CNO Defines Future Large Surface Combatant as 'DDG Next'

The Arleigh Burke-class guided-missile destroyer USS Arleigh Burke (DDG 51). The next generation has been dubbed "DDG-Next" by CNO Adm. Michael Gilday. U.S. Navy / Mass Communication Specialist 2nd Class Justin Yarborough

ARLINGTON, Va. — The Navy's top admiral envisions the next-generation large surface combatant as the next-generation guided-missile destroyer, or in his term, "DDG-Next."

The Future Large Surface Combatant is to be one of several new surface combatant vessels in the Future Surface Combatant Family Vessels that also will include the Constellation-class guided-missile frigate, the Large Unmanned Surface Vessel and the Medium Unmanned Surface Vessel.

"When you talk about large surface combatants, people in their mind's eye, they're thinking 'battleship,' said CNO Adm. Michael Gilday, speaking Oct. 13 in a Defense One webinar and responding to a question from USNI News. "That's not where we're going. We're talking about a ship that's probably going to be smaller than a Zumwalt [guided-missile destroyer]. I don't want to build a monstrosity.

"But, I need deeper magazines on a manned ship than we have right now [on the DDG 51 Arleigh Burke-class guided-missile destroyers]," Gilday said, noting that the Navy "is limited with respect to DDG[51] Flight IIIs in terms of what additional [systems] we could put on those ships. … [We] can't put much more on those hulls."

The CNO said the plan was to design "the next destroyer, one that would be a new hull. "What we would

leverage is existing technologies to put on that hull … and to update [and] modernize those capabilities over time."

Gilday compared the design concept of DDG-Next to the process that produced the DDG 51 class, one of a new hull with existing reliable, proven technologies such as the Aegis Combat System.

"That's why I call it DDG-Next … smaller than a Zumwalt but packing some power," he said.

CNO: Aviation-Capable Combatant Needed in Future Fleet

The aircraft carrier USS Nimitz (CVN 68) departs the Gulf of Bahrain after a maintenance and logistics visit in Bahrain. CNO Adm. Michael Gilday says Battle Force 2045 will include eight to 11 aircraft carriers for the high-end fight. U.S Army / William Gore)

ARLINGTON, Va. – The chief of naval operations (CNO) said that the future naval fleet will need some sort of aviation-capable ship in the 2045 time frame, but the form of that capability is not yet in focus.

Speaking Oct. 13 in a Defense One webinar, CNO Adm. Michael Gilday addressed in general terms the forthcoming 2045 Future Naval Force Study for Battle Force 2045 to be released soon by the Defense Department. Defense Secretary Mark Esper, speaking Oct. 6 at the Center for Strategic and Budgetary Analysis, said that Battle Force 2045 would include a force of eight to

11 aircraft carriers for the high-end fight – equipped with the carrier air wing of the future. The Navy will study the possibility of building up to six light carriers – equipped with short takeoff/vertical landing strike aircraft – to free up the super carriers for the high-end fight.

Gilday said "the hidden point that need to be drawn out is the comparison – or not – to light carriers. … Whether or not the aviation platform of the future looks like the [USS] Gerald R. Ford or the Nimitz class is questionable. It's largely going to be driven by payload."

The CNO said that considering 0 to 6 light carriers in the study "allows us to do much more deeper analysis about what type of functions in a distributed maritime fight across the spectrum of conflict might we want a smaller aviation combatant to do. One example might be IRS&T [intelligence, surveillance, reconnaissance and targeting]."

He said that the Navy had a gap in IRS&T capability and asked if that gap could be closed with something smaller than a supercarrier, not necessarily taking on the carrier's role of long-range strike, but supplementing the capabilities of a super carrier.

Gilday said that studies of large carriers versus smaller carriers in the past jostled with issues such as nuclear propulsion versus conventional propulsion, sortie rate, sustainability, "that leads to a fait accompli that the smaller carrier just doesn't compete with the supercarrier.

"I think that's just a set of false choices," he said. "The United States Navy needs to take a look at where we're going to go in the future, which there is a requirement – which I think is likely – to deliver effects down range from the sea through the air, I think that some type of aviation combatant is going to be required."

Navy Awards Contract Option for COBRA Mine-Detection Sensors

Flying with the AN/DVS-1 Coastal Battlefield Reconnaissance and Analysis (COBRA) airborne mine detection system, an MQ-8B Fire Scout conducts low-light condition developmental testing at Eglin Air Force Base, Fla. COBRA has achieved initial operational capability. U.S. Navy

ARLINGTON, Va. – The Navy has exercised a contract option for more production DVS-1 Coastal Battlefield Reconnaissance and Analysis (COBRA) systems.

The Naval Surface Warfare Center's Panama City Division has awarded Arete Associates an $18 million contract option for additional COBRA Block 1 systems, the Oct. 8 Defense Department contract announcement said. The quantity of systems to be ordered was not announced. Work on the option is expected to be completed by September 2021.

The COBRA is a mine- and obstacle-detection multispectral sensor that is a modular component of the mine warfare mission package for the Navy's littoral combat ships. It is designed to detect mines from the beach through the surf zone. In March 2009, COBRA Block I was rated mature enough to enter Low-Rate Initial Production. The COBRA was successfully tested on an MQ-8B Fire Scout unmanned aerial vehicle in October 2010. Initial Operational Capability was achieved in July 2017. Operational testing was completed in April 2018.

Two upgrades to the COBRA are planned. Block II will add night operation capability and full-detection capability in the surf

zone. Block III will add buried-mine line-detection capability and near-real-time on-board processing capability.

Q&A with Steven J. DiTullio, VP, Strategic Systems, Draper

Steven J. DiTullio

One of the legs of the United States' nuclear strategic deterrent is the submarine-launched ballistic missile (SLBM). Since 1960, ballistic-missile submarines (SSBNs) of the U.S. Navy have patrolled the seas, armed initially with Polaris, then Poseidon, Trident C4, and today Trident D5 and D5LE (Life Extension) SLBMs. Since the beginning of the SLBM program in the mid-1950s, the guidance systems of all Navy SLBMs have been built by The Charles Stark Draper Laboratory, now known as Draper.

DiTullio joined the company in 1984 following a five-year career in the Navy, where he conducted five deterrent patrols while serving as a nuclear-trained officer on the SSBN USS George Bancroft. Upon joining Draper, he supported the company's Strategic Systems program in positions of increasing responsibility before becoming vice president in 2012. In 2017, DiTullio was awarded the Fleet Ballistic Missile Lifetime Achievement Award in recognition of his accomplishments in support of the Navy's strategic missile program.

Getting an SLBM to hit its target perhaps 4,000 nautical miles away is no small feat. DiTullio discussed the guidance system of the Trident missile with Senior Editor Richard R. Burgess. Check out the digital edition of the October issue of Seapower

magazine here.

What is the scope of Draper's role in the design and production of the SLBM guidance systems?

DiTULLIO: Historically, Draper acted in what we call a design agent role. We did the design and development. The Navy themselves contracted for the production, and Draper assisted the government with the industrial support team that was building them. In the late-1990s or early 2000s, the Navy asked Draper to take on the more classic prime [contractor] role, basically to take over for the lifecycle support of the entire guidance program, not only the design and development, but the procurement and direct management of the subcontractors who build and support the systems.

Today, Draper operates like a classic prime [for the guidance system], no different than Lockheed Martin for the missile or General Dynamics for the fire control system or for some of the other subsystems. Now that Draper is the prime, we have the capability to be a little more dynamic in setting where we operate at any given time. We have been able to gain some synergies in terms of being able to take some development activities and use them as part of our sustainment. If we have a current fleet issue or an obsolescence issue, it is a little more seamless now to bring some technology development, maybe for a future system, and accelerate that to meet an emergent need. Not that we weren't able to do that before but, again, now that it's all under one omnibus contract, it makes that a lot more seamless. We work intimately with the Navy to make sure we always have that right balance.

What kind of guidance system is used on the Trident SLBM?

DiTULLIO: The current system, the Mark 6, is what we would call an all-inertial system. It basically runs autonomously, but we do have the ability to use an external aid: a star sighting.

It’s celestial navigation, not much different than the era of wooden ships and iron men. We have a star catalog that sits in [the submarine’s] fire control system. As we currently are mechanized with an all-inertial system and because of the types of gyroscopes that we traditionally had used, we are prohibited from moving the guidance systems inertial platform in flight because of the errors that that would induce.

The one big difference between the Air Force ICBM [intercontinental ballistic missile] and the Navy SLBM is the fact that the ICBM has a fixed base and the SLBM has a moving base – on a submarine platform that moves throughout the ocean. The submerged submarine has no ability to know exactly where it is at the time of launch. We do have a pretty good shipboard navigator to assist in that but even that isn’t precise enough. The way that we handle that uncertainty is by taking a star sighting during missile flight to then effectively correct for the initial position error.

In general, for the classic gyroscopes that we have used up until the most recent Mark 6 life extension, they were spinning mass gyros, so we apply small amounts of torque to the gyro to maintain the platform fixed in inertial space – we would need to apply a significant amount of torque if we were to use the gyro, because you actually wanted to move the platform. When you apply torque to an electromechanical gyroscope and move the platform, you impart currents. Currents hold a lot of heat and heat causes an error. To avoid that error source, we effectively do not allow the platform to move in flight. We basically just align the platform to a known position based on the star selected in the fire control system. In flight, the idea of a gyro is to keep the platform null to whatever we align it to. That minimizes the disturbances on the gyro.

To do a star sighting with that constraint, we basically are only able to take one star sighting. That would not be a very good fix if you only took one star sighting; you can’t really

triangulate where you are on the Earth. The way we get around that is that if you can pick a star that is directly over your target, you then are able to basically make some simplifying assumptions that allow you to get the same level of accuracy. The accuracy of the current system is directly related to having what we call an optimum star, the star that is directly over the target. Now, you can't always get that due to occlusion angles from either the sun or moon, or there just are no stars at the time that you want to launch, so that's an accuracy impact that the current system just has to absorb and we've designed for.

In this case, you're actually trying to pick a star based on some conditions that have to do with the target itself. It is not unlimited – then there are also some star characteristics: brightness, stability and others in order to, when we do sight the star, be able to gain the accuracies that we want, but those are second and third order effects.

An MK6 LE guidance system is installed into a pod, which then was installed and flown under the wing of a F-15 during a test of the system. Draper

Does the missile have a lens that enables the star sighting to be made?

DiTULLIO: Yes. The current guidance system is made up of two sections. One is the electronics assembly, an enclosure or a box that houses most of the power supplies, computers, input devices and output devices. The inertial measurement unit [IMU] that holds accelerometers and the gyroscopes has – in the case of the Mark 6 – the stellar sensor, which has a camera that looks out a window on the side of the IMU at an appropriate time when the missile has shed the first three stages. Prior to that, the window is covered by the missile skin.

You must have to make this system very robust to withstand the

stress of a launch from a submarine.

DiTULLIO: Yes. One of the things that separates these systems from others is the fact that it's on a 125,000-pound rocket – a lot of vibration and shock. The other is the fact that it needs to operate continuously through adversaries' weapons and operate in any environment it may encounter.

Does Draper get feedback from the Navy's Trident to track the performance of the guidance system?

DiTULLIO: Yes. Every flight that the Navy flies is instrumented such that we can reconstitute and analyze the entire flight trajectory from launch point all the way through impact. We instrument the submarine, the missile and the impact area. All that data can be parsed back together to allow you to effectively pull out what are called Level 3 errors, meaning you can get down to a specific instrument scale factor or bias error.

The Navy undertakes, at a minimum, at least four test flights per year, commissioned for U.S. Strategic Command. Four times per year, Strategic Command sends a message out to an alert submarine to come back into port. At that point, the crew is prohibited from doing any maintenance. The tactical re-entry bodies are removed from a missile and a test missile kit is inserted. The aeroshell itself is the same. Then the boat goes back out to sea and launches the missile. We know the trajectory and the splash point as well as telemetered data from the missile body, which really gives us the factual data. If there were anything broken, any maintenance that was needed that would have prohibited, then they're still prohibited. That's how the Navy certifies the reliability and accuracy to Strategic Command and the Office of the Secretary of Defense.

How is the target location loaded into the guidance system?

DiTULLIO: Through optical data disks – the aim points are loaded into the guidance system through the fire control

system. Included in that is also the star catalog information we talked about earlier. There are also files for ballistic parameters such as weather at the targets. And then, based on the launch commands, the system will choose from those target points that are loaded into the fire control system. They will routinely conduct “achievability” checks to make sure that whatever targets in their target package is achievable are based on the submarine’s location. It goes without saying there are some range limitations. You can’t hit every target from one position on the Earth.

As you think to future systems going forward, more and more we want to be able to push that capability out to the warfighter so that the submarines themselves can adapt to whatever changing targets might be based on the situation without necessarily having to have a data load from land.

Back in the day, when you had punch cards to load target data, you didn’t have nearly enough capability or memory to be able to do that. There just wasn’t enough computational capability in the shipboard systems and even in some of the flight systems, so there had to be simplifying assumptions that were made about things like gravity and some trajectory perturbations. Part of the improved accuracy of these systems over time has been the fact that, as we’ve been able to provide more throughput, memory and things like that, we’re able to reduce the number of simplifying assumptions needed to be able to accomplish the mission. Today, our system can operate in an accuracy domain like a regular tactical GPS system or even a commercial GPS system based on its ability to calculate the solution.

For these systems to be robust to the environments, you just aren’t able to operate at the state-of-the-art technology node. Today, if the fastest processor is, say, a gigabyte, we’re probably operating at a megabit. We tend to be one, two, even sometimes three generations behind whatever is current state-of-the-art. In the current system we just deployed – the

Mark 6 Mod 1 Life Extension – the largest data rate that we have is a million bits. Your iPad has devices that are significantly larger than that.

Is Draper working on a next-generation SLBM guidance system?

DiTULLIO: Yes. Under the current timeline, the Ohio-class SSBN hulls have been extended out to 2040 by increasing the reactor core life. That meant we needed to have a weapons system out there. The solution was to extend the current Trident D5 Mark 6 guidance system, which we did with the D5 Life Extension program. Now, the Columbia class submarine that will begin to deploy in the early 2030s will have a service life out to 2084. The current weapons system is not designed for that lifespan. The D5 Life Extension 2 program is meant to extend the service life of the Strategic Weapons System out to 2084.

An unarmed Trident II D5 missile launches from the Ohio-class ballistic missile submarine USS Nebraska (SSBN 739) off the coast of California. U.S. Navy photo by Mass Communication Specialist 1st Class Ronald Gutridge

Is Draper working on the Defense Department's hypersonics program?

DiTULLIO: Yes. We've been part of the national team from the start. Draper developed the guidance and navigation system for the Flight Experiments FE-1 and FE-2 that have flown.

The Army and Navy are under OSD [Office of the Secretary of Defense] guidance to come up with the common hypersonic vehicle. The difference is that the Army intends to launch it off the back of a truck and the Navy will look to launch it off either guided-missile submarines or guided-missile destroyers. The Strategic Systems Program office – the customer that manages the Navy's strategic missiles – is the development agent for the common hypersonic glide body. We are helping with the guidance and navigation. For the flight experiments, we worked with Sandia, the U.S. Army Combat

Capabilities Development Command Aviation & Missile Center and other government labs. The government then subsequently awarded a contract to Lockheed Martin with Raytheon to transition that design into production.

Navy Deploys IRST on Super Hornets in Persian Gulf

Sailors taxi an F/A-18E Super Hornet, from the "Mighty Shrikes" of Strike Fighter Squadron (VFA) 94, on the flight deck of the aircraft carrier USS Nimitz (CVN 68). U.S. Navy / Mass Communication Specialist 3rd Class Dalton Reidhead

ARLINGTON, Va. – The Navy apparently had deployed the Infrared Search and Track (IRST) sensor pod on F/A-18F Super Hornet strike fighters currently deployed in the Persian Gulf region.

An Aug. 16 photograph of an F/A-18F of Strike Fighter Squadron 94, assigned to Carrier Air Wing 17 on board the USS Nimitz, was posted on the Navy's website, clearly showing the IRST pod mounted on the centerline pylon of the aircraft.

The AN/ASG-34 IRST is a passive, long-wave infrared sensor mounted in the forward section of a centerline fuel tank that detects and tracks aerial targets at extended ranges. Its high angle accuracy allows it to passively track closely spaced targets at maximum ranges, enabling the Super Hornet to track without using its APG-79 radar. The aft section of the pod contains fuel for the aircraft.

The IRST system began flight testing on F/A-18E/F Super Hornets in February 2014 and was approved for Low-Rate Initial

Production (LRIP) in December 2014. However, Full-Rate Production was deferred in favor of development of an improved version, IRST Block II, which is under development by contractors Boeing and Lockheed Martin and planned for fleet service in late 2021.

HawkEye 360 Satellite System Tracked Chinese Activity near Galapagos

A schematic from Hawkeye 360 showing how the system works.
ARLINGTON, Va. – The recent concentration of Chinese fishing vessels in the vicinity of the Galapagos Islands in the Eastern Pacific Ocean, accused of fishing inside the Ecuadorean Economic Exclusion (EEZ) around the islands, was tracked by a commercial satellite system that intercepts RF signals and can detect when a vessel turns off its AIS (Automatic Identification System).

HawkEye 360, a commercial satellite company which specializes in RF geo-analytics, collected RF data from the Chinese fishing fleet near Galapagos and published the data, which the company said "reveals the Chinese vessels deactivated their Automatic Identification System (AIS) tracking system hundreds of times to 'go dark.' "

The discovery of the Chinese fishing fleet near Galapagos raised protests from Ecuador and other nations, despite the denial on Aug. 24 by Chinese Ambassador Chen Guoyou that the fishing fleet did not penetrate the EEZ. The Ecuadorean navy sent vessels to investigate the fleet, later joined by a U.S.

Coast Guard cutter.

The EEZ around Galapagos is larger than Spain and Portugal combined, and therefore “using traditional coast guard and airplane observation is near impossible making it easy for fishing vessels to ‘go dark’ and cross into the EEZ,” HawkEye360 said in a release.

According to Reuters, Ecuador’s government said that 149 of some 325 vessels still fishing near the ecologically sensitive islands had turned off tracking systems to prevent monitoring of their activities.”

HawkEye 360 “discovered multiple instances of dark vessels within the EEZ boundary that didn’t correlate with AIS records – raising suspicion of illegal fishing without notice,” the company said. “HawkEye 360 also conducted a joint RF and SAR [synthetic aperture radar] collection with partner Airbus Defence and Space Intelligence. By fusing multiple forms of intelligence, they found many dark vessels and a better understanding of fleet activity.”

“During a six-week period from mid-July to the end of August, HawkEye 360 compared its geolocations against AIS data to filter out vessels that were routinely reporting their locations,” the release said. “The remaining hundreds of geolocations indicated previously unknown vessel positions. Of greatest concern, HawkEye 360 discovered multiple instances of RF activity within the EEZ immediately adjacent to the heart of the Chinese fishing fleet. None of these locations correlated with AIS records for the entire day when they were detected. Although it could be other types of vessels engaged in legitimate activity, these signals may be evidence of dark Chinese vessels crossing into the EEZ to conduct illegal fishing.

“Airbus’s automatic vessel detection extracted 58 vessels locations from the SAR image and provided estimated size and

heading for each vessel," the release said. "Comparing these locations against +/- 60 minutes of AIS data matched only 16 vessels to AIS tracking, again reinforcing the many gaps in the AIS record."

The HawkEye360 satellite system also has been used to track Chinese forces along the Indian border and "dark" Iranian vessels at sea," said John Serafini, chief executive officer of HawkEye360, in an Oct. 8 interview with Seapower.

Hawk360 has one satellite system currently in orbit. The system includes three satellites that fly in a cluster and triangulate RF emissions of 1 watt and greater, including S-band and X-band radars, Serafini said.

The company plans to launch a second system in December and will launch another five systems – roughly one per quarter – in 2021 and 2022. The first system was carried aloft by a Space-X rocket and has been in orbit for 20 months.

The data – all unclassified – from the satellites is sold to governments and private companies and organizations. Serafini was not at liberty to discuss specific customers, but said that they included U.S. defense, intelligence and civilian organizations, international defense and intelligence organizations, and commercial entities.

Serafini, a former U.S. Army officer, said that HawkEye360 raised $130 million in private financing to launch and operate the company.

Coast Guard Begins Testing USVs off Hawaii

A concept photo of the unmanned surface vehicle that will be demonstrated by Spatial Integrated System in the maritime domain awareness technology evaluation by the Coast Guard Research and Development Center this summer. U.S. Coast Guard
ARLINGTON, Va. – The U.S. Coast Guard Research and Development Center (RDC) has begun testing and evaluation of unmanned surface vehicles (USVs) off the south shore of Oahu, Hawaii, the Coast Guard 14th District said in a release.

The testing is scheduled to run from Oct. 7 through Nov. 5. The testing will be conducted in partnership with local Coast Guard units.

"The tests will focus on autonomous vessel systems from Saildrone and Spatial Integration Systems, in addition to a USCG owned autonomous research vessel made by Metal Shark," the release said.

"This evaluation will examine each vessel's ability to provide persistent maritime domain awareness, especially in remote areas of the oceans. While potentially applicable to many Coast Guard missions, there is potential these technologies will help enable the Coast Guard to better protect critical natural living marine resources from Illegal, Unreported, and Unregulated [IUU] fishing and other illicit activities."

The Coast Guard awarded two contracts on Feb. 7, 2020, totaling nearly $1.8 million, for USVs. Approximately $1.1 million goes to Saildrone Inc. of Alameda, California, and approximately $660,000 to Spatial Integrated System Inc. of Virginia Beach, Virginia. The USVs will be contractor-owned/contractor-operated during the testing and evaluation.

The testing will be used to examine “the operational utility of the USV, including feasibility, costs and benefits,” the Coast Guard said. “Following the completion of the evaluation, the RDC will publish a report with recommendations for potential future actions for the Coast Guard.”

Last month, Boston-based Sea Machines Robotics, partnered with shipbuilder Metal Shark Boats, of Jeanerette, Louisiana, supplied the RDC with a new Sharktech 29 Defiant USV (see SeapowerMagazine.org, Sept. 29).

The Defiant is a “29-foot, welded-aluminum monohull pilothouse vessel that comes equipped with the Sea Machines SM300 autonomous-command and remote-helm control technology, offering the USCG capabilities including transit autonomy, collaborative autonomy, collision avoidance and remote vessel monitoring,” Sea Machines said in a release.

“During demonstrations scheduled for October off the coast of Hawaii, the RDC team will test and evaluate the Sharktech vessel’s autonomous capabilities for their potential in supporting USCG surveillance, interdiction, patrol and other missions. Following the Hawaii demonstrations, the autonomous vessel will be returned to the RDC’s New London facility, where it will be used in additional testing to investigate application to various Coast Guard missions.”

Esper’s Preview of Future Fleet Advocates More Attack

Submarines

Defense Secretary Dr. Mark T. Esper delivers remarks at RAND Santa Monica, Calif., Sept. 16, 2020. DoD / Lisa Ferdinando

WASHINGTON – Defense Secretary Mark Esper said the U.S. Navy needs a fleet of more than 500 manned and unmanned ships, including more attack submarines.

" We need to build more attack submarines," Esper said, speaking Oct. 6 at the Center for Strategic and Budgetary Analysis, a Washington think tank, announcing that the Defense Department is in the process of releasing the Future Naval Force Study for Battle Force 2045 and the 30-year shipbuilding plan.

Battle Force 2045 is a plan to build an affordable, lethal, aware fleet of more than 500 manned and unmanned ships, able to maintain maritime superiority over the growing naval power of near-peer competitors China and Russia.

He said the Navy is on a path to reach its previous goal of 355 ships by 2035 in an anticipated era of budget austerity.

Esper said Battle Force 2045 would feature:

- A larger, more capable force of 70 to 80 submarines, which would be increased up by building three attack submarines (SSNs) annually; pursuing the next-generation SSN; and refueling seven Los Angeles-class SSNs. The Columbia-class ballistic missile submarine program would proceed as planned.
- A force of 8 to 11 aircraft carriers for the high-end fight – equipped with the carrier air wing of the future. The Navy will study the possibility of building up to six light carriers – equipped with short takeoff/vertical landing strike aircraft – to free up the super carriers for the high-end fight.

- A force of 140 to 240 unmanned or optionally manned surface and subsurface vessels, for missions such as missile strikes and mining.
- A force of more and smaller future surface combatants, about 60 to 70, including the new guided-missile frigate, able to "deliver long-range precision fires in volume."
- A combat logistic force of 70 to 90 ships to sustain fleet.
- Sufficient sealift ships to transport ground forces to theaters of conflict.
- Ship-based unmanned aircraft of all types.
- An amphibious warfare force of 50 to 60 ships, including the types needed to support the Future Force vision of Marine Corps Commandant Gen. David H. Berger.

Esper said Battle Force 2045 would require additional shipbuilding funds, for which Congressional support would be needed, that would rival the Reagan build-up of the fleet in the 1980s. He also said he would request statutory authority to divert unexpended funds from the Navy at the end of each fiscal year to invest into shipbuilding. He also stressed the need to divest some legacy systems to free up funds for modernization.

He also said the Navy would need increased shipyard capacity – in the Navy's four shipyards and in the shipbuilding industry's yards – to build and maintain the 500+ ships of Battle Force 2045.

Navy to Establish First MQ-25

Stingray UAV Squadron in 2021

Boeing conducts MQ-25 deck handling demonstration at its facility in St. Louis, Mo. U.S. Navy / The Boeing Co.

ARLINGTON, Va. – The U.S. Navy has announced plans to activate the force structure to operate its future MQ-25A Stingray aerial refueling unmanned aerial vehicle late next year.

In an internal notice, the chief of naval operations directed the establishment of Unmanned Carrier-Launched Multi-Role Squadron 10 (VUQ-10) on Oct. 1, 2021.

The squadron, to be based at Naval Air Station Point Mugu, part of Naval Base Ventura, California, will assign detachments to carrier air wings to provide aerial refueling services to the wing's first aircraft.

VUQ-10 will operate under the administrative control of commander, Airborne Command & Control Logistics Wing, also based at Point Mugu.

The Navy plans to procure 72 Stingrays. A Boeing-owned prototype is being test-flown by the company, which is scheduled to deliver four Engineering and Manufacturing examples of the MQ-25A beginning in 2021.

The MQ-25A is scheduled to achieve Initial Operational Capability in 2024. The Navy also has said it plans to use the Stingray in the surveillance role, hence the multi-role term in the squadron's designation.

Reclamation of Ex-Japanese MH-53E Helicopter Parts Complete for U.S. Navy

The U.S. Navy used Japanese helicopter parts to sustain its MH-53E Sea Dragon helicopters. Parts also went to support the Marine Corps' CH-53E Super Stallions. U.S. ARMY

ARLINGTON, Va. – The reclamation of helicopter parts from some retired Japanese helicopters to sustain some U.S. Navy and Marine Corps helicopters is complete, a Navy spokeswoman said.

The parts are being used to sustain the U.S. Navy's MH-53E Sea Dragon mine-countermeasures helicopters and Marine Corps' CH-53E Super Stallion helicopters, which have long been out of production. The Japanese Maritime Self-Defense Force was the only other service that operated the MH-53E.

"The U.S. Navy procured four aircraft from the Japanese Maritime Self-Defense Force, two in 2016 and two in 2017, and utilized them to replenish supply for numerous critical components of the H-53E," said Megan Wasel, public affairs officer for the Program Executive Office Air Antisubmarine Warfare, Assault and Special Mission Programs. "Erickson Inc. performed contracted labor on the four aircraft for the government from 2017 to 2020, removing and refurbishing parts. Erickson Inc. did not procure the helicopters."

Erickson Inc. is an Oregon-based aviation operations and sustainment company, well-known especially for its heavy-lift helicopter operations in support of firefighting, oil and gas industry support, and timber lift.