# AEI: Navy Needs Rebuilding to Reach 355-Ship Fleet

ARLINGTON, Va. – The U.S. Navy faces serious challenges in reaching its goal of 355 ships and the capabilities they need, a Washington think tank said, recommending a series of steps that will help the service to increase its warfighting strength.

In a new study from the American Enterprise Institute (AEI) – Rough Seas: An AEI Study in Crisis Response for Tomorrow's Navy and an Improved Navy for the Future – scholars John W. Miller, Thomas Donnelly and Gary J. Schmitt considered four table-top scenarios to model the future fleet to come up with recommendations.

The authors identified four key challenges. The Navy:

■ "Lacks sufficient funding to meet the stated requirement of a 355-ship fleet;

■ Is not large enough to carry out its primary missions of peacetime engagement, crisis response, and combat operations;

■ Has a maintenance system that cannot respond effectively to unexpected contingencies;

■ Lacks the global presence and capabilities to deal decisively with the new great-power competitors, Russia and China."

The authors made several specific recommendations for the Navy to:

■ Expand forward presence in the North Atlantic, the Mediterranean, and the Pacific.

■ Fully fund Navy operations and maintenance accounts.

■ Adopt “best maintenance” plans and practices from the private sector.

■ Install vertical launch systems (VLSs). The Navy should install 16-cell VLS systems on at least six amphibious ships and six cargo ships by 2022.

■ Install integrated fire control and counter-air systems.

■ Install Harpoon anti-ship missiles. The Navy should equip all expeditionary fast transport ships with Harpoon anti-ship missiles.

■ Install heavyweight torpedoes. The Navy should equip all Ticonderoga-class cruisers with heavyweight torpedoes.

■ Keep all 22 Ticonderoga-class cruisers.

■ Accelerate production and fielding of the amphibious assault ship Bougainville.

■ Buy more F-35 joint strike fighters.

The study said “the proposed short-term investments can ameliorate future strategic vulnerabilities and increase future strategic opportunities. But these proposed investments are not a substitute for the larger, overdue and essential rebuilding that the Navy needs.

“In short, the 355-ship Navy will take decades and billions of dollars not only to build but also to maintain,” the study said. “Neither the Obama administration nor the Trump administration has proposed defense budgets commensurate with reaching or sustaining this significantly expanded fleet.”

The authors recommended that the Navy buy in bulk – as is done through block buys and multiyear procurements – because it has shown that it “improved shipyard performance and saved money. To expand significantly in size, it is imperative the Navy do so as smoothly as possible.”

The authors concluded that “while these improvements can help close a window of maritime vulnerability and assist in stabilizing critical regions, deterring increasingly aggressive adversaries and reassuring increasingly skittish allies, they are not a substitute for the larger, overdue and essential rebuilding that the Navy needs. Today’s Navy is too small, insufficiently lethal, not well enough maintained and, at its bases on the East and West Coasts of the United States, positioned too far away from crises and conflicts that might threaten American interests.”

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# Coast Guard Commandant: Jones Act Repeal Would Bring ‘Severe Repercussions’

WASHINGTON — The commandant of the Coast Guard said that the recent congressional focus on the Jones Act in the wake of the 2017 hurricane relief efforts for Puerto Rico threatens to invite repeal of the act, one that would have unintended negative consequences for national defense, maritime commerce and shipbuilding.

“There’s this fixation that we need to get after the Jones Act,” Adm. Paul F. Zukunft said in response to a question from the audience May 8 at the Center for Strategic and International Studies, a Washington think tank. “The consequences of the Jones Act [repeal] could have severe repercussions as well.”

The Jones Act — formally titled the Merchant Marine Act of 1920 — generally prohibits foreign-built, foreign-owned or foreign-flag vessels from conducting coastwise trade within

the United States and between the United States and its overseas territories. It also generally applies restrictions that effectively prohibit ships under the Jones Act from being overhauled at foreign shipyards. Ship crews must be composed of U.S. citizens or legal residents of the United States.

Zukunft listed three consequences he said would ensue if the Jones Act is repealed.

“All of our coastwise trade will probably be done by a third nation, namely China, [and] not just coastwise trade, but plying our inland river systems as well,” he said. “If we’re looking at, ‘hey, if we can lower the cost of doing business, we can have a third nation do it on our behalf.’

“The next thing that goes away is the [U.S. and state] maritime academies,” he said. “You don’t need them because we have foreign mariners. We don’t know who they are, but they’re foreign mariners plying our waters and our internal waters as well to conduct maritime commerce, which is a $4.6 trillion enterprise in the United States.
“Then the next thing that goes is our shipyards and the technology that goes with the shipyards,” he said, speaking of the smaller labor costs of foreign shipyards.

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# LPD to be Named for Navy Medal of Honor Recipient

ARLINGTON, Va. – The Navy’s 13th San Antonio-class amphibious dock ship (LPD) will be named for a naval officer who was awarded the Medal of Honor for gallantry during a kamikaze attack during the 1945 Okinawa campaign.

Speaking May 2 to reporters at the Pentagon, Navy Secretary Richard V. Spencer said the next LPD would be named for Capt. Richard M. McCool Jr., the former commanding officer of a landing craft support ship, large, Mark 3, that went to the aid of the crew of a sinking destroyer, USS William D. Porter, and then came under attack itself, but saved his ship despite being wounded and knocked temporarily unconscious.

Below is the text of the official citation for the Medal of Honor presented to then-Lt. McCool by President Harry S. Truman on Dec. 18, 1945:

“For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty as Commanding Officer of the U.S.S. LCS 122, during operations against enemy Japanese forces in the Ryukyu Chain, 10 and 11 June 1945. Sharply vigilant during hostile air raids against Allied ships on radar picket duty off Okinawa on 10 June, Lieutenant McCool aided materially in evacuating all survivors from a sinking destroyer which had sustained mortal damage under the devastating attacks. When his own craft was attacked simultaneously by two of the enemy’s suicide squadron early in the evening of 11 June, he instantly hurled the full power of his gun batteries against the plunging aircraft, shooting down the first and damaging the second before it crashed his station in the conning tower and engulfed the immediate area in a mass of flames. Although suffering from shrapnel wounds and painful burns, he rallied his concussion-shocked crew and initiated vigorous fire-fighting measures and then proceeded to the rescue of several trapped in a blazing compartment, subsequently carrying one man to safety despite the excruciating pain of additional severe burns. Unmindful of all personal danger, he continued his efforts without respite until aid arrived from other ships and he was evacuated. By his staunch leadership, capable direction and indomitable determination throughout the crisis, Lieutenant McCool saved the lives of many who otherwise might have perished and

contributed materially to the saving of his ship for further combat service. His valiant spirit of self-sacrifice in the face of extreme peril sustains and enhances the highest traditions of the United States Naval Service."

McCool, an Oklahoma native, served in the Korean and Vietnam wars as well, retiring with the rank of captain. He died in 2008.

Spencer broke the tradition of naming LPDs for cities and counties in the United States by naming the ship after a naval hero.

LPD 29 will be built by Huntington Ingalls' shipyard in Pascagoula, Mississippi, under a $1.4 billion contract awarded in February.

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# HASC Seapower Chairman's Mark Pushes Two-CVN Buy, Study of Nimitz Extension

WASHINGTON – The markup of the National Defense Authorization bill by the chairman of the Seapower and Projection Forces subcommittee of the House Armed Services Committee advocates a two-carrier buy to save Navy funds and a study of another life extension of the USS Nimitz to enable the fleet to maintain a force level of 12 aircraft carriers."

"The Secretary of the Navy may enter into one or more contracts, beginning with the fiscal year 2019 program year, for the procurement of one Ford-class aircraft carrier to be designated CVN–81," the markup said. "The aircraft carrier

authorized to be procured may be procured as an addition to the contract covering the Ford-class aircraft carrier designated CVN–80 that is authorized to be constructed under Section 121 of the John Warner National Defense Authorization Act for Fiscal Year 2007. … The Secretary of the Navy may use incremental funding to make payments under the contract."

Navy leaders have encouraged a two-carrier buy as a way to reduce the carrier construction cost while building up the fleet faster to the 12-CVN part of the 355- ship requirement.

"With the delivery of the USS John F. Kennedy (CVN 79) in 2023, the Navy will reach their 12 aircraft carrier goal but will quickly lose this overall capacity with the programmed retirement of USS Nimitz (CVN 68) in fiscal year 2023," the markup said. "The committee believes that there are several options to retain required aircraft carrier force structure to include accelerating construction of the Ford-class carriers. Additionally, the committee believes that service life extension options may be available for USS Nimitz. Therefore, the committee directs the Secretary of the Navy to provide a briefing to the House Committee on Armed Services by March 1, 2019, on options that exist to extend the service life of USS Nimitz, to include the extension of major components. Additionally, such a briefing should include cost estimates and major modernization components."

The bill as marked up also would:

■ Require the Secretary of the Navy to procure the data rights to the new guided-missile frigate and recompete the frigate not later than the contract award of the 10th frigate.

■ Authorize the Secretary of the Navy to enter into one or more multiyear contracts for 625 Standard Missile-6 missiles beginning in fiscal 2019.

■ Authorize the Secretary of the Navy to enter into one or more multiyear contracts for up to 52 C-130J aircraft

beginning in fiscal 2019.

■ Authorize the Secretary of the Navy to enter into one or more multiyear contracts for up to 24 E-2D Advanced Hawkeye aircraft beginning in fiscal 2019.

■ Authorize the Secretary of the Navy "to procure up to 10 foreign-constructed ships if the secretary certifies that the U.S. Navy has initiated an acquisition strategy for the construction of 10 new sealift vessels. Additionally, this section would limit 25 percent of the U.S. Navy Military Sealift Command's fiscal year 2019 expenditures until the Secretary of the Navy enters into a contract for the procurement of two used National Defense Reserve Fleet vessels and completes the capability development document for the common hull multimission platform."

■ Limit the Maritime Administration from "procuring used training vessels for use as school ship replacement vessels," noting that the Maritime Administration's "short-term strategy would not support the long-term maritime academies' interests. The committee continues to support the new construction of these training vessels in the United States."

■ Support development of the Advanced Low-Cost Munition Ordnance, a guided 57 mm projectile, to counter the growing threats posed by small boat swarms, unmanned aerial systems and other emerging threats.

■ Directs the Secretary of the Navy to provide to the HASC "an assessment of the current and foreseeable torpedo threats facing high-value units and the Navy's plan to adequately protect them, a description of the requirements for SSTD [surface ship torpedo defense], an assessment of the development program concerning each of the SSTD capability elements, the plan to consolidate responsibility of the SSTD program, and the plan to manage and sustain currently fielded SSTD systems."

# Winter: F-35 Test Flight This Week Will Wrap Up SDD Flight Tests

NATIONAL HARBOR, Md. – The joint program manager for the F-35 joint strike fighter said the last test flight of the aircraft's system design and development (SDD) program is imminent.

Speaking April 11 to an audience at the Sea-Air-Space Exposition, Vice Adm. Mat Winter said, "the last SDD test flight event will occur this week, maybe even today."

Winter said the SDD program has accrued 9,000 flight and 67,000 test points. So far, 82 percent of the specification verification has been completed, with 100 percent completion scheduled by the end of the year.

Winter also said the program has "started some of the pre-IOT&E [initial operational test and evaluation]," with formal operational test scheduled for the fall.

Full-rate production, scheduled for the fourth quarter of 2019, will formally mark the end of SDD.

So far, the program has delivered 280 F-35s of all types out of a planned total of 3,220 aircraft for all nations involved in the program. All aircraft rolling off the line now are equipped with the Block 3F software, which brings all combat capability developed in the SDD program. The first post-3F software will be delivered in June, Winter said.

The Navy eventually will procure 353 F-35Cs and the Marine

Corps will procure 273 F-35Bs and 67 F-35Cs.

The Marine Corps F-35B deployed with a detachment of Marine Fighter Attack Squadron (VMFA) 121 on board the USS Wasp last month, and the USS Essex will take on board a detachment from VMFA-211 this summer for deployment. VMFA-211's F-35Bs will mark the first deployment of the 3F software. The USS America and the USS Makin Island will be the next amphibious assault ships to operate the F-35B.

The Navy's first operational fleet squadron, Strike Fighter Squadron 147 (VFA-147) is in F-35C training and is scheduled to become safe for flight in October, the same month it will conduct its carrier qualifications. The squadron is scheduled to deploy on board USS Carl Vinson.

The USS Abraham Lincoln will be the second carrier to deploy with the F-35C. This ship also will host the F-35C's at-sea IOT&E in August with Carrier Air Wing Seven.

By the end of 2024, the F-35 is scheduled to be operational on eight amphibious assault ships and four aircraft carriers.

Winter said the prices for Lot 10 F-35s, being delivered in 2018, are: F-35A, $94.3 million; F-35B, $122.4 million; and F-35C, $121.2 million.

He said that for Lots 14/15, "all three will be under $100 million."

The current production rate for the F-35 is seven to nine per month. The goal for full-rate production is 12 to 15 per month.

# Navy’s New LCAC Hits the Water

NATIONAL HARBOR, Md. — The Navy’s newest ship-to-shore connector, the LCAC 100 (Landing Craft, Air Cushion 100), entered its first testing in the water April 10, a Textron official said, and is on path for delivery this summer.

In an April 11 interview with Seapower, Scott Allen, vice president of Marine Systems for Textron Marine and Land Systems in Slidell, Louisiana, said the underway test was an important milestone that brings the LCAC 100 class closer to service entry.

The lead craft in the new class, LCAC 100, will go through Builder’s Trials later in April and then will be prepared for the Navy’s acceptance trials, Allen said. The craft will be delivered to the Navy in the summer for further testing in at the Naval Surface Warfare Center in Panama City, Florida.

The LCAC 100 class is being procured by the Navy to supplement and eventually replace the older LCAC class that has been in service for decades. The LCAC 100 has many features that improve operation and maintenance, especially through use of composite materials.

The new LCAC is driven by two Rolls-Royce MT7 engines, a derivative of the AE1107 that powers the V-22 Osprey tiltrotor aircraft. The MT7 provides 5,300 shaft horsepower as compared with 3,945 for the engine on the older LCAC.

Compared with the older LCAC, the new one features two gear boxes versus four and two lip bands versus four. The engine drive shafts, propulsor shrouds, variable-pitch propellers and impeller housings are all made of composite material, which reduces corrosion and, accordingly, maintenance.

The LCAC 100 is designed to operate with a crew of three versus the four on the older craft. It is designed to carry a 74-ton load, including an M1A1 tank with a mine plow attached.

So far, Textron is under contract to build nine LCAC 100s, 100 through 108. The latter eight currently are under construction at Textron's facility in Slidell. LCAC 101 is scheduled to be delivered by the end of April. LCACs 101 through 108 will be the first to enter fleet service, with 101 through 106 used to establish initial operational capability.

Allen said Textron is preparing to respond by the end of April to the Navy's request for proposals for follow-on production.

Japan is the only other nation that operates LCACs and is a possibility for a foreign sale of the new LCAC.

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# Navy to Shock-Test GE's New Composite Engine Enclosure

NATIONAL HARBOR, Md. – The new composite engine enclosure designed by GE for the LM2500 engine used on several classes of Navy ships is going to be shock-tested in the near future, a company official said. The company touts the enclosure as advantageous for the future frigate as well.

The lightweight enclosure is designed to replace the steel enclosure for the LM2500, which is the engine used on Arleigh Burke-class destroyers, Ticonderoga-class cruisers, the amphibious assault ships USS Makin Island and USS America, and slated for follow-on ships. It is 50 percent lighter and reduces noise, improves cooling, and provides more safety access than the current steel enclosure.

In an April 11 interview with Seapower, George Aiszus, GE's military marketing director, said that in a comparison test the lightweight enclosure with the engine was 60 percent quieter at four decibels and 25 to 50 degrees cooler, improvement which would greatly improve working conditions for the crew.

Aiszus said the Engineering Change Proposal is in works with the Navy and Bath Iron Works to have the new enclosure installed on DDG 128.

He also said that the lightweight enclosure would be ideal for the Navy's future frigate, because weight would be an important factor in its design, which would need the speed provided by the LM2500.

The LM2500 and its derivatives is the only gas turbine engine on Navy ships that has been shock-tested.

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# Navy Renames LCS Program Executive Office to Reflect Broadened Portfolio

ARLINGTON, Va. – The Navy has renamed Program Executive Office Littoral Combat Ship (PEO LCS) as Program Executive Office, Unmanned and Small Combatants (PEO USC), in a move to encompass the PEO's broadening portfolio of responsibilities.

The name change was ordered in a March 13 memorandum by James F. Geurts, the assistant secretary of the Navy for Research, Development and Acquisition.

"Since the creation of PEO LCS in July of 2011, the

organization’s portfolio has grown beyond its original focus on the development, procurement and sustainment of LCS; its associated mission modules; and related systems,” Geurts said in the memo. “Today, PEO LCS oversees the acquisition of the littoral combat ship (LCS) and its associated mission modules, as well as mine warfare systems, unmanned maritime systems, the future Frigate (FFG(X)) and the Multimission Surface Combatant (MMSC), an LCS variant for international customers. This represents four distinct shipbuilding product lines in development or under construction, 10 unmanned maritime systems, and 15 ACA T or pre-A CAT programs. The name PEO LCS no longer adequately reflects the breadth of its portfolio nor the full importance of its work.

“The Littoral Combat Ship and its mission capabilities remains a critically important shipbuilding program,” he said. “With the introduction of FFG(X) and MMSC in the near future and our burgeoning fleet of unmanned surface and subsurface vehicles, this new name more accurately represents the work on platforms and systems that are key enablers for the future fleet through all phases of warfare. Their continued organization under a single PEO will allow improved program execution, alignment and agility today and into the future.”

The PEO USC includes the following program offices: Unmanned Maritime Systems (PMS 406), LCS Mission Modules (PMS 420), Mine Warfare Systems (PMS 495), Littoral Combat Ships (PMS 501), LCS Fleet Introduction and Sustainment (PMS 505), Frigate (PMS 515) and International LCS (PMS 525).