

In and Out on Time: Navy Tackles Maintenance Backlog With New Initiatives in Contracting and at Shipyards



Rear Adm. Stephen Evans (left), commander of Carrier Strike Group 2, and Rear Adm. Sara A. Joyner tour the dry dock of the aircraft carrier USS George H.W. Bush in Norfolk Naval Shipyard during the ship's incremental availability maintenance period. U.S. Navy/Mass Communication Specialist Seaman Stuart A. Posada

The U.S. Navy is taking some new initiatives to sustain the ships of its busy fleet, including additional oversight, new contracting strategies, shipyard workload stability and capital investment in shipyard infrastructure.

The initiatives are focused on getting ships and submarines through their maintenance periods on time and back to the fleet to meet the requirements of combatant commanders. As the fleet – run hard by decades of war or crisis – grows in numbers, the challenge becomes greater.

Check out the digital edition of November's *Seapower* magazine [here](#).

In an Aug. 23 release, James Geurts, assistant secretary of the Navy for research, development and acquisition, announced that the Department of the Navy was establishing a new deputy assistant secretary of the Navy for sustainment (DASN-S) to develop, monitor

and, implement policy and guidance throughout the Navy who “will enable us to better plan, program, budget and execute the Navy’s sustainment mission.”

“Sustainment is as critical as new construction to ensure the Navy is ready to deploy,” Geurts added. “This position will allow us to improve and align the complex drivers of maintenance and modernization completion – that in turn will increase our output to the fleet. We have to get better, and this will help.”

“We have grown the size of the naval shipyards from 33,850 [workers] to over 36,100 in the past three years. The goal was to get to 36,100 by the start of [fiscal 2020]; we actually got there a year early. That is good news, and that capacity is starting to yield some results to deliver the last eight of the last nine carriers [from maintenance] on time.”

Vice Adm. Thomas Moore, Naval Sea Systems Command

The new DASN-S will have funding oversight and will “manage Navy and Marine Corps sustainment and life-cycle management policies,” the release said. The new position was authorized by Congress in the 2018 National Defense Authorization Act.

The new deputy “will help facilitate and ensure we are putting the same level of aggressiveness into new tools, new ways of doing business, new ways to contract for that effort,

making sure that they've got the full horsepower of the secretariat as [Naval Sea Systems Command Vice] Adm. [Thomas] Moore's teams execute that effort," Geurts said in an Aug. 23 media roundtable at the Pentagon, which Moore also attended.

Moore said at the event that the Navy had been focusing on building the workforce at its shipyards – necessary because the backlog of ship maintenance occurred in part due to a shortage of skilled workers.



The Freedom-class littoral combat ship USS Detroit receives scheduled maintenance and upkeep during dry-dock maintenance at BAE Systems shipyard in Jacksonville, Florida, in March 29. U.S. Navy/Mass Communication Specialist 3rd Class Nathan T. Beard

"We have grown the size of the naval shipyards from 33,850 [workers] to over 36,100 in the past three years," he said. "The goal was to get to 36,100 by the start of [fiscal 2020]; we actually got there a year early. That is good news, and that capacity is starting to yield some results to deliver the last eight of the last nine carriers [from maintenance] on time."

Moore said the Navy also is focused on getting workers qualified more quickly by establishing learning centers.

"Right now, what we are seeing is that [for] the average worker – from the time we bring them in the door to the time they are a productive person – we have cut the time in about half. ... Even though

half my workforce has less than five years of experience, that trend is also starting to turn in the right direction.”

Moore also said the 20-year Shipyard Infrastructure Optimization Plan (SIOP), implemented in March 2018 for aircraft carriers and submarines in Navy-owned shipyards, has already “resulted in significant investments in capital expenditures, great support from the Navy and the budgets in ’18, ’19 and ’20 and great support from [Congress]. That is a key enabler.”

He pointed out that many shipyards are hundreds of years old and the SIOP is engaged in building them into 21st century naval facilities by modernizing dry docks, replacing outmoded equipment and improving workflow. In the 2021 budget proposal, the Navy plans to include an initiative like SIOP to come up with creative ways to make capital investments in private shipyards.



Links of the anchor chain of the aircraft carrier USS George H.W. Bush lay on a barge next to the carrier in Norfolk Naval Shipyard during the ship’s planned incremental availability maintenance period. U.S. Navy/Mass Communication Specialist Seaman Michael Joseph Flesch

“We will look at dry-dock capacity, capital expenditures, etc.,” Moore said. “It’s a little bit different to execute the plan because, unlike in the public sector where we own everything and we can budget for this, this [involves] individual private companies, and so, we’re

working with [Geurts] to come up with some creative ways as to how we could go execute this. For instance, we could do like we do with small business innovative research. The Navy would have a pool of money and, if industry came to us with a good idea in their yard, maybe we could self-fund some of it.”

Geurts said that the Navy is looking at other shipyards that could be certified for Navy work, even though they have no current Navy contracts.

The Navy is also executing a Perform to Plan initiative that identifies performance gaps and barriers to execution so they can be addressed to improve performance, according to the Aug. 23 release.

USS Boise Illustrates Submarine Upkeep Challenges

Moore spoke of submarine maintenance being the toughest challenge, noting that the extensive delay in returning the Los Angeles-class attack submarine USS Boise to service was “the poster child” of that challenge. The Boise completed its last deployment in 2015 and lost its dive certification in 2017. He said the Boise delay caused the Navy to recognize that the sea service did not have enough shipyard capacity for its submarines.

There are only two private shipyards capable of handling work on nuclear-powered submarines: Huntington

Ingalls Industries' Newport

News Shipbuilding in Virginia and General Dynamics Electric Boat in

Connecticut. These companies are occupied with construction of new submarines.



The Los Angeles-class attack submarine USS Boise arrives in June 2018 at Huntington Ingalls Industries' Newport News Shipbuilding division to begin its extended engineering overhaul. Huntington Ingalls Industries/Ashley Cowan

"We were kidding ourselves that we could get the work done," Moore said. "In many ways, Boise caused us to really take a

hard look at what we needed to do in the naval shipyards and, also, caused us

to recognize that we would like to have some surge capacity in the private

sector, working with both Newport News and [Electric Boat] to give them work

when it makes sense. We have had some challenges with them the first time for

them to do submarine maintenance work in a long time. It is different than

building submarines. And so, they have had some proficiency challenges, which

we are working our way through.

"We have to be careful that we're not stepping into the new construction lane with everything going on with Columbia [ballistic-missile submarine] and [Virginia-class attack submarine] Block V, etc.," he said.

"Newport News has expressed a very strong interest in developing a capacity to

do submarine sustainment over the long haul similar to what they do with carrier maintenance today."

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VICE ADM. THOMAS MOORE

Moore said the Boise “will actually start at Newport News probably in April 2020.”

He explained that delays can be described in terms of maintenance delay and idle time, the latter being the time a submarine is idle awaiting the beginning of maintenance. Some idle time results when the Navy squeezes more operational time out of a sub deployment, causing a boat to miss its slot in the maintenance schedule.

“What the data told us is that, if you consider the variables to be idle time and maintenance delays, 80% of that was due to the maintenance delays, and only about 20 percent of it was idle time,” Moore said. “What we have focused on first from a systems standpoint is to fix the maintenance delays and that is by growing the capacity of the shipyard. We’re starting to see those maintenance delays [were cut] in half between ’18 and ’19 [and] the amount of workload carryover between what we saw at its peak in ’16 to today has been reduced by 75%.”

The idle time is coming down as well because of the Navy’s initiatives – “down to about 1,800 total days of idle time, of which 1,200 is Boise,” Moore said. “When you take Boise off

the table, it's really relatively small and my expectation is that, by the end of fiscal '20, we will have no more idle time."

For the Surface Fleet, Enticing Private Yards to Build Capacity

In the private shipyards, where much surface ship maintenance takes place, the Navy is working to entice growth in capacity. Results so far are positive.

"The data is getting better," Moore said.

"Last year, we delivered 16% of our DDGs [guided-missile destroyers] on time.

"This year, it was up to about 40%, and we are forecasting that the next eight DDGs will be on time."

"Currently, 75% of the DDGs are on plan to their life-cycle health assessment and, by 2023, we will have gotten the other 25% back on plan," he added. "The [nuclear power community] have always been very meticulous about staying onto the class maintenance plan. We've been a little bit less rigorous on the surface side of the house probably over the last 10 to 15 years, and we've paid the price for that."



The starboard anchor aboard the aircraft carrier USS George H.W. Bush is lowered into a dry dock for maintenance. U.S. Navy/Mass Communication Specialist Seaman Steven Edgar Moore said that part of the success is attributed to a new contracting strategy: "bundling [shipyard] availabilities together so that they have an opportunity to project workload

out," enabling shipyards to see the stability of enough work to cut costs and maintain the workforce.

He said the Navy was not happy with the cost and schedule performance of cost-plus contracts with a single company for five years at a time. The service then switched to fixed-price contracts for one ship at a time, but this made the private shipyards reluctant to hire additional workers when they did not know if they would win the next contract. With the shipyard reluctant, hiring lagged behind the workload, resulting in delays in delivery back to the fleet. Bundling fixed-price contracts is the new plan.

Moore has been working with Geurts on bundling availabilities together so that if a shipyard wins, it is "going to win availabilities over a two-, three-, four-year period head-to-toe, then you've got a stable plan and you can then go make capital investments in your plan, and you can hire to have that workforce trained."

"My priority for the fleet is, ships come in on time, ships go out on time and they go out with all the work done."

James Geurts, assistant secretary of the Navy for research, development and acquisition

Another factor in delayed delivery is having maintenance plans that aren't executable. Moore said that working with the fleets to provide an executable, level-loaded plan for the shipyards, staying away from overloading them, is yielding progress in tackling

the workload.

Moore

said that NAVSEA's "partnership with the fleets has been as good as it has ever been in the 25 years [that] I've been a maintenance provider."

The Navy also is reducing quality assurance checkpoints by 50%, which will cut shipyards' costs. Moore cited the example of a DDG hull being painted at a Vigor shipyard adjacent to a commercial ferry also getting fresh paint. Vigor's president pointed out to Moore that painting the DDG cost four times more and took twice as long as the ferry work – and the difference was the Navy's onerous checkpoints. The ferry's painter also provided a warranty. Moore said the Navy will conduct a pilot project this year with two ships under a contract with a warranty.

"In return, we'll reduce the checkpoints, and let's see if we can get the cost and the schedule down," Moore said. "There are a number of things out there like that that, over years, we have just added bureaucracy into the system that really doesn't add any value to get the work done."

Geurts, referring to the Navy's 30-year maintenance and modernization plan that supplements the 30-year shipbuilding plan, said: "We've got to get those balanced up right so that we cannot only deliver the capabilities needed but sustain them to provide the operational

commanders the capabilities they need.

"My priority for the fleet is, ships come in on time, ships go out on time and they go out with all the work done," he said.

"The fleet uses the term 'on time in full.' So, my priority is getting credibility in the system so that a fleet commander is confident when they turn a ship over to us to go do the maintenance work that it comes out on time and in full.

"Part of the rigging for speed is not just delivering in peacetime, it's really getting prepared for wartime," he said.

"Ready to me means ready tonight to fight and then ready for the fights that are coming in the future. It's not just about meeting a schedule or a budget target. If we can't do the peacetime stuff well with credibility, we're really going to struggle in wartime mode."

Geurts said that sustaining the lethality of the fleet is a matter of maximizing availability, capacity and capacity, and "the trick is getting those synchronized and mutually supporting, not competing. To some degree, if you spend too much time worrying about new construction but you don't worry about maintenance, then you're not maximizing that investment. If all you are doing is worrying about maintenance and not tracking the costs and trying to drive that cost down, you won't have money to modernize and build new things."