"Marine Corps Systems Command's Advanced Manufacturing Operations Cell, in collaboration with the UMaine Composites Center, used advanced manufacturing techniques to successfully

develop the expendable polymeric composite ship-to-shore vessels," the statement says. "The longer of the two vessels, the largest ever 3D-printed, simulates ship-to-shore movement of 20-foot containers representing equipment and supplies. The second vessel can transport a Marine rifle-squad with organic equipment and three days of supplies. The prototypes can be connected, maximizing the transport capability of a single-tow vehicle."

"This is literally the future of manufacturing that's happening right here at the University," King said.

The Marine Corps established the Advanced Manufacturing Operations Cell in 2019 to support Marines with new advanced manufacturing and technologies and techniques, as well as to conduct testing, experimentation and analysis.

Multiple small logistics vessels will be needed by the Navy-Marine Corps team to support distributed maritime operations and expeditionary advanced base operations.

"This project demonstrates the art of the possible and the potential for AM [additive manufacturing] to fundamentally alter how we think about connectors and their role in mobility and distribution within a contested environment," said Lt. Gen. Edward Banta, Deputy Commandant – Installation & Logistics, U.S. Marine Corps.

"The University of Maine is at the forefront of cutting-edge research and high-impact technologies, including advanced manufacturing, AI and 3D printing important for industries in Maine and beyond," said University of Maine System Chancellor Dannel Malloy. "These prototype vessels are the latest innovations from the Composites Center that demonstrate the future of manufacturing."

"Two years ago, we demonstrated that it was possible to 3D print a 25-foot patrol vessel in three days. Since then, partnering with the DOD, we have been improving material

properties, speeding up the printing process and connecting our printer with high-performance computers that can monitor the print. With these tools in place, we have now printed a prototype vessel that will be tested by the U.S. Marine Corps.”

From the lab in Orono, the boats will travel next go to California for sea testing and evaluation.