NAVSEA Commander: Bullish on Ford Aircraft Carrier; Columbia Submarine “On Track”

WASHINGTON – Despite the continuing problems with some of the advanced technology systems and the extensive overruns in cost and schedule with the next-generation aircraft carrier, “15, 20 years from now, we’re going to be very happy we have that Ford class carrier around. It’s an amazing platform that can do incredible things,” the Navy’s top shipbuilding official said Feb. 19.

“I’m very bullish on [Gerald R.] Ford. We will work our way through the technology challenges we have with that ship” and will have overcome those challenges for the next ships in the class, VADM. Thomas J. Moore, commander Naval Sea Systems Command (NAVSEA) said.

Moore also said the first Columbia-class ballistic-missile submarine is “on track” to meet the critical 2031 operational date to replace the aged Ohio-class boats in the strategic nuclear deterrence mission, but he is concerned about the potential impact the high cost of the 12 Columbias could have on other shipbuilding programs.

And Moore said increasing the capacity and performance of the private ship repair yards in order to keep existing ships in service longer, which could be key to reaching the goal of a 355-ship fleet, “is the number on challenge that I have in NAVSEA right now.”

Moore spent a large part of a breakfast session with the Defense Writers Group answering questions about the Gerald R. Ford, the first of a dramatically redesigned class of nuclear-powered carriers, which has become an example of the problems of attempting too much innovation in a single step.

“This is a completely new ship in almost every aspect beside the design, the shape of the hull. A lot of learning is going on there,” Moore said.

The admiral said the criticism that the Navy attempted too many technology leaps with Ford, designated CVN 78, was “probably a fair assessment. The original plan was not to put all the technology on the first ship, but to build it in stages… We probably bit off an awful lot on Ford, and we see the net result of that.”

Some of the biggest problems that are still being resolved were with the Electro-magnetic Launching System (EMALS) that replaced the traditional steam catapults, the Advanced Arresting Gear (AAG) in place of the hydraulically restrained system, and the Advanced Weapons Elevators.

Although the Pentagon’s operational test director faulted the performance of the first two systems in a recent report, Moore said: “We did more (aircraft) launches and recoveries than we had planned – almost double – during the shakedown

period. And the components of those systems got better as we learned how to operate them… So I’m not at all concerned that EMALS and AAG will ring out the technical issues and the reliability will go up.”

The Navy certified the first of the 11-planned weapons elevators in December, 18 months after accepting the Ford from Newport News Shipbuilding. Moore said the second one would be accepted “shortly,” and the goal was to have them all installed and tested before Ford finishes an extended yard period this summer.

The main problem was with software for the sophisticated electronic control systems, he said. NAVSEA has recognized that it made a mistake in not creating a land-based test facility to work out problems with the elevators, as it did with EMALS and AAG, and now is building that test site.

The Navy's top procurement priority is the Columbia SSBN to replace the Ohio class subs that provide 60 percent of the nation's strategic deterrence capabilities and are considered the most survivable element. Despite a problem with faulty welding on the missile tubes, Moore said, "we're still on track to deliver the ship on time to start its first patrol" in 2031.

He said Electric Boat is "well on its way" to building the first hull and the powerful electric motor that will drive the sub is being tested at a facility in Philadelphia.

Key members of the congressional seapower panels have expressed concern that the estimated $7 billion cost of the Columbia boats will eat up a large share of the annual shipbuilding account when they go into serial production, starting in 2026.

To avoid that, they created the National Sea-based Deterrence Fund to pay for Columbia. But the Pentagon has not been putting money into the separate fund.

Moore said NAVSEA is a supporter of the Deterrence Fund and noted that when serial production of the Columbia's start, the Navy also will be building the Flight III DDGs and the new frigates, starting the future surface combatants and committed to a two-ship buy for the aircraft carriers. "It's an aggressive shipbuilding program and clearly the cost of the Columbia on top of that is a challenge."

Moore explained that the Navy has determined that it cannot reach its 355-ship goal just by new construction and is working on keeping its existing warships in service for at least 45 years, rather than the normal 30 years. But key to that is regular and on-time maintenance, which is handicapped by the lack of capacity in the private repair yards. Designing policies that will give the private yards the predictability needed to maintain an adequate workforce and improve their

facilities is a priority, he said.

Port-Related Funding Programs Fare Well in Fiscal ’19 Minibus Agreement

ALEXANDRIA, Va. – Funding for U.S. port-related programs advocated by the American Association of Port Authorities (AAPA) fared well in the Consolidated Appropriations Act, 2019 agreement announced by Congress Feb. 13, the AAPA said in a Feb. 14 release.

Of particular significance to America’s deep-draft ports, the agreement includes Transportation, Housing and Urban Development and related agencies (THUD) funding for a dedicated port infrastructure program in the U.S. Department of Transportation’s (USDOT) Maritime Administration (MARAD); a significant allocation for USDOT’s Better Utilizing Investments to Leverage Development (BUILD) program in which ports are eligible; level funding in the U.S. Department of Homeland Security’s Port Security Grant Program in addition to a hefty increase in Customs and Border Protection personnel; a $12 million increase in funding for the Environmental Protection Agency’s Diesel Emission Reduction Act grants program; and an increase in the National Oceanic and Atmospheric Administration’s (NOAA’s) Navigation, Observations and Positioning program.

“AAPA is particularly thankful that House and Senate appropriators agreed to provide $292.73 million in funds for U.S. coastal port grants to be distributed by the Maritime Administration as part of its Port Infrastructure Development

Program," said Kurt Nagle, AAPA president and CEO. "AAPA has long advocated for dedicated port infrastructure development funding and recently identified $66 billion in port-related infrastructure needs over the next decade to build projects that better connect ports to the freight network, with rail and road access points. This funding is needed to ensure U.S. job creation, economic growth and tax fairness. The MARAD infrastructure program is a good step forward toward meeting these needs."

Nagle noted that the MARAD program's goal is to enhance U.S. port competitiveness and the ability of ports to effectively handle the movement of goods in our nation's supply chain, which are used by U.S. manufacturers, farmers and consumers.

"We thank Rep. Mario Diaz Balart, R-Fla., for his leadership in negotiating this new funding. His support began as chairman of the House Appropriations subcommittee on THUD, where he's now ranking member."

The minibus funding agreement also includes $900 million for USDOT's Better Utilizing Investments to Leverage Development (BUILD) grants, which when combined with funding for MARAD's infrastructure program, brings USDOT's multimodal grants funding level to almost $1.2 billion. While less than the $1.5 billion provided for BUILD grants in fiscal 2018, the key difference is the dedicated infrastructure funding for ports. The minibus agreement also provides increased funding for MARAD's America's Marine Highway Program – from $5 million last fiscal year to $7 million this year.

Another component of the THUD appropriation important to ports is $255 million in grant funding for the Consolidated Rail Infrastructure and Safety Improvements Program, which can be used for multimodal port access projects.

Beyond THUD, there were several other programs on which ports depend that will get increased funding.

The Environmental Protection Agency's Diesel Emissions Reduction Act grants program appropriation will rise 16 percent, from $75 million last year to $87 million this year. Ports use these grants to reduce ambient air emissions through a variety of initiatives, including clean truck programs, retrofitting or replacing yard equipment, installing shore power for vessels at docks, and retrofitting dredges and tugs.

While funding for the U.S. Department of Homeland Security's Port Security Grant Program will remain level at $100 million, Customs and Border Protection (CBP) agency staffing, which increased by 325 officers last year, will increase by 600 officers this year. AAPA, which advocates increasing CBP officers by at least 500 annually, has voiced strong concerns in recent years over CPB understaffing at America's seaports.

Within the Department of Commerce, NOAA's Navigation, Observations and Positioning program is set to receive $227 million, a $7.8 million increase above fiscal 2018 funding. Included is $2 million that will go to funding hydrographic surveys to update nautical charts. NOAA's popular PORTS program is a component of NOP, and fiscal 2019 funding is the same as last year.

Coast Guard Cutter Dauntless Returns Home after Caribbean Patrol

NEW ORLEANS — The Coast Guard Cutter Dauntless returned home to Pensacola, Florida, after completing a 59-day patrol in the Caribbean Sea, the Coast Guard 8th District said in a Feb. 14 release.

During the patrol, Dauntless conducted joint operations with Department of Homeland Security air and surface assets to intercept over 80 migrants heading for U.S. soil, conducted four medical evacuations at sea saving nine lives, and assisted in a drug interdiction seizure.

The crew of the Dauntless supported Operation Unified Resolve, a combined effort between Joint Interagency Task Force South, Coast Guard and international partners in the Caribbean region. The emphasis of the operation focused on interdicting vessels smuggling drugs and illegal migrants to the United States, which resulted in the seizure of 640 kilograms of cocaine and detention of two smugglers as part of a joint mission effort with U.S. Customs Border Protection.

Navy Awards Orca XLUUV Contract to Boeing

ARLINGTON, Va. – The Navy has selected Boeing to build the Orca extra-large unmanned underwater vehicle (XLUUV).

With a $43 million contract modification, the Naval Sea Systems Command ordered four Orcas and associated support elements, a Feb. 13 Defense Department contract announcement said.

The Orca – named for the similar-size marine mammal – is the largest unmanned underwater vehicle currently planned for the Navy's operational use. It will not be submarine-launched but autonomously launched from the shore and independently deployed.

The open-architecture, reconfigurable Orca XLUUV "will be

modular in construction with the core vehicle providing guidance and control, navigation, autonomy, situational awareness, core communications, power distribution, energy and power, propulsion and maneuvering, and mission sensors," the announcement said. "The Orca XLUUV will have well-defined interfaces for the potential of implementing cost-effective upgrades in future increments to leverage advances in technology and respond to threat changes."

The XLUUV will be equipped with a modular payload bay with interfaces for future payloads.

The Boeing design is based on the 51-foot-long Echo Voyager, a large autonomous UUV developed by the company as a capabilities demonstrator.

The Orca program is managed by the Program Executive Office – Unmanned and Small Combatants.

Mercury Systems Receives $3.5M Order for Rugged Servers for Naval Application

ANDOVER, Mass. – Mercury Systems Inc. has received a $3.5 million order from a leading defense prime contractor for rugged servers to be used in a naval subsurface application, the company announced in a Feb. 12 release. The order was booked in the Company's fiscal 2019 third quarter.

Mercury's EnterpriseSeries servers are currently deployed on over forty naval programs. Designed from the ground up for mission critical applications where interoperability,

longevity, availability and performance are crucial, Mercury's servers feature commercial leading-edge technologies while providing superior resilience to shock, vibration and temperature extremes.

"We are proud to provide our customers with a wide variety of servers designed for suitability in a variety of military domains, in this case, the demanding environment of our Navy's subsurface fleet," said Scott Orton, vice president and general manager of Mercury's Trusted Mission Solutions group. "With a broad range of surface, subsurface, ground and airborne deployments, Mercury continues to develop and support server solutions that can be optimally configured to meet our customer's performance, reliability, environmental and security needs."

Department of the Navy Announces New Education Initiatives

WASHINGTON – The Department of the Navy (DoN) released its Education for Seapower report Feb. 12, along with the Secretary of the Navy's action memorandum, providing the way forward for the new education initiatives for the department, according to a release of the same date from the undersecretary of the Navy's public affairs officer.

The Education for Seapower study was a clean-sheet review of naval learning and focused on flagship institutions like the U.S. Naval Academy, Naval Postgraduate School, and Naval and Marine War Colleges, along with a fresh look at the relationships with civilian academic institutions and

corporate learning structures.

Members of the Education for Seapower Executive Board included luminaries such as Adm. Mike Mullen, USN(Ret.), Gen John Allen, USMC(Ret.), Amb. Barbara Barrett, Vice Adm. Ann Rondeau, USN(Ret.), and Dr. Harlan Ullman.

“I am convinced, now more than ever before that the intellectual development of our naval leaders is the most critical warfighting capability for our national security,” said the Navy Secretary Richard V. Spencer. “That is why the Department of the Navy intends to create a Naval University System that further integrates and aligns naval education to the need of the enterprise.”

Highlights from the memorandum include a new secretary of the Navy staff assistant, Chief Learning Officer for naval education, intent to establish a Naval Community College with universal transcripts so enlisted Sailors and Marines can soon earn accredited associate’s degrees in technology-rich fields, and a new Naval University System that retains the strengths of current educational institutions, while aligning strategic intent in order to provide increased agility. While the Department of the Navy is enacting these changes, many initiatives within them will, over the next year, be evaluated for their efficacy before being fully implemented.

“Any success we may enjoy in the future will be enabled by an ever-more-agile force – led by agile people who thirst for knowledge and who are adept at thinking, learning, and processing information quickly,” said Undersecretary of the Navy, Thomas B. Modly. “The development of such a force does not happen by accident. It must be constantly cultivated through a renewed emphasis on education, and the deliberate construction of a learning culture across the entire naval service.”

Navy to Commission Littoral Combat Ship Tulsa

ARLINGTON, Va. – The Navy will commission its newest Independence-variant littoral combat ship, the future USS Tulsa (LCS 16), during a 10 a.m. PST ceremony Saturday, Feb. 16, at Pier 30/32 in San Francisco, the Defense Department announced in a Feb. 13 release.

U.S. Sen. James Lankford of Oklahoma will deliver the commissioning ceremony's principal address. Kathy Taylor, former mayor of Tulsa, Oklahoma, is the ship's sponsor. The ceremony will be highlighted by a time-honored Navy tradition when Taylor gives the first order to "man our ship and bring her to life!"

"This ship is named in honor of Tulsa, Oklahoma, but represents more than one city," said Navy Secretary Richard V. Spencer. "USS Tulsa represents an investment in readiness and lethality and is a testament to the increased capabilities made possible by a true partnership between the Department of the Navy and our industrial base."

The future USS Tulsa is the second naval vessel to honor Oklahoma's third largest city. The first USS Tulsa was an Asheville-class gunboat designated as PG 22 that served from 1923 to 1944 before being renamed Tacloban. She earned two battle stars for World War II service. A cruiser to be named USS Tulsa was also authorized for construction during World War II, but the contract was canceled before it was built.

LCS is a highly maneuverable, lethal and adaptable ship designed to support focused mine countermeasures, anti-submarine warfare and surface warfare missions. The ship

integrates new technology and capability to affordably support current and future mission capability from deep water to the littorals.

The LCS class consists of two variants, the Freedom variant and the Independence variant, designed and built by two industry teams. The Independence variant team is led by Austal USA, Mobile, Alabama, (for LCS 6 and the subsequent even-numbered hulls). The Freedom variant team is led by Lockheed Martin, Marinette, Wisconsin, (for the odd-numbered hulls).

USS Tulsa will join USS Freedom (LCS 1), USS Independence (LCS 2), USS Fort Worth (LCS 3), USS Coronado (LCS 4), USS Jackson (LCS 6), USS Montgomery (LCS 8), USS Gabrielle Giffords (LCS 10), USS Omaha (LCS 12) and USS Manchester (LCS 14) in their homeport of San Diego.

The ceremony, using hashtag #USSTulsa, can be viewed on the Navy Live blog at http://navylive.dodlive.mil.

SPAWAR Systems Center Names Change to Naval Information Warfare Centers

SAN DIEGO – Space and Naval Warfare Systems Command (SPAWAR) announced it will change the names of its Echelon III systems centers, SPAWAR Systems Center Atlantic in Charleston, S.C. and SPAWAR Systems Center Pacific in San Diego, Calif., to Naval Information Warfare Center Atlantic and Naval Information Warfare Center Pacific, respectively, SPAWAR Public Affairs said in a Feb. 13 release.

The changes will be effective Feb. 18. The new language “Naval Information Warfare Center,” with the acronym NIWC, (pronounced Nī’ wick) will apply to the names of all Naval Information Warfare Center sites falling under NIWC Pacific and NIWC Atlantic worldwide.

SPAWAR Commander Rear Adm. Christian Becker made the announcement Feb. 13 in his address to attendees at the WEST 2019 conference co-hosted by the U.S.

Naval Institute (USNI) and the Armed Forces Communications and Electronics

Association (AFCEA) at the San Diego Convention Center.

The name change demonstrates that information is a fundamental element of warfare, an essential concept of the Navy’s Design for Maritime Superiority 2.0.

Use of ‘warfare centers’ in the names reflects the centers’ focus, core capabilities and importance in the full spectrum of warfighting. It also improves clarity of mission and purpose with stakeholders across the fleet and industry and throughout the broader Information Warfare community and Naval Research and Development Enterprise.

The name Naval Information Warfare Center also aligns the centers with Naval Air Systems Command’s air warfare centers and Naval Sea Systems Command’s surface and undersea warfare centers.

The intent of the name change is to recognize the importance of the Information Warfare mission and does not signal a change in SPAWAR’s mission of identifying, developing, delivering and sustaining information warfighting capabilities.

“The advantage information warfare brings to the fight is at the core of our Navy’s ability to compete and win today and in

the coming decades," said Becker. "Recognizing our systems centers as Naval Information Warfare Centers reaffirms our commitment to accelerate the development and delivery of advanced warfighting capabilities to the fleet."

Belgian Navy Sees Cooperation Opportunities for Wind Farm Industry

ANTWERP, Belgium – Belgium's 40-mile long coastline is shorter than most countries, but Belgium is a maritime nation with one of the busiest seaports in the world, Antwerp, and sits astride the approaches to the Dutch port of Rotterdam. Together they are two of the busiest ports in Europe.

Standing off the coast of Belgium are found enough wind turbines to generate more than five percent of the national energy demand, increasing to 20 percent beyond 2020. The presence of offshore wind generation is growing, especially in Europe. Despite its relatively small coastal zone, Belgium is third in Europe behind the United Kingdom and Denmark in wind energy production. Instead of solely complicating navigation, Capt. Jan De Beurme, chief of staff of the Belgian Navy, said the cooperation with the wind farms industry could prove very useful.

"There is private owned infrastructure in place that could be shared with the Navy," De Beurme said. "Antennas and radars can be mounted on the structures; offshore camera images can be shared to increase the maritime awareness and maritime picture in our coastal waters. In return the Navy can assure the security of these critical infrastructures that the wind

farms are to Belgium."

Antwerp prides itself on being the "crossroads of the global supply chain," Beurme added.

De Beurme explains the joint Dutch-Belgian mine countermeasures project that will create new capabilities for both navies. The mine countermeasures ships will abandon the legacy minesweeper or mine hunter that must approach and enter the minefield to find or clear mines. Those ships have therefore traditionally been made of wood or composites so they won't trigger magnetic influence mines. De Beurme said the new ships will remain outside minefields and rely on a "toolbox" of offboard remote and unmanned systems to enter the danger zones while the ship remains at a safe distance. As drone technology matures, the newer capabilities can replace the older systems.

Belgium's Navy is a blue-water navy and is capable of distant open-ocean operations. While their ships will be interoperable with NATO mine warfare assignments anywhere in the alliance, they will also be optimized to find and neutralize any mines introduced into their own coastal waters.

These offboard systems can be controlled from the ships, or from containerized control stations that can be placed where needed ashore. The unmanned underwater vehicles can carry sensors such as synthetic aperture sonar and side scanning sonar, as well as neutralization charges to destroy mines. The critical part of using underwater vehicles for mine hunting is to be able to communicate with those vehicles and quickly obtain the sensor data for analysis.

The matrix of wind structures can help create an underwater network to communicate with the drones, and even recharge their batteries.

Coastal security is a team effort, De Beurme said, involving the Navy, Federal Police and Customs working together from a

single maritime information center. “We want to step up our maritime information center, and add new sensors.”

OPT to Develop Fiber Optic Mooring Technology for the Naval Air Warfare Center

MONROE TOWNSHIP, N.J. — Ocean Power Technologies Inc. (OPT) has been awarded a contract award from the U.S. Navy valued at $125,000, and an additional three options totaling $100,000 for a total potential contract value of $225,000, the company announced in a Feb. 12 release. Under this contract, OPT will immediately begin the development of a buoy mooring system which incorporates fiber optics for the transmission of subsea sensor data to airplanes, ships and satellites. OPT will execute the work under its Innovation and Support Services line and will leverage its many years of experience with marine systems and U.S. Navy programs to address the Navy’s need for reliable and low-cost “optical-mechanical mooring cables.” Importantly, the fiber optic mooring concepts developed under this contract may be incorporated into OPT’s PowerBuoy and Subsea Battery Module product lines.

“We’re very excited for this Phase I award by the U.S. Navy to develop a fiber optic mooring line which may be used for both defense and commercial applications,” said George Kirby, CEO of Ocean Power Technologies. “We believe that this new contract award further validates our technical expertise and experience with ocean energy systems and could also lead to additional future contract awards where we might utilize OPT technologies which are already in advanced stages of

development. To date, OPT has earned 28 U.S. government awards, including eight Phase I awards, which led to five Phase II efforts and 15 Phase III efforts, all related to marine systems and applications. We welcome the opportunity that this new contract brings, and this award now allows us to immediately bid on a Phase II contract."

OPT has submitted several proposals to the U.S. Navy and the Office of Naval Research under its Innovation and Support Services line on topics such as powering acoustic and nonacoustic sensors and improving the persistence of unmanned underwater vehicles through battery recharging and critical data transfer. Additionally, OPT has successfully advanced its anchorless PowerBuoy design under a prior contract with the Office of Naval Research and is seeking to prototype the design for both defense and commercial applications.

"OPT has a long work history on Department of Defense projects," Kirby said. "Our most recent government effort has been around advancing our anchorless PowerBuoy design, and we're nearing the prototype stage. The anchorless PowerBuoy design is very encouraging to our customers due to its innovative and patented approach to power generation and also the need for a quick-deploy solution throughout markets such as defense and offshore oil and gas.

"In addition, these markets are undergoing a radical transformation to cleaner and more efficient all electric, all digital and all autonomous subsea operations," he said. "Rapid deployment of persistent power and real-time subsea data communications is the enabling technology. Thanks to our efforts over the past few years, OPT is positioned and ready to enable this transformation today. In fact, we currently have one PowerBuoy deployed for a global oil and gas operator, another

which is undergoing preparation for deployment, and we have two additional PowerBuoys in various stages of production.