NOT FOR PUBLICATION UNTIL RELEASED BY THE HOUSE ARMED SERVICES COMMITTEE SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES

STATEMENT

OF

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BEFORE THE

SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES

OF THE

HOUSE ARMED SERVICES COMMITTEE

ON

DEPARTMENT OF THE NAVY SEAPOWER AND PROJECTION FORCES CAPABILITIES

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SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES

Mr. Chairman, Representative Courtney, and distinguished members of the subcommittee, thank you for the opportunity to appear before you today to address the Department of Navy's seapower and projection forces capabilities.

The Fiscal Year (FY) 2016 President's Budget submission is governed by the 2014 Quadrennial Defense Review (QDR), which implements the 2012 Defense Strategic Guidance (DSG) and continues our efforts to ensure our ability to protect the homeland, build security globally, and project power and win decisively. In balancing resources and requirements, the Department continues to place a priority on maintaining a sea-based strategic deterrent, sustaining forward presence, strengthening our means to defeat and deny aggression, focusing on critical readiness, sustaining or enhancing our asymmetric capabilities, and sustaining a relevant industrial base, including providing stability in our shipbuilding programs. The Navy and Marine Corps remain well suited and uniquely positioned to perform the missions of the DSG, including appropriate readiness, warfighting capability, and forward presence. Our principal requirement remains to equip the Navy and Marine Corps with the most effective warfare systems, through procurement, modernization, and sustainment, to address the security challenges of today and tomorrow. These principles guide the priorities and direction of the Department's FY 2016 President's Budget request. The Department will continue to work closely with Congress to maintain the right balance across capacity, capability, readiness, and the industrial base.

Though budget issues have challenged the Department, our Sailors and Marines deployed around the world continued to perform the mission and operate forward, being where it mattered when it mattered. Among these missions, the *George H.W. Bush* Strike Group relocated from the Arabian Sea to the north Arabian Gulf and was on-station within 30 hours, ready for combat operations in Iraq and Syria. Navy and Marine strike fighters from the carrier generated 20 to 30 combat sorties each day for 54 days to project power against the Islamic State of Iraq. The *George Washington* Strike Group also provided disaster relief to the Philippines in the wake of the Supertyphoon Haiyan approximately a year ago. USS *Truxton* established a U.S. presence and reassured our allies in the Black Sea within a week after Russia invaded Crimea. *USS Fort Worth,* on her maiden deployment, joined USS *Sampson* in support of the Indonesia-led search effort for Air Asia flight 8501 within days of arrival in theater.

Marine Corps units deployed to every Geographic Combatant Command (GCC) and executed numerous Theater Security Cooperation (TSC) exercises to help strengthen

relationships with allies and build partner capacity. Marine Corps Special Purpose Marine Air-Ground Task Force (SPMAGTFs) and ship based Marine Expeditionary Units (MEU) also responded to emergent crises in Sudan, Iraq and Libya, and most recently off the coast of Yemen to participate in strikes or reassure American allies. Innovative force packages were provided to the GCCs with Special Purpose MAGTF Crisis Response for the Middle East and Africa. These fully capable ground-based MAGTFs responded to crisis when called upon in a matter of hours to reinforce or evacuate embassies in South Sudan and Libya. Furthermore, in December, the Marines turned over control of Regional Command Southwest and redeployed its last combat forces from Afghanistan, and remain committed to support the continuing North Atlantic Treaty Organization efforts.

The Department maintained a steady pace of over 200 engagements, more than 30 amphibious operations, 150 TSC events, and 130 exercises over the year. This included Rim of the Pacific, an exercise off Hawaii that featured participants from 22 nations (including China for the first time), and the international mine countermeasures exercise in the 5th Fleet's arena in and around the Arabian Gulf that included participants from 44 nations. In addition, the Marine Corps deployed numerous other units globally. The newly developed Marine Security Guard Security Augmentation Unit deployed 29 times during 2014 to augment posts at the request of the State Department to a variety of embassies. Marine Rotational Force-Darwin based in Darwin, Australia, conducted bi-lateral training and exercises. The Black Sea Rotational Force continued their enduring activities in the European Command area of operations and Fleet Anti-Terrorism Security Teams provided forward-deployed platoons to four GCCs in support of dynamic mission tasking such as embassy reinforcement in Baghdad, Iraq.

The Department's FY 2016 President's Budget represents the bare minimum to execute the DSG in the world we face, but still results in high risk in two of the most challenging DSG missions that depend on adequate numbers of modern, responsive forces. The principal risk to the Department's ability to meet the DSG remains the uncertainty in future funding, which affects our planning and the ability to balance near- and long-term readiness and capability. The FY 2014 President's Budget was the last budget submission to fully meet all of the missions of the DSG. The Department made difficult, strategy-based choices to reprioritize within available resources, but that is not sustainable. The FY 2013 sequestration was manageable in part because of key budget reprogramming actions made by the Department with Congressional support. In order to accomplish this, however, the Department applied mitigating actions to

ships in execution and deferred costs to future years in order to avoid breaking programs. While the Bipartisan Budget Act of 2013 (BBA) provided some relief from sequestration-level funding in FY 2014 and FY 2015, significant shortfalls remained compared to the FY 2014 President's Budget. The Department was compelled to further reduce the capability of weapons and aircraft, slow modernization, and delay upgrades to all but the most critical shore infrastructure. As a result, the Department is challenged with maintenance backlogs, compressed training for modernization, and impacts on our people and their families due to extended deployments.

If sequestration returns in FY 2016, a revisit and revision of the defense strategy would be necessary. With limited ability to mitigate the impacts as we did in FY 2013, sequestration in FY 2016 would force the Department to further delay critical warfighting capabilities, reduce readiness of forces needed for contingency response, further downsize weapons capacity, and forego or stretch force structure procurements as a last resort. The Marine Corps would assume additional significant risk in long-term modernization and infrastructure sustainment, delay of major acquisition programs, forced sustainment of aged legacy systems resulting in increased operations and support costs, as well as further detrimental impacts to readiness, which will lead to morale issues and quality of life degradation. The Department's capability and capacity to meet operational requirements over the long-term will be reduced, including our ability to deploy forces on the timeline required by GCCs in the event of a contingency.

The Fiscal Year 2016 President's Budget Request

The FY 2016 President's Budget submission continues to balance force structure, readiness, and capability to meet national security commitments. The Department's shipbuilding plan is built around stability, balancing near-term and long-term requirements to enable efficient planning and procurement, improve cost performance, and sustain the critical shipbuilding and supplier industrial base. A brief overview of seapower and projection forces programs follows.

Shipbuilding

The FY 2014 update to the 2012 Force Structure Assessment (FSA) to meet the Department of the Navy's required missions in support of the DSG, has increased the objective to 308-ships to account for evolving force structure decisions and real-world changes to assumptions made in 2012. The Department's FY 2016 shipbuilding plan continues to build toward the balanced force required by the FSA. As such, the FY 2016 President's Budget

requests funding for nine ships: two *Virginia* class attack submarines, two DDG 51 *Arleigh Burke* class destroyers, three Littoral Combat Ships (LCS), the first next generation logistics fleet resupply ship T-AO(X), and the remaining funding for the Amphibious Transport Dock (LPD 28) that Congress added in FY 2015. The FY 2016 submission for the Future Years Defense Program (FYDP), FY 2016 to FY 2020, plans for the procurement of 48 ships. Additionally, the budget request includes funding for the aircraft carrier USS *George Washington's* refueling and complex overhaul (RCOH).

An additional key component of our budget submission is the modernization of 11 cruisers, which are the most capable ships for controlling the air defense of a carrier strike group. The Navy's cruiser modernization plan in accordance with FY 2015 Congressional direction will allow the Navy to reduce some funding requirements while increasing the capability and extending the service life of our large surface combatants.

The key elements of the FY 2016 shipbuilding plan will now be discussed for each area of the plan.

Aircraft Carriers

Our aircraft carriers are central to our nation's defense strategy, which calls for forward presence; the ability to simultaneously deter potential adversaries and assure our allies; and capacity to project power at sea and ashore. These national assets are equally capable of providing our other core capabilities of sea control, maritime security, and humanitarian assistance and disaster relief. Our carriers provide our nation the ability to rapidly and decisively respond globally to crises, with a small footprint that does not impose unnecessary political or logistical burdens upon our allies or potential partners.

Nimitz and Ford class carriers will be the premier forward deployed asset of choice for crisis response and early decisive striking power in major combat operations for the next half-century. The Department has established a steady state *Ford* class procurement plan designed to deliver each new ship in close alignment with the *Nimitz* class ship it replaces. The design improves warfighting capability, survivability, operational availability, and quality of life for Sailors, while reducing the ship's crew by between 500 and 900 personnel and decreasing total ownership costs by approximately $4 billion per ship. *Gerald R. Ford* (CVN 78), the lead ship of the class, was launched in November 2013. As of January 2015, CVN 78 is 87 percent complete, 37 percent of compartments have been turned over to the crew, 9.4 million feet of the

9.8 million feet of cabling (96 percent) has been installed, and 36 percent of the shipboard testing program is complete. CVN 78 land-based catapult testing commenced in December 2014. CVN 78 is planned for delivery in FY 2016.

The Navy is committed to delivering CVN 78 within the $12.887 billion Congressional cost cap. Sustained efforts to identify cost reductions and drive improved cost and schedule on this first-of-class aircraft carrier have resulted in highly stable performance since 2011.

Parallel efforts by the Navy and shipbuilder are driving down and stabilizing aircraft carrier construction costs for the future *John F Kennedy* (CVN 79) and estimates for the future *Enterprise* (CVN 80). As a result of the lessons learned on CVN 78, the approach to carrier construction has undergone an extensive affordability review. The Navy and the shipbuilder have made significant changes on CVN 79 to reduce the cost to build the ship as detailed in the 2013 CVN 79 report to Congress. The benefits of these changes in build strategy and resolution of first-of-class impacts on CVN 79 are evident in metrics showing significantly reduced man-hours for completed work from CVN 78. These efforts are ongoing and additional process improvements continue to be identified.

The Navy extended the CVN 79 construction preparation contract into 2015 to enable continuation of ongoing planning, construction, and material procurement while capturing lessons learned associated with lead ship construction and early test results. The continued negotiations of the detail design and construction (DD&C) contract afford an opportunity to incorporate further construction process improvements and cost reduction efforts. Award of the DD&C contract is expected in third quarter FY 2015. This will be a fixed price-type contract.

Additionally, the Navy will deliver the CVN 79 using a two-phased strategy. This enables select ship systems and compartments to be completed in a second phase, wherein the work can be completed more efficiently through competition or the use of skilled installation teams responsible for these activities. This approach, key to delivering CVN 79 at the lowest cost, also enables the Navy to procure and install shipboard electronic systems at the latest date possible.

The FY 2014 NDAA adjusted the CVN 79 and follow ships cost cap to $11,498 million to account for economic inflation and non-recurring engineering for incorporation of lead ship lessons learned and design changes to improve affordability. In transitioning from first-of-class to first follow ships, the Navy has maintained *Ford* class requirements and the design is highly stable. Similarly, we have imposed strict interval controls to drive changes to the way we do

business in order to ensure CVN 79 is delivered below the cost cap. To this same end, the FY 2016 President's Budget request aligns funding to the most efficient build strategy for this ship and we look for Congress' full support of this request to enable CVN 79 to be procured at the lowest possible cost.

Enterprise (CVN 80) will begin long lead time material procurement in FY 2016. The FY 2016 request re-phases CVN 80 closer to the optimal profile, therefore reducing the overall ship cost. The Navy will continue to investigate and will incorporate further cost reduction initiatives, engineering efficiencies, and lessons learned from CVN 78 and CVN 79. Future cost estimates for CVN 80 will be updated for these future efficiencies as they are identified.

With more than half of the service life of the *Nimitz* class still remaining, RCOH continues as a key enabler for the enduring presence of the aircraft carrier Fleet. USS *Abraham Lincoln* (CVN 72) completed her RCOH undocking in November 2014. This year's budget request restores funding for the USS *George Washington* (CVN 73) RCOH. The CVN 73 thirty month RCOH advanced planning, long lead time material procurement, engineering, and early fabrication contract was awarded in February 2015.

Submarines

Submarines' stealth and ability to conduct sustained forward-deployed operations in anti-access / area-denial environments serve as force multipliers by providing high-quality Intelligence, Surveillance, and Reconnaissance (ISR) as well as indication and warning of potential hostile action. In addition, attack submarines are effective in anti-surface warfare (ASuW) and undersea warfare in almost every environment, thus eliminating any safe-haven that an adversary might pursue with access-denial systems. As such, they represent a significant conventional deterrent. The Navy is mitigating an impending attack submarine force structure shortfall in the 2020s through multiple parallel efforts: continuing procurement of two *Virginia* class submarines per year; reducing the construction span of *Virginia* class submarines; extending the service lives of select attack submarines (SSN 688s) with the potential to eliminate 10-15 attack submarine (SSN) years from the SSN shortfall of 51 years. While each of the Navy's attack submarines provides considerable strike capacity, guided missile submarines (SSGN) provide substantially more strike capacity and a robust capability to deploy special operations force (SOF) personnel. Lastly, the Navy's 14 ballistic missile submarines (SSBNs)

provide the nation with an around-the-clock, credible, modern and survivable sea-based strategic deterrent.

SSBNs, coupled with the TRIDENT II D-5 Strategic Weapons System, represent the most survivable leg of the Nation's strategic arsenal and provide the Nation's most assured nuclear response capability. Originally designed for a 30-year service life, the Ohio class was extended to its limit at 42 years of operation. With the Ohio class SSBNs being an average of 25.5 years old, the U.S. must continue development of the follow-on twelve ship Ohio Replacement (OR) SSBN program as the current SSBNs' life cycles cannot be extended further. This is our top priority program within the Department of the Navy.

The FY 2016 President's Budget requests full funding of two *Virginia* class submarines and advanced procurement for the FY 2017 and FY 2018 vessels. The *Virginia* class submarine program has delivered the last seven ships on budget and ahead of schedule. The last ship delivered, USS *North Dakota* (SSN 784), included a completely redesigned bow section as part of the Design for Affordability efforts, an approximate 20 percent design change. Additionally, USS *North Dakota* delivered with the highest quality of any *Virginia* class submarine to date.

The Navy awarded the Block IV contract in April 2014 for ten ships. It continues the co-production of the *Virginia* class submarines between General Dynamics Electric Boat and Huntington Ingalls Industries - Newport News Shipbuilding through FY 2018. The savings realized with this multiyear procurement (MYP) contract was over $2 billion, effectively giving the Navy ten ships for the price of nine.

In December 2012, the Navy awarded a research and development (R&D) contract for OR SSBN which focuses on meeting the program's performance requirements while reducing costs across design, production, and operations and sustainment. The lead ship recurring estimate was reduced to $6.2 billion Constant Year (CY) ($8.8B Then Year (TY)) dollars from $6.8 billion CY ($10.0B TY) dollars. The average follow-on ship recurring cost estimate was reduced to $5.2 billion CY ($9.8B TY) dollars from $5.4 billion CY ($10.5B TY) dollars. The non-recurring cost estimate is $17.1 billion CY ($22.4B TY). Cost reduction efforts continue and bring the Navy closer to its cost goals. The cost reduction efforts will continue throughout the design and construction phases.

The FY 2016 President's Budget requests funding to continue development of the OR SSBN and ensures Common Missile Compartment (CMC) efforts remain on track to support the United Kingdom's SUCCESSOR Program's schedule. Given the need to recapitalize this

strategic asset, coupled with the ongoing need to support Navy force structure, the Navy continues to pursue the means to resource construction of the OR SSBN in accordance with the schedule to fulfill U.S. Strategic Command requirements. The first-of-class is to be procured in 2021, with Shipbuilding and Conversion, Navy (SCN) advanced procurement in 2019 and 2020. The Navy continues to need significant increases in our topline beyond the FYDP, not unlike that during the period of *Ohio* construction, in order to afford the OR SSBN procurement costs. Absent a significant increase to the SCN appropriation, OR SSBN construction will seriously impair construction of virtually all other ships in the battle force: attack submarines, destroyers, and amphibious warfare ships. The shipbuilding industrial base will be commensurately impacted and shipbuilding costs would spiral unfavorably. The resulting battle force would fall markedly short of the FSA, unable to meet fleet inventory requirements. The National Sea-Based Deterrence Fund is a good first step in that it acknowledges the significant challenge of resourcing the OR SSBN, but the fund is unresourced.

In addition to the Department of the Navy's budget request, the continued support of Congress for Naval Reactors' Department of Energy (DoE) funding is vital to the Navy mission and ensuring the safe, reliable and enduring operations of the nuclear-powered Fleet. The President's FY 2016 DOE budget fully funds Naval Reactors request for the OR SSBN. This funding is critical to maintain the reactor design and development in synch with the Navy shipbuilding schedule to support lead ship procurement in 2021. The DoE budget submission also provides full funding for refueling the Land-based Prototype. This effort not only supports development of the OR SSBN life-of-the-ship core, but also ensures Naval Reactors continues to train about 1,000 nuclear-qualified sailors per year for the next twenty years. Naval Reactors' DoE budget also includes the second year of funding for the Spent Fuel Handling Project (SFHP). Recapitalizing this facility is critical to the Navy's tight refueling and defueling schedule of nuclear-powered aircraft carriers and submarines.

The Navy's four SSGNs provide significant warfighting capability, but will be retired in 2026-2028 after 42 years of combined SSBN/SSGN service. To mitigate the 60 percent reduction in undersea strike capacity when they retire, the Navy is investing in *Virginia* Payload Module (VPM) that will include a hull insert amidships of a *Virginia* class submarine that will contain four 87-inch diameter missile tubes each capable of launching seven TOMAHAWK cruise missiles. The FY 2016 President's Budget continues VPM R&D and starts SCN funding

in FY 2017 for detail design efforts to enable integrating VPM into Block V *Virginia* class SSNs in one per year starting in FY 2019.

Large Surface Combatants

Guided missile cruisers (CGs) and guided missile destroyers (DDGs) comprise our large surface combatant Fleet. When viewed as a whole, these ships fulfill broad mission requirements both independently and in conjunction with a strike group. The demands for increased capability and capacity in Ballistic Missile Defense (BMD) and Integrated Air and Missile Defense (IAMD) continue to be a focal point. In order to meet the increased demand for BMD, in FY 2014, the Navy forward deployed two BMD capable DDGs, USS *Donald Cook* (DDG 75) and USS *Ross* (DDG 71) to Rota, Spain. USS *Carney* (DDG 64) and USS *Porter* (DDG 78) will arrive in FY 2015. Two additional BMD ships will homeport shift to Yokosuka, Japan in 2015 and 2016, USS *Benfold* (DDG 65) and USS *Barry* (DDG 52). The Anti-Submarine Warfare (ASW) combat systems on DDGs and CGs are also being upgraded, bringing significant improvements over legacy systems.

The *Arleigh Burke* class (DDG 51) program remains one of the Navy's most successful shipbuilding programs – 62 ships are currently operating in the Fleet. The FY 2016 President's Budget includes funding for two destroyers to execute the fourth year of the current MYP. One of these ships will incorporate IAMD and provide additional BMD capacity, and the other ship will introduce the next flight upgrade known as Flight III, which incorporates the Air and Missile Defense Radar (AMDR), with both ships bringing additional capability to the Fleet when they deliver in the early FY 2020s. AMDR and Flight III are essential for future sea-based BMD. The FY 2016 President's Budget also includes funding to complete the construction of *Thomas Hudner* (DDG 116) to restore program funding removed by the FY 2013 sequestration.

AMDR is the future multi-mission radar of the Navy's surface combatant fleet, which will meet the growing ballistic missile threat by improving radar sensitivity and enabling longer range detection for engagement of increasingly complex threats. In October 2013, the Navy awarded the contract for development of the AMDR, with options for up to nine low rate initial production (LRIP) units. The AMDR radar suite will be capable of providing simultaneous surveillance and engagement support for long range BMD and area defense. The program continues to demonstrate maturity in the design development as shown in successful completion of the AMDR hardware critical design review (CDR) in December 2014 and is on track for the

system CDR in April 2015. Engineering Change Proposal (ECP) detail design efforts for the DDG Flight III design will continue in FY 2016, ultimately leading to over 90 percent detail design completion prior to construction on the first Flight III ship.

The DDG 1000 *Zumwalt* class guided missile destroyer will be an optimally crewed, multi-mission, surface combatant designed to provide long-range, precision, naval surface fire support to Marines conducting littoral maneuver and subsequent operations ashore. In addition to the ship's two 155mm Advanced Gun Systems capable of engaging targets with the Long Range Land Attack Projectiles (LRLAP), the ship will be capable of conducting ASW, land attack, and will provide valuable advancements in technology such as signature reduction (both acoustic and radar cross-section), active and passive self-defense systems, enhanced survivability features, and shipboard automation (in support of reduced manning). The DDG 1000 program accomplished several construction milestones in 2014 with significant test and activation efforts continuing for the ship's propulsion and power plants. DDG 1000 sea trials will be conducted this year in preparation to enter the Fleet in 2016. The FY 2016 budget requests funds to continue the DDG 1000 program.

Small Surface Combatants

The Littoral Combat Ship (LCS) enables the Navy to implement the DSG imperative to develop innovative, low-cost, and small-footprint approaches to achieve our security objectives. The modular, open systems architecture inherent in LCS allows for rapid integration of technological solutions that increase capability at reduced cost. The LCS complements our inherent blue water capability and fills war fighting gaps in the littorals and strategic choke points around the world. LCS design characteristics (speed, agility, shallow draft, payload capacity, reconfigurable mission spaces, air/water craft capabilities) combined with its core command, control, communications, computers and intelligence; sensors; and weapons systems, allow LCS to bring unique strengths and capabilities to the mission.

In February 2014, Secretary Hagel capped LCS at 32 ships, pending an evaluation of the alternatives to increase the lethality and survivability of future small surface combatants. In December 2014, Secretary Hagel approved the Navy's proposal to procure a small surface combatant based on an upgraded LCS. The upgraded LCS will provide multi-mission ASuW and ASW, as well as continuous and effective air, surface and underwater self-defense. As these capabilities are generally consistent with those of a frigate, the Secretary of the Navy directed re-

designation of upgraded LCS to frigates (FF). The FY 2016 President's Budget requests funding for concept development and design for improved survivability and lethality performance in the Navy's future Frigate. The FY 2016 request also includes funding for three LCS Class ships. The Navy plans to extend the FY 2010 - 2015 block buy contract to include the first ship in FY 2016, and use the competitive pricing from the block buy to obtain option prices for the remaining two FY 2016 ships. Furthermore, the FY 2016 request includes funding to complete construction on LCS 9 through LCS 12, which was deferred due to sequestration in FY 2013.

The LCS Mission Modules (MM) program continues its efforts to field capability incrementally as individual mission systems become available, rather than wait for all the mission systems needed for the end-state capability. The direction from Secretary Hagel does not affect the near term content and funding needs of the LCS MM program. The Navy still must continue to procure Mission Packages (MP) for fielding aboard LCS 1-32. In addition, the future frigates will retain specific mission module capabilities to augment the ships' organic ASuW and ASW, as directed by the Fleet Commanders. In November 2014, the program declared Initial Operational Capability (IOC) for the Surface Warfare (SUW) MP after successful testing onboard USS *Fort Worth* (LCS 3) in April 2014. The Mine Countermeasure (MCM) MP completed its final Increment 1 Developmental Test event in October 2014. The MCM MP is currently scheduled for Technical Evaluation and Initial Operational Test & Evaluation (IOT&E) in 2015. The ASW MP successfully completed its initial integration test onboard USS *Freedom* (LCS 1) in September 2014, with operational testing scheduled to begin in 2016. This early operational test event will reduce integration risk through real-world, at-sea testing of the Advanced Development Model (ADM). A subsequent early deployment of the ASW MP ADM aboard USS *Freedom* (LCS 1) in 2016 will further prove out the capabilities of the ASW MP. Operational testing will culminate in IOT&E in 2017. Significant developmental and operational testing has already been accomplished on both variants, with embarked ASW, MCM and SUW MPs. The LCS and ASW MP performed as predicted and marked the first time an LCS has tracked a submarine with variable depth sonar and a multi-function towed array. USS *Freedom* (LCS 1) also served as the test platform for the Surface Electronic Warfare Improvement Program Block Two-Lite engineering development model (EDM) installation and testing. The FY 2016 President's Budget requests funding for five MPs (two MCM, two SUW, and one EDM for ASW.) The LCS, with a MP, provides capability that is equal to or exceeds the current capability of the ships that it is replacing.

With four LCS in-service, operational experience continues through at sea testing, operations and rotational deployments. USS *Fort Worth's* deployment marks the beginning of continuous LCS forward presence in Southeast Asia, and will validate the Class 3:2:1 (three crews, two ships, one ship always forward-deployed) rotational manning and crewing concept and mark the first deployment of the Navy's MH-60R Seahawk helicopter along with the MQ-8B Fire Scout on an LCS.

Amphibious Ships

Amphibious ships operate forward to support allies, respond to crises, deter potential adversaries, and provide the nation's best means of projecting sustainable power ashore; they also provide an excellent means for providing humanitarian assistance and disaster relief. Amphibious forces comprised of Sailors, Marines, ships, aircraft and surface connectors provide the ability to rapidly and decisively respond to global crises without a permanent footprint ashore that would place unnecessary political or logistical burdens upon our allies or potential partners. There are two main drivers of the amphibious ship requirement: maintaining persistent forward presence, which enables both engagement and crisis response, and delivering the assault echelons of up to two Marine Expeditionary Brigades (MEB) for joint forcible entry operations.

The Chief of Naval Operations and Commandant of the Marine Corps have determined that the force structure for amphibious lift requirements is 38 amphibious ships, fiscally constrained to 33 ships. Balancing the total naval force structure requirements against fiscal projections imposes risk on meeting this requirement. Based on the footprint of a 2.0 MEB assault echelon force, a minimum of 30 operationally available ships are necessary to provide a force made up of ten Amphibious Assault Ships (LHD/LHA), ten Amphibious Transport Docks (LPD) and ten Dock Landing Ships (LSD). The FY 2016 shipbuilding plan will result in a projected amphibious ship force structure of at least 31 ships in the near-term and maintains at least 33 ships throughout the 2020s and 2030s. At the end of FY 2016, the Amphibious Force Structure will be 31 ships, which includes 9 LHD/LHAs, 10 LPDs, and 12 LSDs.

LHA(R) Class ships are flexible, multi-mission platforms with capabilities that span the range of military operations -- from forward deployed crisis response to forcible entry operations. These ships will provide the modern replacements for the remaining LHA 1 *Tarawa* class ship and the aging LHD 1 *Wasp* class ships as they begin decommissioning in the late 2020s. USS *America* (LHA 6) and *Tripoli* (LHA 7) are optimized for aviation capability and do

not include a well deck. USS *America* delivered to the Navy in April 2014 and was commissioned in October 2014. LHA 7 is currently under construction and will deliver in 2018. LHA 8, the first Flight 1 ship, will have a well deck to increase operational flexibility and a smaller island that increases flight deck space to retain aviation capability. LHA 8 is funded in FY 2017 and FY 2018, and is planned for delivery in FY 2024. LHA 8 will be competed as part of an amphibious and auxiliary shipbuilding acquisition strategy to support stability and affordability for this sector of the industrial base. The Navy expanded the early industry involvement efforts for the LHA 8 design and initiated a phased approach to the design for affordability of amphibious ships. FY 2014 funding enabled affordability efforts that foster an interactive competition with industry partners in developing a more affordable, producible detail design and build strategy, and drive towards more affordable ships.

The *San Antonio* class (LPD 17) provides the ability to embark, transport control, insert, sustain, and extract elements of a MAGTF and supporting forces by helicopters, tilt rotor aircraft, landing craft, and amphibious vehicles. Two ships are under construction, John P. Murtha (LPD 26) and Portland (LPD 27), and will deliver in spring 2016 and summer 2017, respectively. The FY 2015 Consolidated and Further Continuing Appropriations Act provided $1 billion of funding toward a twelfth ship of class, LPD 28. The FY 2016 President's Budget requests the balance of funding for LPD 28, and cost to complete funding for LPD 27. The program will include targeted cost reduction initiatives to improve affordability of the ship. Procurement of LPD 28 will assist in mitigating some impacts to shipbuilding and combat systems industrial bases. LPD 28 will possess all of the key fundamental capabilities and characteristics associated with LPDs 17 through 27, to include command and control, aviation operations and maintenance, well deck operations, and medical. There are fact of life changes due to obsolescence which need to be incorporated. LPD 28's design and construction features will, at the same time, exploit many of the ongoing LX(R) design innovations and cost reduction initiatives that are necessary for the program to achieve affordability goals while maintaining the high level capabilities of the LPD 17 class.

LX(R) is the replacement program for the landing ship dock, LSD 41 and LSD 49 classes, which will begin reaching their estimated service life in the mid-2020s. The Analysis of Alternatives Report was completed in April 2014. After thorough analysis, the Department has determined that using a derivative of the LPD 17 hull form is the preferred alternative to meet LX(R) operational requirements. This determination sustains the program's focus on

requirements, affordability and total ownership cost. Program focus during FY 2016 will be to finalize the requirements in the Capability Development Document and execute contract design efforts to meet acquisition milestones for procurement of the lead ship in FY 2020. The LX(R) contract design effort is part of the Navy's recent announcement of its acquisition strategy for the LHA 8, six T-AO(X) ships, and LX(R) contract design. Both General Dynamics NASSCO and Huntington Ingalls Industries, Ingalls Shipbuilding will participate in this limited competition.

LX(R) is envisioned to be a flexible, multi-mission warship with capabilities that support execution of the full range of military operations. The need to support disaggregated or split operations away from the Amphibious Readiness Group or to deploy independently is a key driver for the design of the ship class. The inherent flexibility of amphibious ships is demonstrated by their support to 7 of the 10 missions in the DSG. LX(R) will be a versatile, cost-effective amphibious ship –- a success story in leveraging mature design while balancing cost and requirements to deliver key capabilities. The lead LX(R) will deliver in time for LSD 43's retirement in FY 2027.

The Navy plans to maintain 11 deployable LSDs in the active force until LX(R) delivers by rotating three LSDs to complete phased modernizations beginning in FY 2016. This will extend USS *Whidbey Island* (LSD 41), USS *Germantown* (LSD 42), and USS *Tortuga (*LSD 46) to a 44 year expected service life. This plan mitigates presence shortfalls and supports 2.0 MEB Assault Echelon shipping requirements.

Auxiliary Ships

Support vessels such as the Mobile Landing Platform (MLP) and the Joint High Speed Vessel (JHSV) provide additional flexibility to the Combatant Commanders. The future USNS *Lewis B. Puller* (MLP 3), the first Afloat Forward Staging Base (AFSB) variant, was christened in February 2015, and will deliver in summer 2015. USNS *Montford Point* (MLP 1) completed its integrated testing and evaluation phase this past fall and the Navy continues to explore further use beyond Maritime Prepositioning Force to facilitate expeditionary operations. The Navy awarded MLP 4 AFSB in December 2014, and plans to request MLP 5 AFSB in FY 2017.

The JHSV provides a high-speed, shallow-draft alternative to moving personnel and materiel within and between the operating areas, and to supporting security cooperation and engagement missions. JHSV production continues with delivery of the fifth JHSV anticipated in April 2015. JHSVs 6-10 are also under contract. In FY 2015, Congress provided funding for an

eleventh JHSV. The Navy is exploring opportunities to further enhance JHSV's operational profile to support/enhance warfighter requirements such as Special Operations support, Maritime Interdiction Operations, submarine rescue, and ISR missions. Additional research is being applied to the stern ramp to increase its ability to conduct at sea delivery. The FY 2016 President's Budget requests cost to complete funding for the JHSV program in order to restore funding reduced by FY 2013 sequestration.

Combat Logistics Force ships fulfill the vital role of providing underway replenishment of fuel, food, repair parts, ammunition and equipment to forward deployed ships and embarked aircraft, to enable them to operate for extended periods of time at sea. Combat Logistic Force Ships consist of T-AOE fast support ships, T-AKE auxiliary dry cargo ships, and T-AO fleet replenishment oilers. The T-AO and T-AKE ships serve as shuttle ships between resupply ports and their customer ships, while the T-AOE ships serve as station ships, accompanying and staying on-station with a Carrier Strike Group to provide fuel as required to customer ships.

Navy continued its efforts to mature its concept for the replacement of the *Kaiser* class (T-AO 187) of Fleet Replenishment Oilers. The new replacement oilers, currently designated as T-AO(X), will be double-hulled and meet Oil Pollution Act 1990 and International Marine Pollution Regulations. The FY 2016 President's Budget request includes the lead ship in 2016 with serial production beginning in 2018. The total ship quantity is expected to be 17 ships. The Department recently announced an acquisition strategy for LHA 8, T-AO(X), and LX(R), and will limit this competition to NASSCO and HII Ingalls.

Beginning in 2017, the Navy plans to begin procuring replacement ships for the four T-ATF 166 class fleet tugs, which reach the end of their expected service lives starting in 2020. T-ARS(X) is a recapitalization project to replace the capabilities provided by the four T-ARS 50 class salvage ships, which reach the end of their expected service lives starting in 2025. As noted in the Long Range Shipbuilding Plan, the Navy is considering a common hull to replace both the T-ATF and T-ARS; acquisition of a common hull would follow the acquisition approach described for the T-ATF(X) and would preclude the need to acquire a separate T-ARS(X) class.

Affordability and the Shipbuilding Industrial Base

Stability and predictability are critical to the health and sustainment of the Nation's shipbuilding industrial capacity. A healthy design and production industrial base is critical to

achieving Department priorities and fulfilling Navy needs. Today's shipbuilding industry, with its interdependent suppliers and vendors, is a complex system where decisions made today have a cascading effect both in the near-term as well as years into the future. Perturbations in naval ship design and construction plans are significant because of the long-lead time, specialized skills, and extent of integration needed to build military ships. Each ship is a significant fraction of not only the Navy's shipbuilding budget, but also industry's workload and regional employment. Consequently, the timing of ship procurements is a critical matter to the health and sustainment of U.S. shipbuilding and combat system industries, and has economic impacts at the regional and local levels. It is important, therefore, for the Department to provide stability and predictability to the industrial base, including key suppliers and vendors, to maintain our ability to continue to build the future Fleet as outlined in the Long Range Shipbuilding Plan.

The Navy has taken specific key acquisition and procurement actions to contain costs and sustain the industrial base, including:

- Stabilizing procurements through block buys and MYPs;
- Increasing competition;
- Controlling costs through stable designs;
- Strictly limiting change orders;
- Conducting targeted reviews;
- Pursuing cross-program common equipment buys; and
- Focusing on affordability.

In addition, the Navy has made investments to support shipyard facility improvements, optimal build plans, conduct of affordability studies, lease for facilities improvement, design for affordability and modularity, combat system open architecture, and shipbuilding capability preservation agreements. These investments support affordability, minimize life-cycle costs, improve and ensure quality products, facilitate effective and efficient processes, and promote competition -- which all support Department priorities.

Surface Ship Modernization

The FY 2016 President's Budget implements the CG/LSD modernization plan as modified by the FY 2015 NDAA and Consolidated and Further Continuing Appropriations Act. This plan will provide the means to retain the best Air Defense Commander and Marine expeditionary lift capabilities through the 2030s. This plan paces the threat through the

installation of the latest technological advances in combat systems and engineering in CGs 63-73 and LSDs 41, 42 and 46. As a result, these ships remain relevant and viable, extending the CGs service life out to 40 years, enabling the Navy to sustain dominant force structure. To date, the Navy has modernized CGs 52-58 with the Advanced Capability Build (ACB) 08 Combat System as well as substantial Hull, Mechanical, and Electrical (HM&E) upgrades, and has nearly completed modernization on CGs 59, 60, and 62 with the improved ACB 12. These investments have allowed the first 11 ships of the *Ticonderoga* class to remain the world's premier Air Defense Commander platform, fully capable of integrating into the CSG construct or operating independently in support of Combatant Commander demands.

The Navy has developed an affordable framework to retain the remaining eleven cruisers (CGs 63-73) in the active Fleet, through induction into a phased modernization period. Within the guidelines of the FY 2015 Consolidated and Further Continuing Appropriations Act, the Navy will induct no more than two ships per year for no more than four years, and have no more than six ships in a modernization period at any given time. In FY 2015, the Navy is inducting the first two ships, the USS *Gettysburg* (CG 64) and USS *Cowpens* (CG 63) into modernization. The FY 2016 President's Budget request inducts the next two CGs, USS *Vicksburg* (CG 69) and USS *Chosin* (CG 65), into modernization in FY 2016.

The Navy will begin the modernization of these ships with material assessments, detailed availability planning, and material procurements. Subsequently, the Navy will perform HM&E upgrades, critical structural repairs, and extensive corrective and condition-based maintenance. These HM&E modernization and repair efforts will commence as soon as possible after entering this modernization period, and will include modernization industrial periods. The HM&E-centric maintenance and modernization industrial periods will include modifications that are part of the Cruiser Modernization program of record, such as structural modifications and maintenance, including tanks and voids, and mission life extension alterations. Other preparatory work for the combat system modernization, such as equipment removal and space preparations may also be accomplished during these periods. These modernization industrial periods can be scheduled at times when there is a shortage of work in the various homeports, thereby leveling the work load and effectively utilizing industrial facilities. Without the pressure of meeting near term Fleet deployment schedules, the work can be planned in the most economical and efficient manner, including reducing the need for costly overtime rates and hiring subcontractors to supplement shipyard workforce. The final phase will include combat

system installation, integration, and testing. This will occur concurrently with re-crewing the ship, immediately preceding re-introduction to the Fleet. With combat systems modernization occurring immediately prior to restoration, these ships will have the latest combat systems upgrades, thus mitigating the risk and cost of technical obsolescence. The Navy intends to draw down the manpower for these CGs during their modernization, to reduce the cruiser costs during the period. The plan is to complete modernization of each cruiser on a schedule that sustains 11 deployable Air Defense Commander CGs (one per Carrier Strike Group) into the 2030s. Under the Navy's original phased modernization plan proposed in the FY 2015 President's Budget, the final CG retirement would have occurred in 2045, at a significantly reduced cost to the Navy, and would have relieved pressure on the shipbuilding account largely consumed in the 2030s with building OR SSBNs and aircraft carriers.

Similarly, the Navy plans to perform the final *Whidbey Island* class midlife modernization as well as to extend two LSDs through this plan. This plan completes the HM&E midlife and modernizes combat systems/command, control, communications, computers, collaboration, and intelligence on USS *Tortuga* (LSD 46) (thereby achieving 40 year expected service life), while providing for additional post-midlife modernization for USS *Whidbey Island* (LSD 41) and USS *Germantown* (LSD 42). LSD 41 and 42 will receive additional structural, engineering, and combat systems modernizations to extend their expected service life to 45 years. LSD 46 will be inducted into modernization in FY 2016.

The FY 2016 President's Budget also includes funding for the modernization of four destroyers. To counter emerging threats, this investment is critical to sustain combat effectiveness and to achieve the full expected service lives of the Aegis Fleet. The destroyer modernization program includes HM&E upgrades as well as advances in warfighting capability and open architecture combat systems. This renovation reduces total ownership costs and expands mission capability for current and future combat capabilities. However, due to fiscal constraints, we were compelled to reduce the combat system modernization of one DDG Flight IIA per year starting in FY 2018.

Naval Aviation

There are several central themes to our FY 2016 Naval Aviation Budget plan: Persistent multi-role ISR; supporting capabilities such as maritime patrol; and targeted modernization of the force for relevance and sustainability. To meet the demand for persistent, multi-role ISR

capability, the Navy and Marine Corps are building a balanced portfolio of manned and unmanned aircraft, leveraging other service capacity where able, but valuing the unique contribution of maritime ISR. The Department is also recapitalizing our aging fleets of airborne early warning and maritime patrol aircraft. Specifically, the Department is replacing our fleet of E-2C airborne early warning aircraft with the E-2D and our P-3C maritime patrol aircraft with the modern P-8A.

Airborne Early Warning Aircraft

The E-2D Advanced Hawkeye (AHE) is the Navy's carrier-based Airborne Early Warning and Battle Management C2 system, which provides premier airborne battle management command and control and surveillance as part of the Naval and Joint IAMD architecture, which includes Naval Integrated Fire Control - Counter Air (NIFC-CA) capability. In addition, E-2D AHE is capable of synthesizing information from multiple onboard and off-board sensors, making complex tactical decisions and then disseminating actionable information to Joint Forces in a distributed, open-architecture environment. Utilizing the AN/APY-9 Mechanical/Electronic Scan Array radar, Link-16, and the Cooperative Engagement Capability system, the E-2D AHE works in concert with tactical aircraft and surface-combatants equipped with the Aegis combat system to detect, track and defeat air and cruise missile threats at extended ranges and provide Strike Group Commanders the necessary required reaction time.

The first Fleet E-2D squadron (VAW-125) has transitioned and was designated "safe for flight" in January 2014. IOC was subsequently met in October 2014. Initial fleet introduction of the NIFC-CA Increment I capability that integrates aircraft sensor and ship weapon capabilities and improves lethality against advanced air and missile threats will commence in 2015.

The Department is requesting $272.2 million RDT&E,N to continue development of improved E-2D capabilities during FY 2016. These capability improvements include in-flight refueling, Secret Internet Protocol Router chat, Advanced Mid-Term Interoperability Improvement Program, Multifunctional Information Distribution System/Joint Tactical Radio System Tactical Targeting Networking Technology, counter electronic attack, sensor netting, data fusion, Link-16 Fighter to Fighter, navigation warfare, J11 messages, and Stores Performance Assessment Requested Quality. Additionally, the Department requests $1,053.0 million to continue Full Rate Production (FRP) of Lot 4 aircraft (the third year of a 26 aircraft

MYP contract covering FY 2014 to FY 2018), and Advance Procurement funds for FY 2017 FRP Lot 5 aircraft, and economic ordering quantity funding for the MYP (FY 2018).

Maritime Patrol Aircraft

The P-8A Poseidon recapitalizes the Maritime Patrol ASW, ASuW and armed ISR capability currently resident in the P-3C Orion. The P-8A combines the proven reliability of the commercial 737 airframe with avionics that enables integration of modern sensors and robust communications. The P-8A's first operational deployment was completed in June 2014, and continuous 7th Fleet operational deployments are underway. As of February 2015, four Fleet squadrons have completed transition to P-8A. All Fleet squadrons are scheduled to complete transition by the end of FY 2019. While P-8A inventory continues to build, Fleet squadrons must complete transition below their primary aircraft authorized (PAA). The aircraft that deliver after transition ends in FY 2019 first will be assigned to Fleet squadrons so they achieve their PAA of seven aircraft. The remaining aircraft will go to the Fleet Replenishment Squadron (FRS) and to developmental test squadrons (VX). The P-8A program is meeting all cost, schedule and performance parameters in accordance with the approved Acquisition Program Baseline.

The Department has delivered 21 aircraft (LRIP I/II/III) to the Fleet as of February 2015, and three remaining LRIP III aircraft are scheduled to deliver by May 2015. LRIP IV (13 aircraft), and FRP 1 (16 aircraft) are under contract and will start delivering in May 2015. FRP 2 (nine aircraft) is planned to award in June 2015. The FY 2016 President's budget requests $3,278.5 million to procure 16 additional aircraft with planned procurement of 47 P-8As over the FYDP to sustain the P-3C to P-8A transition. In the FY 2016 budget, the warfighting requirement remains 117 aircraft; however the fiscally constrained inventory objective for 109 aircraft will provide adequate capacity at acceptable levels of risk.

The Department requests $102.8 million RDT&E,N to support planned capability improvements. As fleet deliveries of the Increment 1 configuration accelerate, integration and testing of P-8A Increment 2 capability upgrades continue. P-8A Increment 2 ECP 1 "Early Multi-Static Active Coherent (MAC)" follow-on test and evaluation commenced November 15, 2014. The U.S. Navy is on track to field the ECP 1 "Early MAC" capability in FY 2015 followed by Increment 2 ECP 2 "Full MAC" capabilities in FY 2016. The Increment 2 ECP 3 contract for High Altitude ASW Weapons Capability was awarded in December 2014.

The aging P-3C fleet will continue to provide critical ASW, ASuW and ISR support for joint and naval operations worldwide until the Fleet completes transition to P-8A. The FY 2016 budget requests $3.1 million in funding required to manage P-3C aircraft mission systems obsolescence during the transition. As of December 2014, 61 P-3C Special Structural Inspection-Kits have been installed (zero remaining); 87 Zone 5 modifications completed (last three aircraft in work); and 20 outer wing installations completed (last nine aircraft in work).

The P-3C aircraft is well beyond the original planned fatigue life of 7,500 hours for critical components, with an average airframe usage of over 18,400 hours. The budget request continues to fund the P-3 Fatigue Life Management Program so that the Navy can maintain sufficient capacity to successfully complete the transition to P-8A.

The EP-3E Aries is the Navy's premier manned Maritime Intelligence, Surveillance, Reconnaissance, and Targeting (MISR&T) platform. The Joint Airborne Signals intelligence (SIGINT) Common Configuration includes Multi-Intelligence sensors, robust communication, and data links employed by the flexible and dependable P-3C air vehicle to ensure effective MISR&T support across the full Range of Military Operations. The FY 2011 NDAA (Public Law 111-383) directed Navy to sustain EP-3E airframe and mission systems relevance to minimize SIGINT capability gaps until the systems are fully recapitalized with a platform or family of platforms that in the aggregate provide equal or better capability and capacity.

The Navy's ISR family of systems approach continues to shift focus from platforms to payloads: the future force will rapidly respond to changing threats with modular, scalable, netted sensors and payloads on a range of sea and shore-based manned and unmanned systems, establishing persistent maritime ISR when and where it is needed.

The Navy will use manpower from EP-3E and Special Projects Aircraft squadrons to field new ISR&T platforms such as MQ-4C Triton. The Navy's MISR&T transition plan will deliver increased capacity and persistence by the end of the decade; however, due to fiscal and end strength constraints, the Department will accept some risk in near term capability and capacity. The FY 2016 budget request maintains the legacy EP-3E force retirement date which was extended in FY 2015 by one year to FY 2020.

The FY 2016 budget request reduces risk in both capacity and capability compared to 2015 and the Navy continues to work with the Joint Staff, Office of the Secretary of Defense, and the Fleet to optimize this transition plan. The Navy has succeeded in sustaining the fielding timeline for the future force despite constraints imposed by the current fiscal environment.

These fiscal challenges are reducing procurement rates for the baseline MQ-4C and P-8, as well as the improved sensors for these platforms. Timely and predictable system delivery is crucial to the Navy's plan for meeting the intent of the FY11 NDAA. Due to the ISR&T plan's dependence on timely fielding, continued Congressional support for the MQ-4C and P-8 programs is vital to transition success.

Fixed Wing Aircraft

The Department of the Navy plans to procure two KC-130Js included in the third year of the multi-service MYP and to continue product improvements. Targeted improvements include aircraft survivability through advanced electronic countermeasure modernization, and obsolescence upgrades to the Harvest HAWK ISR/Weapon Mission Kit.

Fielded throughout our active force, the Marine Corps declared IOC for the KC-130J in 2005, bringing increased capability, performance and survivability with lower operating and sustainment costs to the MAGTF. Forward deployed in support of ongoing operations since 2005, the KC-130J continues to deliver Marines, fuel and cargo whenever and wherever needed. In 2015 the KC-130J remains in high demand, providing tactical air-to-air refueling, assault support, Close Air Support (CAS) and Multi-sensor Imagery Reconnaissance (MIR) capabilities in support of Special Purpose MAGTFs and deployed MEUs.

First deployed in 2010, the bolt-on/bolt-off Harvest HAWK mission kit for the KC-130J continues to provide extended MIR and CAS capabilities. All six mission kits have been fielded and funding included in the FY 2016 budget request will be used to maintain operational relevance of this mission system through compatibility with additional Hellfire variants and an improved full motion video data-link.

The Marine Corps has received funds for 53 of the 79 KC-130J aircraft in the program of record. The three aircraft included in the FY 2013 budget would complete the Active Component (AC) requirement of 51 aircraft. However, the Marine Corps began using the AC backup aircraft to accelerate the Reserve Component (RC) transition from the legacy KC-130T aircraft to the more capable and efficient KC-130J in FY 2014. The two aircraft requested in the FY 2016 President's Budget ($216.7 million APN) will continue to increase KC-130J inventory as the Department strives to achieve Full Operational Capability in the RC. Delays in procurement would force the Marine Corps to sustain the KC-130T aircraft longer than planned at increased cost.

Unmanned Aircraft Systems (UAS)

The FY 2016 President's Budget funds entry into production of the MQ-4C Triton (formerly known as Broad Area Maritime Surveillance (BAMS)) with three LRIP aircraft in FY 2016. The FY 2016 President's Budget requests $227.2 million in RDT&E,N to continue Triton development activities, $150.9 million for Triton modernization, and $548.8 million of Aircraft Procurement, Navy (APN-4) for procurement of the first lot of LRIP aircraft and long lead materials for the second lot of LRIP aircraft.

Triton will start establishing five globally-distributed, persistent maritime ISR orbits beginning in FY 2018, as part of the Navy's Maritime ISR&T transition plan. MQ-4C Triton test vehicles have completed 21 total flights as of February 3, 2015, and are on schedule to begin sensor integration testing in the Spring of 2015. This rigorous integrated flight test program will support a Milestone C planned for FY 2016. The MQ-4C Triton is a key component of the Navy Maritime Patrol Reconnaissance Force. Its persistent sensor dwell, combined with networked sensors, will enable it to effectively meet ISR requirements in support of the Navy Maritime Strategy.

The Navy currently maintains an inventory of four U.S. Air Force Global Hawk Block 10 UAS, as part of the BAMS Demonstrators (BAMS-D) program. These aircraft have been deployed to CENTCOM's area of responsibility for over six years. BAMS-D recently achieved over 14,000 flight hours in support of CENTCOM ISR tasking. These assets are adequate to cover all Navy needs through FY 2018.

The MQ-8 Fire Scout is an autonomous vertical takeoff and landing tactical UAV (VTUAV) designed to operate from any suitably-equipped air-capable ship, carry modular mission payloads, and operate using the Tactical Control System (TCS) and Line-Of-Sight Tactical Common Data Link. The FY 2016 budget requests $52.8 million RDT&E,N to continue development of the MQ-8C endurance baseline, to include integration of ISR payloads, radar and short range air to surface weapons. Funding will also be used to continue payload and Frigate integration with the MQ-8B and MQ-8C. The FY 2016 President's Budget requests $142.5 million APN for procurement of MQ-8C air vehicles, MQ-8 System ground control stations, ancillary, training and support equipment, technical support and logistics to outfit the suitably-equipped, air-capable ships and train the associated Aviation Detachments. Commonality of avionics, software, and payloads between the MQ-8B and MQ-8C has been

maximized. The MQ-8B and MQ-8C utilize the same ship-based ground control station and other ship ancillary equipment.

Fire Scout was deployed to Afghanistan from May 2011 until August 2013, and amassed more than 5,100 dedicated ISR flight hours in support of U.S. and coalition forces. Since 2012, the MQ-8B Fire Scout has flown more than 6,800 hours from Navy frigates, performing hundreds of autonomous ship board take-offs and landings in support of SOF and Navy operations. Fire Scout deployed on LCS for the first time in November 2014 aboard USS *Fort Worth* (LCS 3). The MQ-8C Fire Scout continues developmental test and has completed phase II dynamic interface testing aboard USS *Jason Dunham* (DDG 109). The MQ-8C has flown more than 350 flight hours since October 2013. The Fire Scout program will continue to support integration and testing for LCS-based mission modules.

The TCS provides a standards compliant, open architecture, with scalable C2 capabilities for the MQ-8 Fire Scout air vehicle. In FY 2016, TCS will continue to transition the Linux operating system to a technology refreshed mission control system and enhance the MQ-8 System's Automatic Identification System and sensor track generation integration with ship systems. The Linux operating system conversion overcomes hardware obsolescence issues with the Solaris based control stations and provides lower cost software updates using DoD common application software. In addition, the TCS Linux upgrade will enhance collaboration with the Navy's future unmanned aircraft system common control station.

The Unmanned Carrier Launched Airborne Surveillance and Strike (UCLASS) system will provide the CSG with a persistent, unmanned, Intelligence, Surveillance, Reconnaissance, and Targeting (ISR&T) and precision strike capability that is available organically to the CSG and comprehensively to the Joint Force. The UCLASS system will enhance the CSGs capability and versatility and enable sustained 24/7 operations from a single aircraft carrier. The FY 2016 President's Budget requests $134.7 million in RDT&E,N for UCLASS system development efforts. This funding will continue progress on the Control System & Connectivity and Carrier Segments and the government Lead System Integrator efforts pending a limited competition for the Air Segment among the contractors that previously completed the Preliminary Design Review. The requirements for the Air Segment will reflect the results of the DoD-wide Strategic Portfolio Review (SPR) of ISR&T systems and the future composition of the carrier air wing. This will delay the award of the UCLASS Air Vehicle segment by at least one year. The UCLASS system will be integrated with carrier air wing operations, increasing the effectiveness

of current CSG ISR&T capabilities (airborne, surface, and sub-surface) by the FY 2022 timeframe. Once deployed, the UCLASS System will inherently provide reach-back to Navy and National architectures for command and control (C2) and for tasking, processing, exploitation, and dissemination. The UCLASS system will achieve these capabilities through the development and integration of a carrier-suitable, semi-autonomous, unmanned Air System; a Control System and Connectivity Segment; and the *Nimitz* class carrier. The development and integration effort is overseen by the Government as the Lead Systems Integrator, providing system-of-systems integration for the UCLASS Program.

The UCLASS Program builds on the knowledge gained through the UCAS Demonstrator (UCAS-D) efforts. The UCAS-D program advanced maritime technologies and provided risk mitigation for the UCLASS system. The UCAS-D program is in its final year of funding ($36.0M in FY 2015) with Autonomous Aerial Refueling test flights scheduled this spring.

Weapons

Ship Defense is based on the concept of layered defense with each layer reducing the raid size until the threats are eliminated. The Navy has made significant strides in extending the fleet's defensive battle-space as well as improving the capabilities of the individual ship defense layers. Standard Missile – 6 (SM-6) provides theater and area defense for the fleet and with integrated fire control has more than doubled defensive battle-space. SM-6 continues to successfully demonstrate the integrated fire control capability with two more successful tests completed in 2015. The highly maneuverable Evolved SeaSparrow Missile (ESSM) Block 2 leverages the SM-6 active guidance section architecture to improve ship self-defense performance against stressing threats. Rolling Airframe Missile (RAM) Block 2 will achieve IOC in 2015, providing improved terminal ship defense from the higher maneuverability and improved threat detection. Through the combination of expanding the battle-space and improving the capabilities of each layer, the Navy is successfully pacing the anti-ship cruise missile threat. Affordability continues to be a focus for weapons. International cooperation on ESSM and RAM results in our allies funding 50% or more of the program costs. By leveraging investment in previous designs, the Navy's development, production, and maintenance costs are reduced. The increased capabilities inherent in these new designs can also support the use of these weapons in additional roles thereby creating multi-mission weapons from existing designs. The FY 2016 President's Budget provides the funds required for these critical activities.

The Tomahawk Weapons System is the Navy's premier precision strike standoff weapon for deep strike against various fixed and re-locatable targets and can be launched from both Surface Ships and Submarines. The current variant is the Tactical Tomahawk (TACTOM BLK IV), which preserves Tomahawk's long-range precision-strike capability while significantly increasing responsiveness and flexibility. TACTOM's improvements include in-flight retargeting, the ability to loiter over the battlefield, in-flight missile health and status monitoring, and battle damage indication imagery (providing a digital look-down "snapshot" of the battlefield via a satellite data link). Other Tomahawk improvements include rapid mission planning and execution via Global Positioning System (GPS) onboard the launch platform and improved anti-jam GPS.

The FY 2016 President's Budget requests $184.8 million in WPN for procurement of an additional 100 BLK IV TACTOM vertical launch system weapons and associated support, $71.2 million in OPN for the Tomahawk support equipment, and $25.2 million in RDT&E to minimize factory shutdown time until the start of BLK IV recertification and modernization in FY 2019. The BLK IV recertification and upgrade program includes advanced communications, electronics, and software navigation upgrades that will ensure Tomahawk BLK IV remains operationally viable until the end of its service life in the 2040s. The Navy is determining whether there are warfighter capability gaps in light of advances and proliferation of adversary anti-access/area denial technology that may be addressed via additional Tomahawk upgrades.

For ASuW, President's Budget FY 2016 continues to accelerate the acquisition of the Long Range Anti-Ship Missile (LRASM) air-launched variant, which will achieve early operational capability on F/A-18E/F aircraft in FY 2019 as an Increment I capability. As part of the long-term strike weapon strategy, the Department is investing in a Next Generation Strike Capability (NGSC) that includes a survivable, long range, multi-mission, multi-platform conventional strike capability by the mid-2020s. NGSC will combine the current maritime Offensive Anti-Surface Warfare (OaSuW) Increment II and Next Generation Land Attack Weapons (NGLAW) projects into a single multi-mission development effort as the acquisition follow-on program to the current OASuW Increment I (LRASM) and Land Strike (Tomahawk Modernization) investments. NGSC will focus on assessing, maturing and incorporating emergent technologies to determine the best path forward for the follow-on improved land/maritime strike capabilities.

Expeditionary Warfare

The concept of Expeditionary Warfare allows the U.S. to exploit the seas as maneuver space and as a base for global power projection. It allows us to be forward and to be ready when the nation most needs us. Our ability to deploy from the sea in austere environments at a time and place of our choosing gives us significant tactical, operational and strategic advantages over potential enemies.

The Navy and Marine Corps operate as a team to give the Combatant Commanders and our Nation the options needed to engage with our partners, to deter our adversaries and, when needed, to fight and win. In the 36th Commandant's planning guidance he emphasized the "inherent flexibility, scalability, and combined arms capability" of the MAGTF. That capability is primarily the product of our disciplined, well trained, and motivated Sailors and Marines, but it is enabled by the amphibious ships, the aircraft and the weapons discussed earlier. As important to our expeditionary warfare capabilities, however, is the ability to maneuver ashore and to fight and win once there. That ability is provided through the combination of connectors to move the ground force from the sea base to the ashore objective and the organic capability of the ground force to maneuver and fight ashore.

Connectors

The Seabasing Joint Integrated Concept requires surface and vertical lift capability to transport personnel, supplies and equipment from within the sea base and maneuver them to objectives ashore. Surface and aviation connectors with enhanced speed and range will provide future expeditionary force commanders greater flexibility to operate in contested environments. While the aviation component of our connector capability has seen significant modernization with the fielding of the MV-22 and continuation of the CH-53K program, our primary surface connectors, the landing craft air-cushion (LCAC) and the Landing Craft Utility (LCU) are reaching the end of their service life and require modern replacements.

The President's FY 2016 Budget includes the Ship to Shore Connector (SSC) air-cushioned vehicles as the replacement for the aging LCAC while also continuing investment in the LCAC service life extension program (SLEP) of 72 active LCACs to mitigate the gap as the SSC is developed and fielded. A planned Surface Connector (X)-Recapitalization (SC(X)) program will recapitalize the aging LCU 1610 class.

These platforms are essential in connecting the combat power and logistical sustainment that the sea base provides, with the forces that are operating in the littorals and inland for all missions. The Department will continue to explore future connector options that will increase our ability to exploit the sea as maneuver space by increasing range, speed, and capacity.

Ground Forces

The focus of our ground modernization efforts continues to be our ground combat and tactical vehicle (GCTV) portfolio, along with the C2 systems needed to leverage the entire MAGTF once ashore.

Ground Combat and Tactical Vehicles (GCTV)

The Marine Corps GCTV portfolio modernization programs account for approximately 50 percent of the Marine Corps ground modernization investment. The overarching priority within the GCTV portfolio is the replacement of the legacy Amphibious Assault Vehicle (AAV) with modern armored personnel carriers (APCs) through a combination of complementary systems. The Amphibious Combat Vehicle (ACV) program is the Marine Corps' highest ground modernization priority and will use an evolutionary, incremental approach that consists of two increments, ACV 1.1 and ACV 1.2. Increment 1.1 will field a personnel carrier; Increment 1.2 will improve personnel carrier capabilities over Increment 1.1 and will deliver C2 and recovery and maintenance mission role variants.

ACV Phase 1.1 modernizes 2 of our 10 amphibious vehicle companies. The AAV Survivability Upgrade Program (SUP) improves AAV capability in 4 of the 10 companies, in order to support MEU deployments and when globally sourced, provide the essential capacity necessary for the assault echelons of two MEBs. ACV Phase 1.2 will modernize the remaining 4 of 10 companies. This combination of a modern amphibious armored personnel carrier alongside the improved AAV generates a complementary set of capabilities to meet general support lift capability and capacity requirements of our Ground Combat Element.

In parallel with these modernization efforts, a science and technology portfolio is being developed to explore a range of high water speed technology approaches to provide for an affordable, phased modernization of legacy capability to enable extended range littoral maneuver. These efforts will develop the knowledge necessary to reach an informed decision

point in the mid-2020s on the feasibility, affordability, and options for developing a high water speed capability for maneuver from ship-to-shore.

The second highest priority within the portfolio remains the replacement of a portion of the high mobility, multi-purpose, wheeled vehicle (HMMWV) fleet that is most at risk; those trucks that perform a combat function and are typically exposed to enemy fires. In partnership with the Army, the Marine Corps has sequenced the Joint Light Tactical Vehicle (JLTV) program to ensure affordability of the entire GCTV portfolio while replacing one third of the legacy HMMWV fleet with modern tactical trucks prior to the fielding of ACV 1.1.

These core Marine Corps modernization efforts have been designed in a manner to ensure their affordability. However, if the budget is fully sequestered in FY 2016 or beyond, it will jeopardize both the timing and resources required to undertake this strategy and greatly affect our ability to achieve our requirements in both vehicle fleets.

Amphibious Combat Vehicle 1.1

Leveraging demonstrated mature technologies, ACV Phase 1.1 will be acquired as a modified non-developmental item (NDI) and is approved to enter the acquisition phase at Milestone B. A request for proposal will be released in the spring of this year with an expected Engineering and Manufacturing Design (EMD) contract award to two vendors in the fall of 2015 and a competitive down-select for production in FY2018. The acquisition objective (AO) of 204 vehicles will provide lift for two infantry battalions and will achieve IOC in FY 2020. The aggressive acquisition schedule for ACV 1.1 requires full funding and support from Congress.

AAV Survivability Upgrade Program (AAV SUP)

AAV SUP is a well-defined program to increase the capability of the current vehicle by providing force protection upgrades to counter current and emerging threats to the underside of the vehicle. Specifically, the program will provide improved armor, spall liners, blast mitigating seats and protected fuel storage. These improved AAVs will play an essential role in facilitating ship-to-shore mobility until replaced via a future phase of the ACV program. A contract award to one of the two competing vendors will be announced in the coming months. Funding supports continuation of the EMD phase and associated prototyping and testing. The AO for the program is 392 vehicles with IOC in FY2019.

Joint Light Tactical Vehicle (JLTV)

The Department remains firmly partnered with the U.S. Army in fielding a JLTV that lives up to its name, while also being affordable. JLTV will deliver a modern reliable truck with M-ATV protection and unarmored HMMWV land mobility and transportability performance to begin replacing the highest risk portions of our light fleet in 2018. The JLTV has effectively controlled ownership costs by maximizing commonality, reliability, and fuel efficiency, while achieving additional savings through effective competition in all stages of program execution. The program is scheduled to complete the Engineering and Manufacturing Development stage later this year, down-select to one of three competing vendors and begin the production and deployment phase. Funding for major activities in this budget includes test and evaluation, procurement of 109 LRIP assets, and associated government furnished equipment procurement, publications and technical data.

Ground Force Command and Control

Critical to the success ashore of the MAGTF is our ability to coordinate and synchronize our distributed C2 sensors and systems. Our modernization priorities in this area are the Ground/Air task Oriented radar (G/ATOR) and the Common Aviation Command and Control System (CAC2S) Increment I. These systems will provide modern, interoperable technologies to support real-time surveillance, detection and targeting and the common C2 suite to enable the effective employment of that and other sensors and C2 suites across the MAGTF.

Ground/Air Task Oriented Radar (G/ATOR)

G/ATOR will support air defense, air surveillance, counter-battery/target acquisition, and aviation radar tactical enhancements; the final evolution will also support the Marine Corps' air traffic control mission. G/ATOR Block 1 provides air defense and air surveillance capability, achieved Milestone C in 2014 and is currently procuring LRIP units. G/ATOR Block 2 provides counter-battery/target acquisition and is in the EMD phase of acquisition. Funding in this budget includes RDT&E funding for the development of G/ATOR Block 2, procurement funding supporting the LRIP of two G/ATOR Block 1 systems and the refurbishment of one G/ATOR EDM.

Common Aviation Command and Control System (CAC2S)

Phase I Limited Deployment Capability was achieved 2nd Quarter FY2012 and the initial fielding of was complete during 4th Quarter FY2013. Phase 2 addresses the remaining Air Combat Element (ACE) Battle Management and C2 requirements. Phase 2 is currently in the EMD Phase with a Milestone C scheduled for the second quarter of FY 2015. Funding in this budget supports the assembly and IOT&E of the first four Limited Deployment Units. Phase 2 completion will result in the delivery of the full CAC2S Increment I capabilities and is planned to begin fielding in FY 2017. The approved AO is 50 systems.

Other Ground Programs

Individual Marines are the foundation of the Marine Corps, the MAGTF and our expeditionary capability. In addition to the major programs described above, this budget supports the continued delivery of required warfighting capabilities to our individual Marines and our flexible MAGTF structure in a timely and affordable manner. The Marine Corps continues to invest in the weapons, individual protective equipment, tactical radios, training systems, and information technology necessary to ensure an effective and efficient fighting force and keep faith with our commitment to those individual Marines who shoulder the burden and privilege of being America's expeditionary force in readiness.

Summary

The Department of the Navy continues to instill affordability, stability, and capacity into the shipbuilding, aviation, and combat vehicle plans to advance capabilities and meet the DSG and Fleet mission requirements. Our force is focused on global reach and access with investments to enable global presence, sea-control, mission flexibility, and when necessary, interdiction.

Continued Congressional support of the Navy's plans and budgets will help sustain a viable shipbuilding industrial base. The FY 2016 President's Budget request funds nine ships, two DDG 51 destroyers, three LCS, two *Virginia* class submarines, one LPD 17, and one T-AO(X). The request supports the right balance between requirements, affordability, and the industrial base.

Naval Aviation is aligned to meet our international responsibilities and national imperatives, and will continue to focus on balancing the challenges of national defense within

the margins of tighter budget constraints, all while fulfilling demands for persistent multi-role ISR, supporting maritime patrol capabilities, and targeting modernization of the force for relevance and sustainability.

As America's expeditionary force in readiness, the Marine Corps modernization investments will ensure continued capability to project power from the sea and provide a powerful response and credible deterrent to aggression anywhere in the littorals. A modern survivable ACV is a critical component of our amphibious capability and the Department of the Navy is committed to embarking on this program with well-defined required capabilities, technical maturity, and affordability of this once in a generation acquisition program.

The Navy and Marine Corps stand ready to answer the call of the Nation. We thank you for your continued support of the Navy and Marine Corps and request your support of the FY 2016 President’s Budget for the Department of the Navy.