Highlights of the Department of the Navy FY 2017 Budget
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Note: All photographs in this document were obtained from the Department of the Navy's official website, http://www.navy.mil/, and the Marine Corps' official website, http://www.marines.mil/, and are available for public use.

The estimated total cost for the Department of Navy budget justification material is approximately $1,834,000 for the 2016 fiscal year. This includes $75,000 in supplies and $1,759,000 in labor.

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SECTION I – OVERVIEW

The United States of America is a maritime nation. For more than two centuries, the Navy and Marine Corps have operated throughout the world to protect American citizens and defend U.S. interests by responding to crises and, when necessary, fighting and winning wars. Forward-deployed and forward-stationed naval forces use the global maritime commons as a medium of maneuver, assuring access to and enabling overseas commerce, defending key interests in those areas, protecting our citizens abroad, and preventing our adversaries from leveraging the world's oceans against us. The ability to sustain operations in international waters far from our shores constitutes a distinct advantage for the United States—a Western Hemisphere nation separated from many of its strategic interests by vast oceans. Maintaining this advantage in an interconnected global community that depends on the oceans remains an imperative for our Sea Services and the Nation.

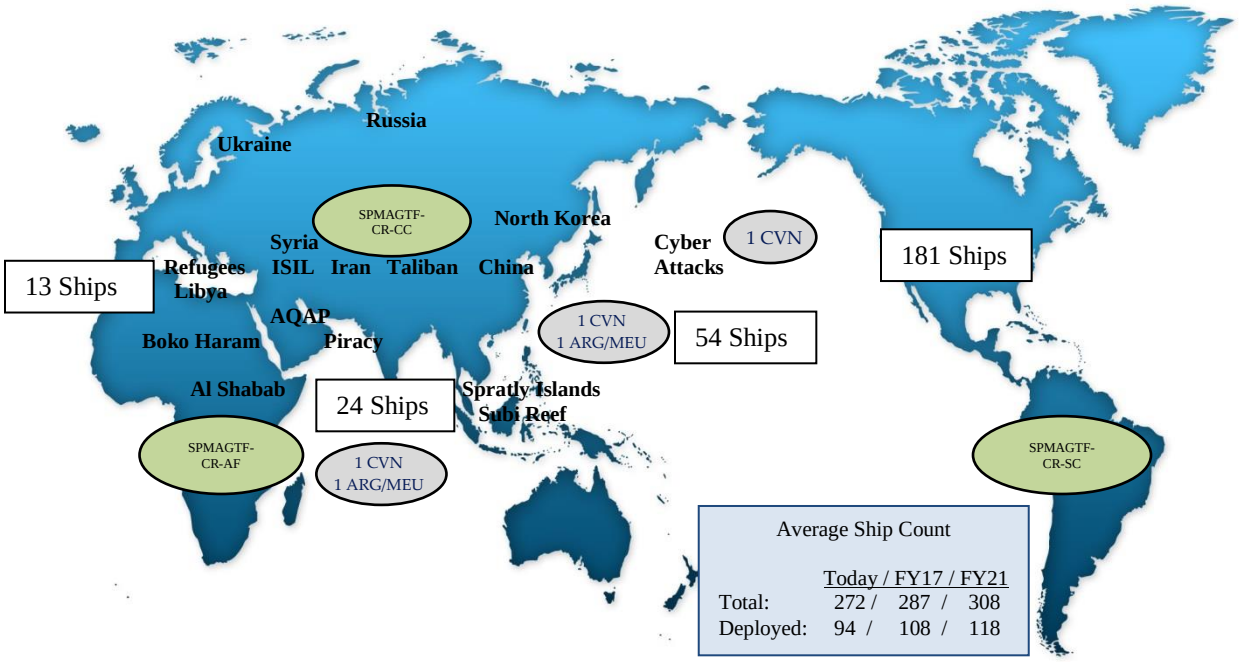
Today's global security environment is characterized by the rising importance of the Indo-Asia-Pacific region, the ongoing development and fielding of anti-access/area denial (A2/AD) capabilities that challenge our global maritime access, continued threats from expanding and evolving terrorist and criminal networks, the increasing frequency and intensity of maritime territorial disputes, and threats to maritime commerce, particularly the flow of natural resources and fuel.

In addition to the risks emerging in this turbulent 21st Century, there are opportunities as well—many facilitated by the Sea Services through routine and constructive engagement with allies and partners. Chief among them is the potential for a global network of navies that brings together the contributions of like-minded nations and organizations around the world to address mutual maritime security challenges and respond to natural disasters.

America's Sea Services uniquely provide forward postured capability around the globe. During peacetime and times of conflict, across the full spectrum—from supporting an ally with humanitarian assistance or disaster relief to deterring or

defeating an adversary in battle—Sailors and Marines are deployed at sea and in far-flung posts to be wherever we are needed, when we are needed. Coming from the sea, we get there sooner, stay there longer, bring everything we need, and do not have to ask for anyone's permission. Figure 1 shows areas of active DON involvement in 2015.

Figure 1 – DON 2015 Engagements



The FY 2017 President's Budget balances current readiness needed to execute assigned missions while sustaining a highly capable fleet. The DON budget balances risk in today's requirements and those required to counter 21st century threats. In the near term, there are gaps in training and maintenance that create readiness risks in the event of a major contingency. In the longer term, there are also risks: a dynamic and increasingly dangerous security environment, especially as potential adversaries develop greater military capability, and forces straining to handle multiple simultaneous contingencies. This budget reflects a base DON Future Years Defense Program (FYDP) from 2017 to 2021 of $826.4 billion, $1.6 billion higher than the FYDP presented with the FY 2016 budget; the FY 2017 base budget for the Department is $155.4 billion, a decrease of $8.2 billion (five percent). The FY 2017 request for Overseas Contingency Operations (OCO) is $9.5 billion.

The FY 2017 budget funds construction of 38 ships across the FYDP. Emphasizing stability in shipbuilding in order to affordably deliver warfighting requirements, the

budget supports steady production of destroyers and submarines; ten destroyers, nine submarines, and one *Ohio* replacement are constructed through FY 2021. The FYDP shipbuilding construction program also includes funding for the *Ohio* Replacement Program Advance Procurement beginning in FY 2017, one CVN-21, one LHA replacement, seven LCS ships, four T-AO(X) fleet oilers, one LX(R), four T-ATS, and continued funding for the refueling and overhaul of USS GEORGE WASHINGTON (CVN 73). PB17 also continues to finance the detailed design and construction of the second Ford Class carrier and provides the second year of Advanced Procurement for the third.

The budget supports a balanced manned and unmanned aviation procurement plan of 476 aircraft over the FYDP. The successful testing of the carrier variant (CV) of the Joint Strike Fighter (JSF) on USS NIMITZ (CVN-68) in 2014, followed by the successful operational testing of the Short Takeoff and Vertical Landing (STOVL) variant on the USS WASP (LHD-1) in 2015, continues JSF program progression. The F-35B reached initial operational capability in July 2015 with a squadron of ten ready for deployment worldwide. The Navy and the Marine Corps procure a combined total of 161 JSF aircraft of both variants across the FYDP. The Marine Corps invests heavily in rotary wing aircraft, accelerating the procurement of the final 78 AH-1Z/UH-1Y helicopters, and procures 24 MV-22 Ospreys. The first 24 Navy V-22 Carrier Onboard Delivery (COD) aircraft will be procured starting in FY 2018. Investment in unmanned systems includes nineteen MQ-4 Triton Unmanned Aircraft Systems through FY 2021, with first deployment to the Pacific in FY 2017, the procurement of nine MQ-8C Vertical Takeoff Unmanned Aircraft Systems, and 25 RQ-21A Blackjack Unmanned Aircraft Systems. Aviation investments in the FYDP also include procurement of airborne early warning aircraft (23 E-2D), presidential helicopters (17 VH-92A), heavy lift helicopters (40 CH-53K), aerial refueling tankers (10 KC-130J), sixteen F/A-18E/F Super Hornets, and the final thirty P-8A Poseidon multi-mission maritime aircraft.

The FY 2017 budget funds an FY 2017 fleet of 287 Battle Force Ships. As with the FY 2016 request, this budget funds baseline and OCO flight hours for the Navy and Marine Corps to deploy at a 2.0 T-rating. Ship Operations are funded to 58 days/quarter deployed and 24 days/quarter non-deployed with OCO. Ship Depot maintenance is funded to 70 percent in the base budget, and 100 percent with OCO.

Aviation Depot Maintenance is funded to capacity at the Fleet Readiness Centers, 85 percent of the total requirement in base and OCO funding (76 percent in base). Marine Corps ground equipment maintenance is funded at 79 percent of requirement. The FY 2017 base budget request funds sustainment of Navy shore facilities at 70 percent and Marine Corps at 74 percent.

To provide the required ability to deter aggression and respond to emerging security threats—including extremist organizations, pandemic diseases and natural disasters—we must maintain the proper force strength. Both the Navy and Marine Corps are on path to align with the force structure required by strategy, following periods of reduction. The Navy has drawn down from 383,000 in FY 2002, and will end the FYDP at 323,100. The Marine Corps is coming down from a peak of 202,000 in FY 2009 to a sustained level of 182,000 in FY 2017 and beyond. Our Marines will continue returning to their expeditionary roots, with an enhanced ability to operate from sea. Civilian personnel levels grow slightly to accommodate shipyards, security, and acquisition, while maintaining the force as engineers, scientists, medical professionals, and skilled laborers.

The Department remains challenged to meet Combatant Commander (COCOM) demands for forces, and associated higher-than-planned operational tempo over the past decade, while dealing with constrained levels of funding. Surgeable forces have decreased due to high operational tempo and deferred maintenance, a reduction in aircraft and weapons procurement, and risks taken against support infrastructure. This budget continues to put a priority on readiness while maintaining the minimum investment necessary to maintain an advantage in advanced technologies and weapons systems. While we have accepted some risk in weapons capacity and delayed certain modernization programs, this budget provides us with the best balance to keep the Navy and Marine Corps as a ready and decisive force.

The Department has been challenged to build the capability for full-spectrum warfighting to deter high-end adversaries. This budget takes calculated risk in balancing today's requirements and those required to counter 21st century threats, with gaps in training and maintenance that create readiness risks in the event of a major contingency. The Department prioritizes investments in modernization efforts

to recapitalize our forces and maintain an effective, safe, and secure nuclear deterrent, including weapons and systems to enhance reliability and survivability of our nuclear strike capability, and command and control (C2) networks.

Overall, the Department's investments in readiness and infrastructure in PB17 are essential to generating the combat ready forces that support the DoD global posture spanning the Middle East, Europe, Africa, the Western Pacific, and South America.

STRATEGIC GUIDANCE

The FY 2017 President's Budget is developed from the priorities established in the 2014 Quadrennial Defense Review (QDR). The QDR sets ten missions for the Department, arranged under three objectives—protect the homeland, build security globally, and project power and win decisively.

Protect the Homeland

- Maintain a safe, secure, and effective nuclear deterrent
- Fight terrorism through counter-terrorism/irregular warfare operations
- Defend the homeland and provide support to civil authorities
- Counter weapons of mass destruction

Build Security Globally

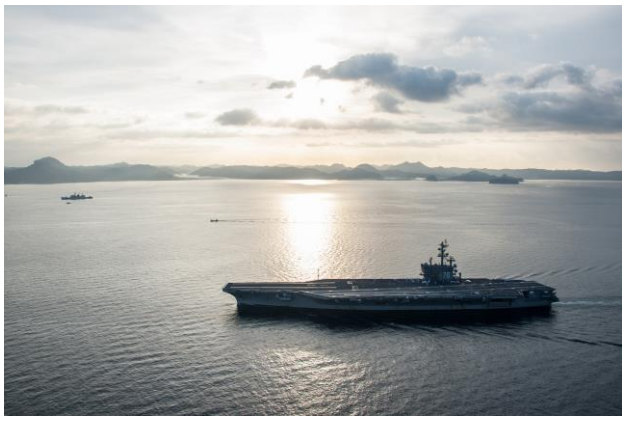
- Provide a stabilizing presence across the globe
- Conduct stability and counterinsurgency operations
- Conduct humanitarian, disaster relief, and other operations

Project Power and Win Decisively

- Defer and defeat aggression
- Project power despite anti-access/area denial challenges
- Operate effectively in space and cyberspace

In addition to these three objectives and ten missions, the QDR also directs the Department to prepare for 21st century conflicts and to maintain the strength of our All-Volunteer Force. The Marine Corps will return to a smaller, more agile sea-based force, as outlined in "Expeditionary Force 21." Furthermore, the implementation of the Marine Corps "Advance to Contact Fragmentary Order One" places special emphasis on modernization of both deployments and focused exercises. This will be accomplished through advanced training and emerging technologies. Additionally, we will evaluate innovative new ways to integrate

Marine Corps operations with Navy, Coast Guard, Special Forces, and international partners.



The Department has identified three major forces that energize the rapidly changing environment in which the Navy must operate to fight and win. The first is increased traffic on the oceans, seas, waterways, and the sea floor. The maritime system is becoming more heavily used, stressed, and contested than ever before. The second force is the increasing rise of the global information system, including information that rides on servers, undersea cables, satellites, and wireless networks that connect the globe. The third force is increasing rate of technological creation and adoption, including robotics, energy storage, 3-D printing, and low-cost networks. The Navy will need to respond with greater agility and creativity across the entire spectrum of action at and from the sea.

The Department will move forward to address these forces by executing four Lines of Effort that focus on warfighting, learning, faster, strengthening our Navy team, and building partnerships. The Navy will enhance power at and from the sea by providing a combat-ready Fleet, trained and deployed to protect U.S. interests while deterring conflict. We will learn better and faster by employing best techniques and technologies to accelerate learning. We will also adopt our processes to be inherently receptive to innovation and creativity. We will strengthen our one Navy team of Sailors and Civilians who are trained masters of their craft, who share our core values and are empowered to use their own initiative. The Navy will expand and strengthen our network of partners by building deepened operational relationships with other services, agencies, industry, allies and partners who support our shared interests.

PEOPLE, PLATFORMS, POWER, AND PARTNERSHIPS

Four key factors sustain the DON's warfighting advantage and global presence; these factors are the Secretary of the Navy's priority areas:

- **People** provide the critical asymmetric advantage in today's complex world. The DON will continue to prioritize the correct size of deployment

capabilities to meet operational demands; afford the initiative for new concepts and strategy to develop at all levels; and, to ensure the proper training, readiness and mental and physical well-being of Sailors, Marines and their families.

- **Platforms** span the ships, aircraft, submarines, tactical vehicles, and unmanned vehicles that provide the capability and capacity underpinning the DON's global combat-ready presence. The budget supports expanding aspects of information warfare, specifically in the areas of space and cyber security. This approach is essential to providing the platforms needed to execute our missions.
- **Power** and energy get the platforms where they need to be and keep them there. The DON continues to make progress toward greater energy security, building on a record of energy innovation from sail to coal to oil to nuclear to bio fuels, wind, and solar power.
- **Partnership** initiatives strengthen the capacity of existing partnerships, while developing key alliances through joint exercises, operations, and broad leadership engagement. This has made the DON a more interoperable force better prepared and more widely available to prevent and respond to crises.

INNOVATION

To face the threats of tomorrow, our force must continue to evolve and innovate to meet the challenges of a changing world. Our security depends on a future force that is able to harness the best and brightest talent that our nation has to offer. The Secretary of the Navy is initiating manpower reforms to the military's personnel system to achieve a modernized force. High profile changes such as opening all occupations to women, new maternity leave policies, and physical fitness assessment and body composition assessment reforms are accompanied by other initiatives such as more proactive outreach to retain talent and restructuring of bonuses to reward performance. The Navy is encouraging high velocity learning as individuals, teams, and organizations through tools and technologies that prioritize creativity and agility. These and other changes emerging from Sailor 2025 initiatives and the Secretary of Defense's Force of the Future initiatives are designed to offer careers that are flexible, option-oriented, and competitive. By leading in this area, Navy will continue to provide the exceptional manpower capable of operating the most technologically-advanced Navy in the world.

The Department of the Navy has been at the forefront of innovation for over 240 years whether it was the Constitution's inventive battle armor, ship-borne tactical

aviation, nuclear powered ships and submarines, ballistic missile defense capability and now our fifth generation fighter aircraft and multi-mission ships. We must continue to be leaders not only in innovation, but also in the velocity with which it is deployed. This effort will be accomplished through our high quality people, better use of information, and quicker maturation of ideas. We must take advantage of opportunities from our advances in technology, information systems, and the sciences. We must innovate to not only keep pace with emerging technology but also to bridge challenges in today's fiscal environment to required capabilities for tomorrow's global security. Innovation will be accomplished through five key efforts:

- Build a Naval Innovation Network where we partner with private sector to accelerate how we develop and field new ideas and methods. Greater access to tools, training, and technology will help transform Navy and Marine Corps capabilities and workforce.
- Manage the talent of the DON workforce through systems that will better inform career paths, career options and provide more flexibility. Sailor 2025 will provide high velocity learning through tools such as simulators, gaming, and other technologies that prioritize creativity as well as agility.
- Transform DON use of information by empowering decision makers through information sharing across organizations to enable innovation to thrive.
- Accelerate new capabilities to the Fleet by creating test beds for emerging operational capabilities to accelerate their delivery to the warfighter. This is necessary to keep pace with rapidly evolving technology in the world around us.
- Develop game-changing warfighting concepts by increasing the frequency and breadth of DON war gaming and then applying outcomes for future capability.

FORWARD PRESENCE, POSTURE, AND PARTNERHIP

Naval forces operate forward to shape the security environment, signal U.S. resolve, and promote global prosperity by defending freedom of navigation in the maritime commons. By expanding our network of allies and partners and improving our

ability to operate alongside them, naval forces foster the secure environment essential to an open economic system based on the free flow of goods, promote stability, deter conflict, and shorten our response time to aggression. During crises, forward naval forces provide the President immediate options to defend our interests, de-escalate hostilities, and keep conflict far from our shores. During wartime, forward naval forces fight while preserving freedom of access—and action—for follow-on forces.

The DON's budget submission provides forward postured capabilities of 308 ships by 2021, up from 280 at the end of 2016, to be "where it matters, when it matters." This includes forward-based naval forces in Guam, Japan, and Spain; forward-operating forces deploying from overseas locations such as Singapore; and rotationally-deployed forces that operate from the United States. To provide forward presence more efficiently and effectively, we continue to implement the following force employment innovations:

- Continue planned increasing of forward-based forces abroad to reduce costly rotations and deployments, while boosting in-theater presence.
- Provide globally distributed and networked expeditionary forces in concert with our allies and partners to increase effective naval presence, strategic agility, and responsiveness.
- Employ modular designed platforms to allow mission modules and payloads to be swapped instead of entire ships, saving time and money.

CYBER

The Department continues funding of cyberspace capabilities, including training and equipping cyber mission forces, investments in cyber Science and Technology, and information assurance activities to strengthen our ability to defend the network. In 2015, based on recommendations from Task Force Cyber Awakening, the Navy stood up its enduring Cyber Security Organization, which demonstrates our continued commitment to prioritizing cyber investments particularly in shipboard and aviation platforms. The FY 2017 budget added funding for non-recurring engineering to establish control points and boundary defense across afloat Hull, Machinery & Electrical, Navigation and Combat Control Systems; development of control point defense capabilities for aviation control systems; and investment in Cyber Situational Awareness.

RESOURCE SUMMARY

Total Obligation Authority (TOA) for the FY 2017 DON baseline budget is $155.4 billion. Figure 2 displays the DON topline. Over the FYDP the FY 2017 budget request decreases $8.2 billion from the FY 2016 President's Budget levels. Figure 3 displays the FY 2017 President's Budget request by Appropriation Title. Figure 4 displays individual Department of the Navy appropriation estimates.

Figure 2 – DON Annual Budget in FY 2016 Constant Dollars, FY 2012 – FY 2021 (Dollars in Billions)

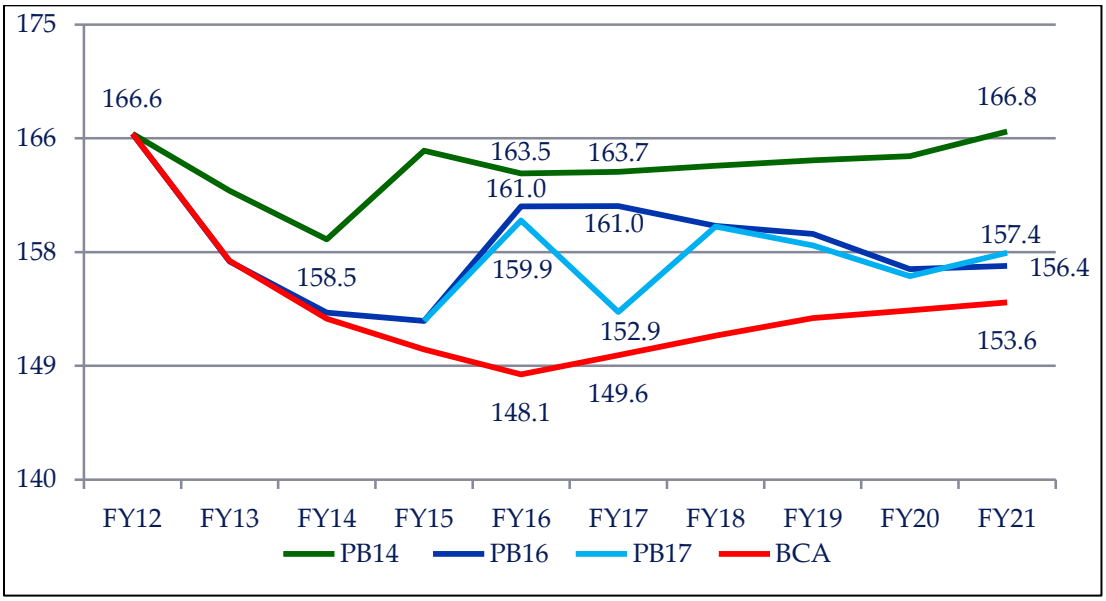


Figure 3 – FY 2017 DON Budget by Appropriation Title ($155 Billion)

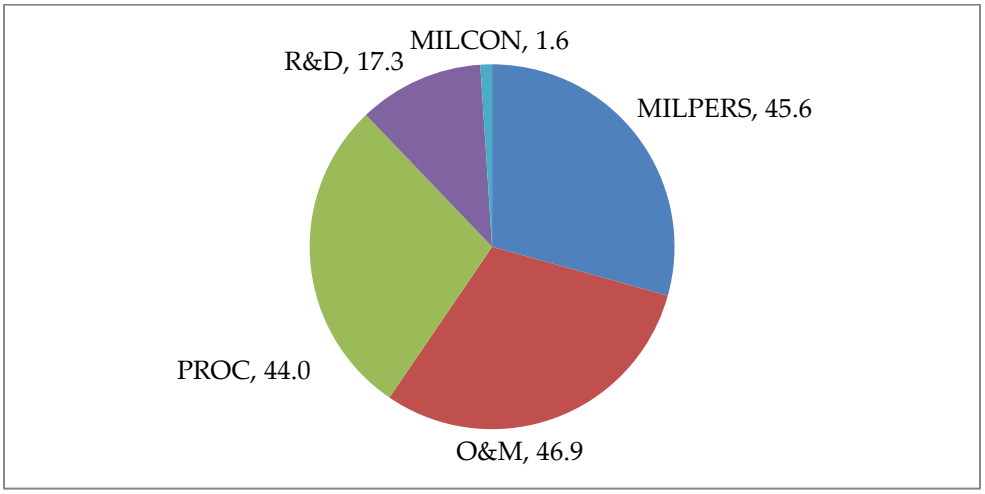


Figure 4 – Appropriation Summary, FY 2015- FY 2017

(In Millions of Dollars)	FY 2015	FY 2016	FY 2017
Military Personnel, Navy	27,380	27,704	27,952
Military Personnel, Marine Corps	12,741	12,818	12,813
Reserve Personnel, Navy	1,873	1,867	1,924
Reserve Personnel, Marine Corps	691	702	745
Medicare-Eligible Retiree Health Fund Contribution, Navy	1,313	1,281	1,241
Medicare-Eligible Retiree Health Fund Contribution, MC	748	726	703
Medicare-Eligible Retiree Health Fund Contribution, Res Navy	125	116	112
Medicare-Eligible Retiree Health Fund Contribution, Res MC	74	68	65
Operation and Maintenance, Navy	38,000	38,946	39,484
Operation and Maintenance, Marine Corps	5,627	5,677	5,954
Operation and Maintenance, Navy Reserve	1,000	957	928
Operation and Maintenance, Marine Corps Reserve	270	274	271
Environmental Restoration, Navy	0	300	282
Aircraft Procurement, Navy	14,755	17,719	14,109
Weapons Procurement, Navy	3,173	3,050	3,209
Shipbuilding and Conversion, Navy	15,995	18,705	18,355
Ship Modernization and Sustainment	294	0	0
Other Procurement, Navy	6,281	6,484	6,339
Procurement, Marine Corps	893	1,187	1,363
Procurement of Ammunition, Navy/Marine Corps	674	652	664
Research, Development, Test, and Evaluation, Navy	16,030	18,111	17,276
Military Construction, Navy and Marine Corps	1,084	1,704	1,028
Military Construction, Naval Reserve	56	36	39
Family Housing, Navy (Construction)	16	17	94
Family Housing, Navy (Operations)	345	353	301
National Defense Sealift Fund	508	474	0
Base Realignment & Closure	225	170	134
SUBTOTAL	**150,171**	**160,097**	**155,385**
Navy	***127,822***	***136,900***	***132,018***
Marine Corps	***22,349***	***23,197***	***23,366***
Overseas Contingency Operations	10,341	9,273	9,476
TOTAL	**160,512**	**169,370**	**164,861**

NOTE: OCO details in Section VIII

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SECTION II – PERSONNEL

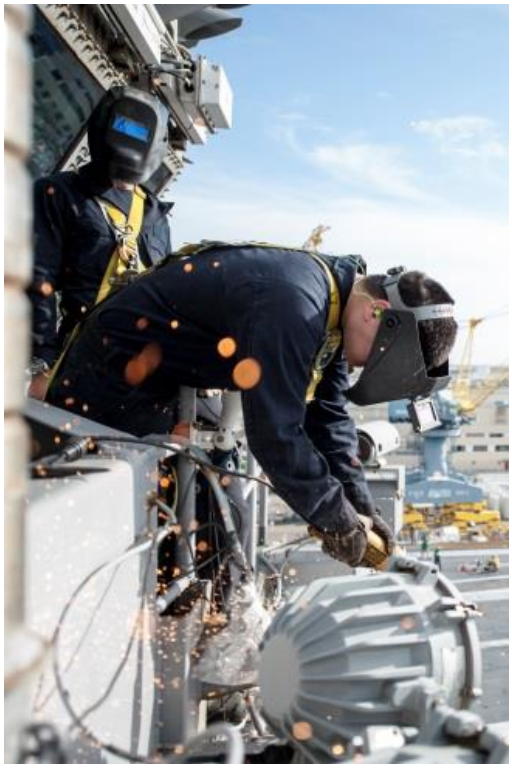
OVERVIEW

Sailors, Marines, Civilians, and their families enable the Navy and Marine Corps to remain ready, forward, and engaged in challenging times. The men and women who comprise today's all-volunteer military are of superb caliber, and we continue to invest to sustain this impressive force.

MILITARY PERSONNEL

Active Navy Personnel

The Department's military personnel are the cornerstone of the Navy. Our mission objectives are accomplished because Sailors adhere to our core values enhancing the trust and confidence of the American people. Over the next five years the Navy will continue to make adjustments to properly size manpower accounts to reflect force structure decisions, reduce manning gaps at sea, and improve Fleet readiness. This will result in FY 2017 active duty manning at 322,900 and supports a FYDP goal of 50,000 Sailors underway on ships, submarines and aircraft, with more than 100 ships deployed overseas on any given day. Critical to our success is a continued focus in FY 2017 on recruiting, developing, retaining and promoting the best Sailors, to maintain the optimal mix of personnel with the right skills and experience to man the Fleet. To fight and win, we need a force that draws from the broadest talent pools, values health and fitness, attracts and retains innovative thinkers, provides flexible career paths, and prioritizes merit over tenure. We continue to implement Navy fitness initiatives, provide for more adaptive workforce opportunities, and further performance-based advancement programs. We increase female accessions and open all operational billets to women while providing extended maternity leave. We expand the Career Intermission Program, as well as



Secretary of the Navy sponsored Industry Tours, and grow the number of meritorious advancements, rather than relying solely on a points system. The Navy's goal is to deliver the right training at the right time to the right Sailor for the right job by focusing on quality, not just quantity of training. To this end, in FY 2017 we begin to fully invest in the Sailor 2025 Ready Relevant Learning initiative, which through pilot programs will begin to create a new way of training our Sailors through mobile, modularized learning, re-engineered content, and a distributed Learning Continuum IT infrastructure. Improvements to training will include employing gaming technology, simulation environments, virtual reality, modular training, and mobile environment training that will accelerate Sailors learning and on-the-job skills. Our goal is to increase the tempo and efficiency with which we train, and adapt our processes to be receptive to innovation and creativity for the individual, the team, and the institution.

The FY 2017 Military Personnel, Navy (MPN) budget requests resources to support Navy manpower, personnel, training, and education. The budgeted end strength in FY 2017 is 322,900; approximately 4,400 lower than the estimated end-of-year end strength for FY 2016. Major changes from FY 2016 include increasing end strength to support Anti-Terrorism/Force Protection (AT/FP) enhancements, retaining Helicopter Sea Combat Squadron 85 (HSC-85) and establishing associated Tactical Support Units, funding HM squadron wholeness to improve safety and training, funding to historic Officer execution levels, disestablishing our 10th Carrier Air Wing with its aircraft realigned to other wings, aligning Cruiser manpower to the FY 2017 modernization plan, and reducing the student Individual Account (IA) due to training efficiencies realized from the Sailor 2025 Ready Relevant Learning investments. This budget continues to reduce distributable inventory friction and improve Fleet readiness. Additionally, it increases junior officer billets to ensure the billet base reflects the work required.

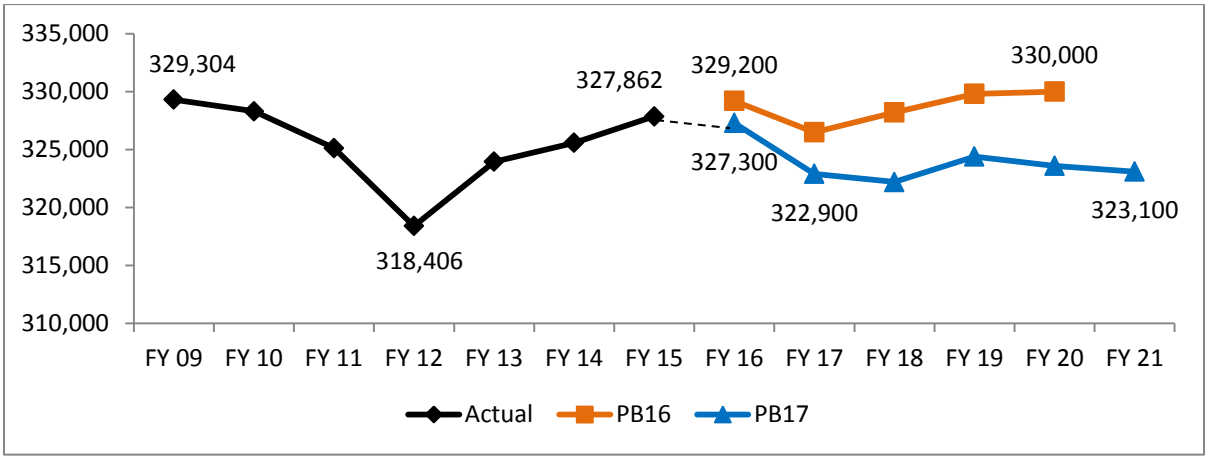
The Navy will continue improving the quality of life for Sailors and implementing quality of service initiatives begun in prior years. We will provide a comprehensive package of pay and benefits that is limited in its growth, but rewards Sailors assigned to deployable units by providing increased sea pay, special and incentive

pays for critical skill-sets, and compensation for Sailors underway for extended deployments. We will manage our personnel strength to deliver a naval force that produces leaders and teams who learn and adapt to achieve maximum possible performance, and who achieve and maintain high standards to be ready for decisive operations and combat. Navy active military manpower is reflected in Figures 5 and 6.

Figure 5 - Active Navy Personnel Strength

	FY 2015	FY 2016	FY 2017
Officers	54,223	54,333	54,112
Enlisted	269,172	268,524	264,420
Midshipmen	4,467	4,443	4,368
Total: Strength	**327,862**	**327,300**	**322,900**

Figure 6 – Active Navy End Strength Trend



Reserve Navy Personnel

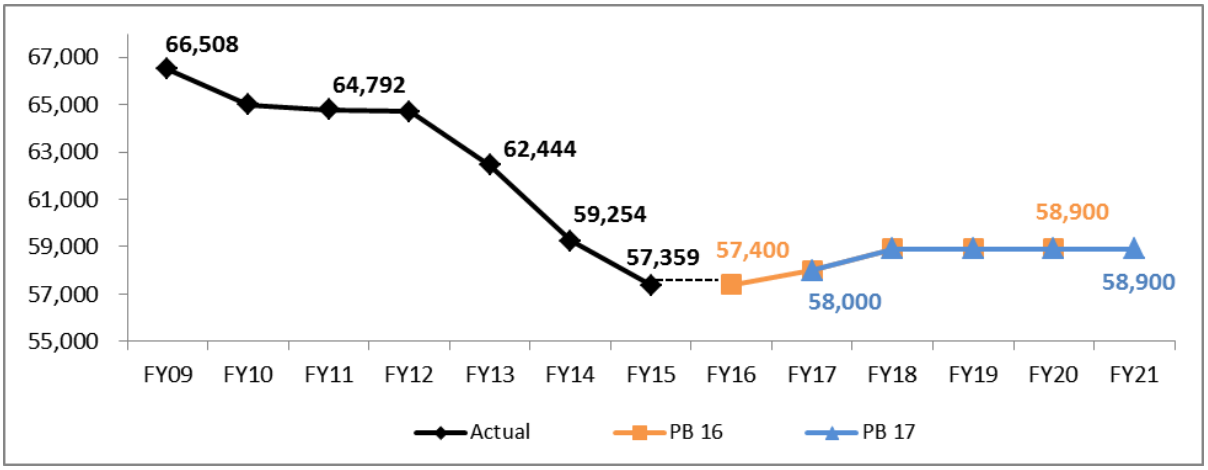
The FY 2017 Reserve Personnel, Navy (RPN) budget request supports 58,000 Selected Reservists and Full Time Support personnel delivering strategic depth and operational capability to the Navy, Marine Corps, and Joint Forces. Today's Navy Reserve is a ready and agile force, whose military and civilian skills are strongly leveraged to support mission accomplishment. The contributions of Navy Reserve personnel span the full range from vital wartime surge capabilities that are kept ready at minimal cost to operational warfighting capabilities that are used daily around the globe. The Navy is committed to extending its return on investment

with initiatives promoting the continuum of service for its combat proven Sailors. To achieve this end, Navy Reserve end-strength will grow from FY 2016 to FY 2017, as shown in Figures 7 and 8. Reductions in headquarters activities will be offset by previously planned increases in the cost-effective shipyard surge maintenance workforce and cyber warfare mission team personnel. Investments in operational units will include the full restoral of Helicopter Sea Combat Squadron Eight Five (HSC-85), an effort to retain combat experience and expand Special Operations Forces (SOF) support training across the Fleet. Additionally, in response to the July 2015 active shooting at Navy Operational Support Center (NOSC) Chattanooga, TN, fully trained and ready anti-terrorism/force protection (ATFP) security personnel will continue to be surged for protection of our off-installation facilities.

Figure 7 – Reserve Navy Personnel Strength

	FY 2015	FY 2016	FY 2017
Drilling Reserve	47,509	47,466	48,045
Full Time Support	9,850	9,934	9,955
Total: Strength	57,359	57,400	58,000

Figure 8 – Reserve Navy End Strength Trend



Active Marine Corps Personnel

The United States Marine Corps is America's premier expeditionary force, ready to respond to any crisis. Marines are the first responders to any situation, priding

themselves on being the "right force at the right place at the right time." Figures 9 and 10 provide Marine Corps manpower levels.

The FY 2017 Military Personnel, Marine Corps (MPMC) budget requests funds an active duty end strength of 182,000 and remains at this level through the FYDP. The drawdown from 202,000 is complete as we continue to manage our personnel strength to deliver an affordable, sustainable force that meets mission needs.

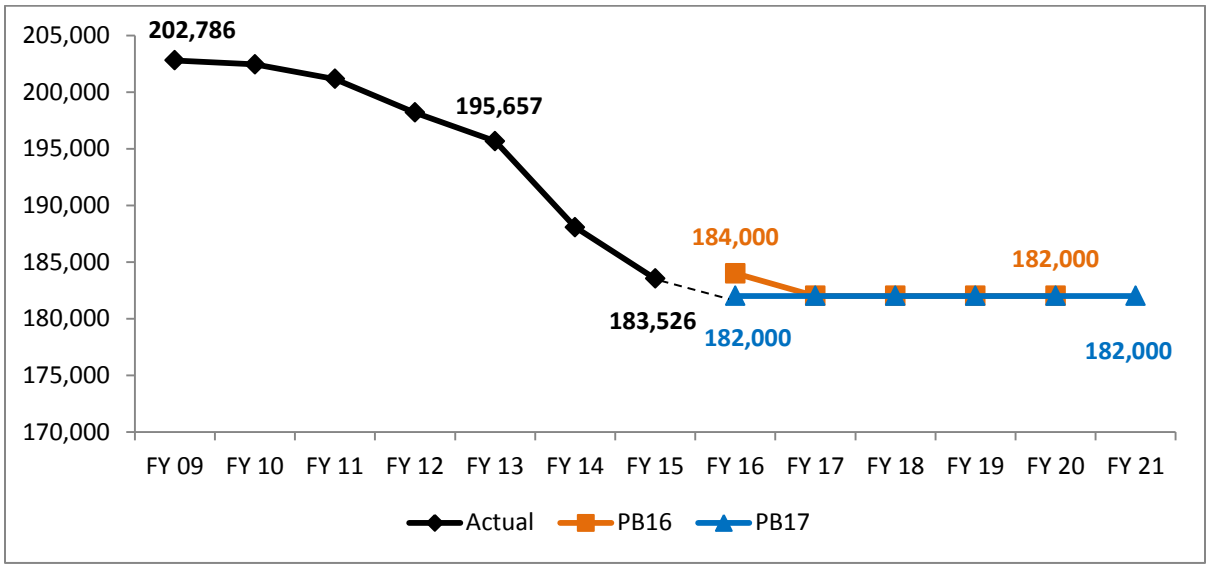
The Marine Corps is positioned to respond across the range of military operations and continues to transition from post-OIF/OEF while supporting Operation Resolute, Inherent Resolve and Freedom Sentinel. The Marine Corps is prepositioning Special Purpose Marine Air-Ground Task Forces (MAGTFs) in Africa, Kuwait, and Central America in order to conduct Theater Security Cooperation (TSC) and protect diplomatic facilities and U.S. citizens abroad. The Marine Corps also sources Western Pacific deployments through the Unit Deployment Program, and operations against the Islamic State of Iraq and the Levant.

OCO funding is requested for deployed pay and allowances in support of contingencies, mobilized reservists to support continued operations in the U.S. Central Comment (CENTCOM) area of operations, and continued support of wounded, ill, and injured Marines.

Figure 9 - Active Marine Corps Personnel Strength

	FY 2015	FY 2016	FY 2017
Officers	20,645	20,912	20,912
Enlisted	162,881	161,088	161,088
Total: Strength	**183,526**	**182,000**	**182,000**

Figure 10 – Active Marine Corps End Strength Trend



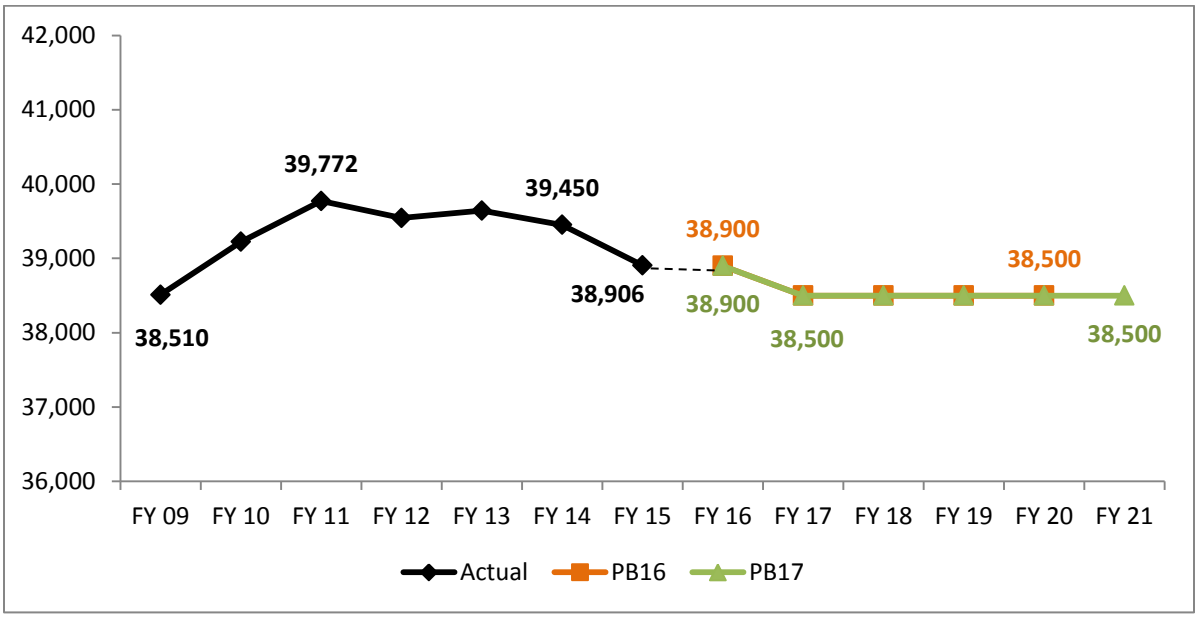
Reserve Marine Corps Personnel

The FY 2017 request supports Marine Corps Reserve strength of 38,500, as indicated in Figures 11 and 12. The Marine Corps Reserve maintains a 'Ready-Relevant-Responsive' force capable of seamlessly augmenting and operating as a part of the Total Force to fulfill Combatant Commander and Service rotational and emergent requirements. The Marine Corps Reserve will focus on readiness, core competencies, and the health of the force in order to meet these objectives. The budget provides pay and allowances for drilling reservists, personnel in the training pipeline, and full-time active reserve personnel.

Figure 11 - Reserve Marine Corps Personnel Strength

	FY 2015	FY 2016	FY 2017
Drilling Reserve	36,671	36,640	36,239
Full Time Support	2,235	2,260	2,261
Total: Strength	**38,906**	**38,900**	**38,500**

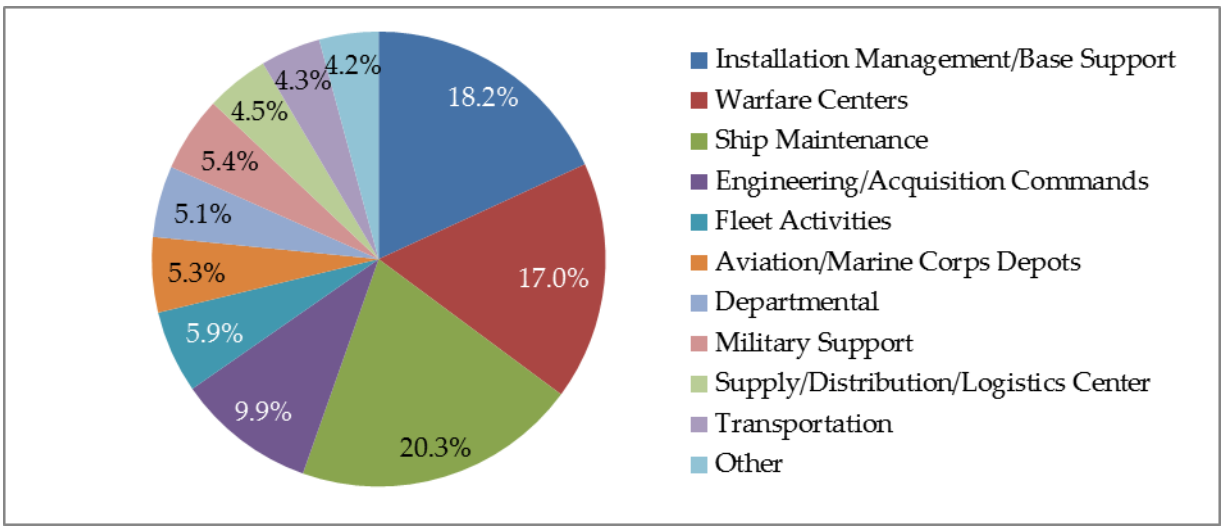
Figure 12 – Reserve Marine Corps End Strength Trend



CIVILIAN PERSONNEL

DON civilian employees are inextricably linked to the success of the Navy and Marine Corps team and our ability to operate and fight decisively around the globe. DON civilians operate across a broad spectrum of occupations from world-class researchers and scientists who develop cutting-edge equipment and weapons, to those that provide day-to-day technical, operational, and management capability to the Department. Figure 13 displays the diverse nature of the civilian workforce.

Figure 13 – Civilian Manpower Work Areas, FY 2017



Civilian career employees are in every single state in more than 558 different occupational series across the country helping to solve fleet issues— whether trouble-shooting a malfunction in a ship's propulsion plant or designing a future weapon. This technologically savvy workforce has received over 3,000 patents since 2000, ranking as one of the top entities worldwide for new discoveries and inventions. Simultaneously, there is an equally industrious workforce developing and manufacturing critical ordnance items, and repairing and maintaining our nuclear submarines, ships, and aircraft. To meet ever increasing challenges to meet mission objectives, the Department is committed to innovation from within the workforce. Norfolk Naval Shipyard, for example, has deployed a Rapid Prototype Lab which allows shipyard workers to submit ideas to simplify a process or reengineer equipment. Early results have shown better quality and improved efficiency in ship maintenance. Getting our ships and submarines back to the

warfighters allows them to answer the call, 24/7, providing a rapid response to our nation's needs.
Nearly half of the civilian workforce is comprised of engineers, logisticians, mathematicians, scientists, information technology, and acquisition specialists - many with critical certifications and advanced degrees. Approximately 35,000 are blue collar artisans. Veterans (to include Wounded Warriors and disabled veterans) comprise more than 50 percent of the DON civilian workforce.

This budget reflects our commitment to provide the necessary manning to support the warfighter. We are growing specific elements of our workforce to restore stressed readiness and to maintain maritime superiority. Ship maintenance workforce grows, with our Regional Maintenance Centers increasing Full-Time Equivalents (FTEs) to reduce the backlog that has accumulated from over a decade of increased Operational Tempo (OPTEMPO). We are adding personnel to our ship repair facility in Japan to meet the demand of homeporting two additional ships, and with this budget, our four public shipyards will meet the workforce goal of 33,530 FTEs. To handle the backlog of airframes requiring maintenance from increased flight hours in the Middle East, we have added artisans and engineers to our Fleet Readiness Centers. Finally, due to the increased dangers at home, we are greatly increasing security at our bases and facilities. We will protect our Sailors, Marines, civilians and their families whether at home or abroad.

In FY 2015, Secretary of Defense Hagel implemented a DoD-wide reduction to headquarters activities. This 20 percent funding reduction was to be implemented incrementally over five years. For this budget, an additional five percent has been added, bringing the total headquarters activities reduction to 25 percent by FY 2020. The Department is balancing a reduction to civilian personnel, headquarters contractor support, and the realignment of military billets to achieve this goal.

Figure 14 displays total civilian personnel FTEs by component, type of hire, and appropriation.

Figure 14 – DON Civilian Manpower Full-Time Equivalent

	FY 2015	FY 2016	FY 2017
Total - Department of the Navy*	198,642	201,496	203,317
By Component			
Navy	175,237	179,759	181,562
Marine Corps	23,405	21,737	21,755
By Type Of Hire			
Direct	186,367	190,458	191,879
Indirect Hire, Foreign National	12,275	11,038	11,438
By Appropriation/Fund			
Operation and Maintenance, Navy	93,650	97,445	99,560
Operation and Maintenance, Navy Reserve	782	812	835
Operation and Maintenance, Marine Corps	21,385	19,720	19,764
Operation and Maintenance, Marine Corps Reserve	259	253	250
Total - Operation and Maintenance	**116,076**	**118,230**	**120,409**
Base Closure and Realignment	47	55	55
Family Housing (Navy/Marine Corps)	625	705	702
Research, Development, Test, and Evaluation, Navy	860	1027	1026
Total - Other	**1,532**	**1,787**	**1,783**
Total - Working Capital Funds	**81,034**	**81,479**	**81,125**
FTE by Work Area			
Ship Maintenance (e.g., Shipyards)	38,103	39,944	41,245
Installation Management/Base Support	37,096	36,289	36,914
Warfare Centers	35,041	34,744	34,526
Engineering/Acquisition Commands (excludes PEOs)	20,242	20,123	20,162
Fleet Activities (e.g., Ship/Air Operations)	11,065	11,720	11,947
Military Support (e.g., Training, Quality of Life)	10,715	10,799	10,904
Aviation/Marine Corps Depots	10,413	10,786	10,873
Departmental (e.g., Navy/Marine Corps HQ, PEOs)	10,346	10,343	10,313
Supply/Distribution/Logistics Center	9,093	9,138	9,120
Transportation	9,055	8,888	8,724
Other	7,473	8,722	8,589

**Numbers do not include 85 FTEs in FY 2016 for Overseas Contingency Operations.*

MILITARY PERSONNEL, NAVY

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Pay and Allowances of Officers	7,642	7,660	7,809
Pay and Allowances of Enlisted	17,460	17,699	17,990
Pay and Allowances of Midshipmen	80	79	82
Subsistence of Enlisted Personnel	1,142	1,212	1,176
Permanent Change of Station Travel	905	902	741
Other Military Personnel Costs	150	153	154
Sub Total: MPN	**27,380**	**27,704**	**27,952**
Overseas Contingency Operations	332	251	331
Total: MPN	**27,712**	**27,955**	**28,282**

MEDICARE-ELIGIBLE RETIREE HEALTH FUND CONTRIBUTION, NAVY

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Health Accrual	1,313	1,281	1,241
Total: DHAN	**1,313**	**1,281**	**1,241**

RESERVE PERSONNEL, NAVY

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Reserve Component Training and Support	1,873	1,867	1,924
Sub Total: RPN	**1,873**	**1,867**	**1,924**
Overseas Contingency Operations	14	13	12
Total: RPN	**1,886**	**1,880**	**1,936**

MEDICARE-ELIGIBLE RETIREE HEALTH FUND CONTRIBUTION, NAVY RESERVE

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Health Accrual	125	116	112
Total: DHANR	**125**	**116**	**112**

MILITARY PERSONNEL, MARINE CORPS

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Pay and Allowances of Officers	2,702	2,732	2,763
Pay and Allowances of Enlisted	8,739	8,705	8,699
Subsistence of Enlisted Personnel	766	801	814
Permanent Change of Station Travel	432	468	433
Other Military Personnel Costs	102	112	104
Sub Total: MPMC	**12,741**	**12,818**	**12,813**
Overseas Contingency Operations	306	171	180
Total: MPMC	**13,047**	**12,989**	**12,993**

MEDICARE-ELIGIBLE RETIREE HEALTH FUND CONTRIBUTION, MARINE CORPS

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Health Accrual	748	726	703
Sub Total: DHAMC	**748**	**726**	**703**
Overseas Contingency Operations	14	-	-
Total: DHAMC	**762**	**726**	**703**

RESERVE PERSONNEL, MARINE CORPS

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
	691	702	745
Sub Total: RPMC	**691**	**702**	**745**
Overseas Contingency Operations	4	3	4
Total: RPMC	**695**	**706**	**749**

MEDICARE-ELIGIBLE RETIREE HEALTH FUND , MARINE CORPS RESERVE

(Dollars in Millions)

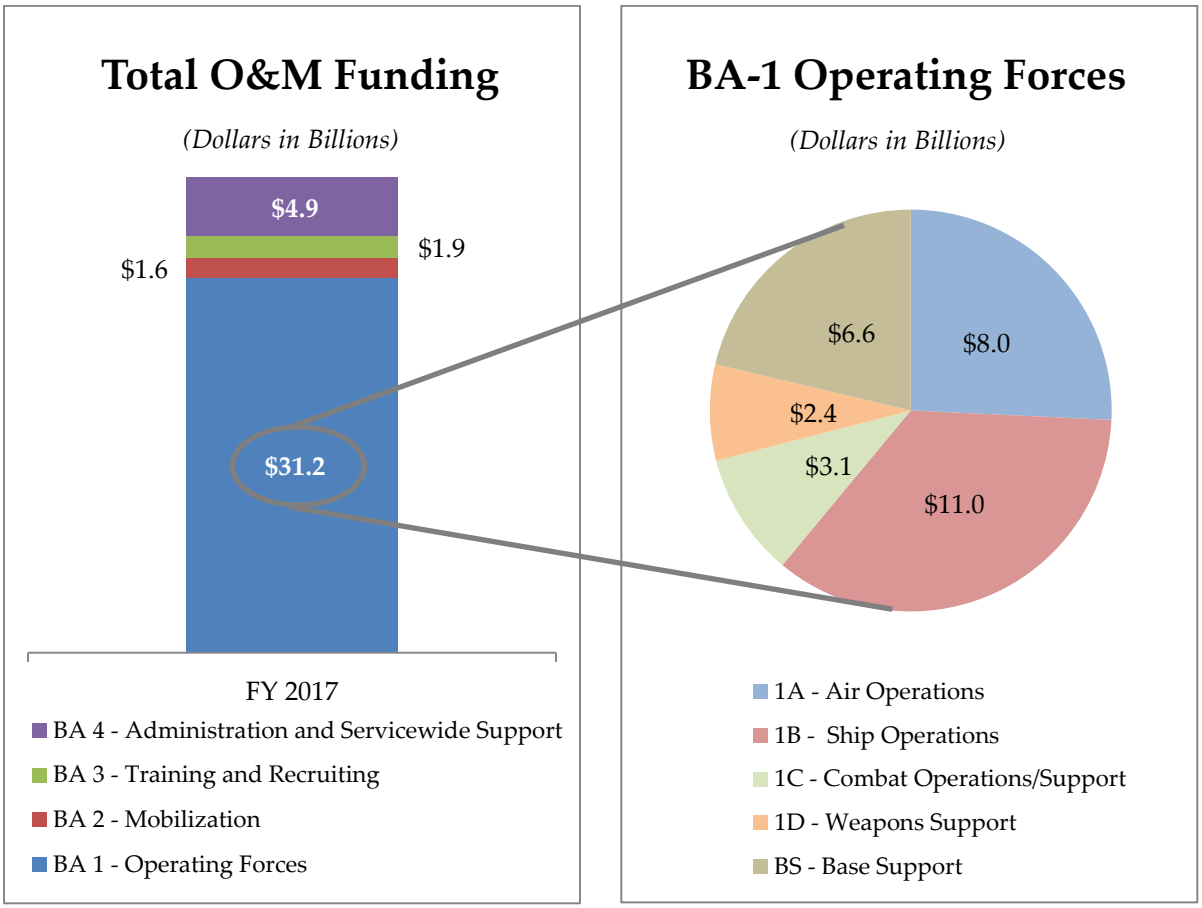
	FY 2015	FY 2016	FY 2017
Health Accrual	74	68	65
Total: DHAMCR	**74**	**68**	**65**

SECTION III – READINESS

NAVY OVERVIEW

The FY 2017 budget request supports requirements for our Carrier Strike Groups (CSGs), Amphibious Ready Groups (ARGs), and Marine Expeditionary Forces (MEFs) to respond to persistent and emerging threats. The Navy deploys full-spectrum-ready forces to further security objectives in support of U.S. interests. Every day, more than 100 ships and submarines, embarked and shore based air squadrons, and Navy personnel ashore, are on watch around the globe. The following figure displays the Navy's operation and maintenance funding in FY 2017.

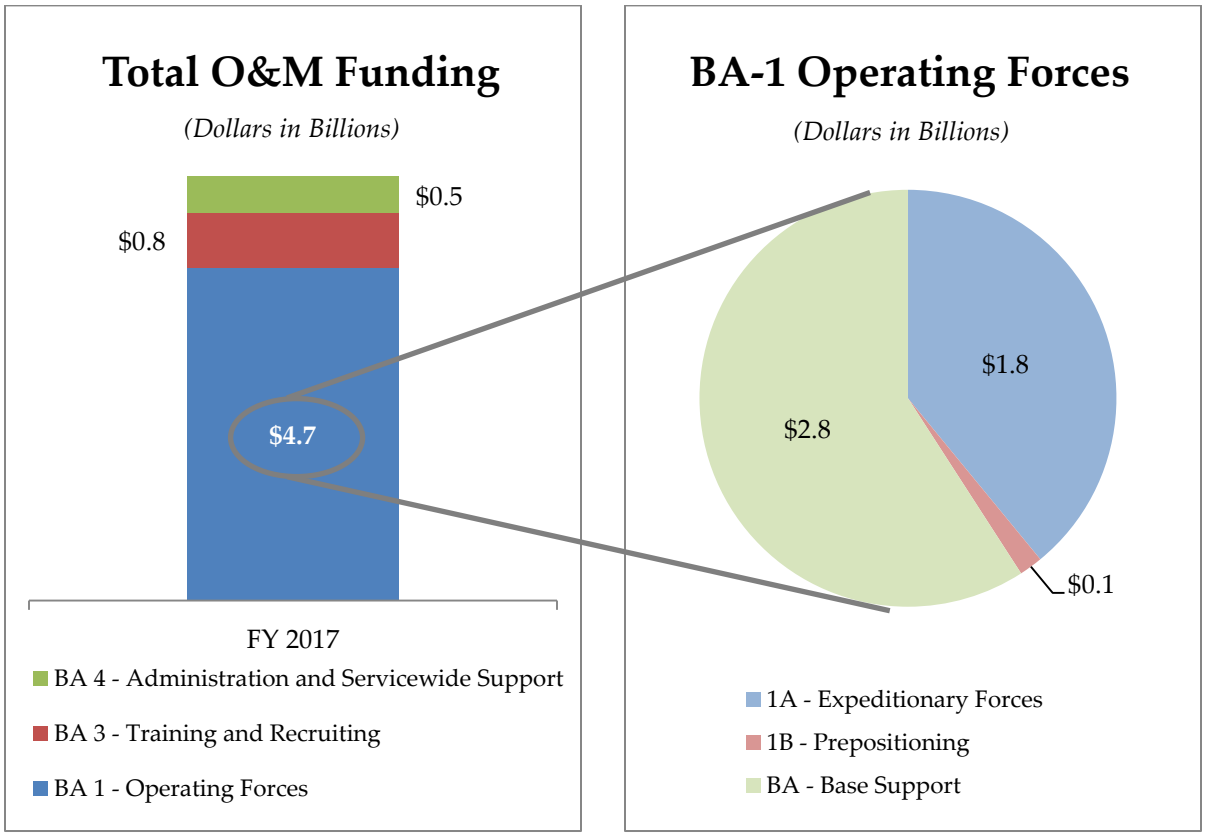
Figure 15 – FY 2017 Active Navy Operation and Maintenance (O&M) Funding



MARINE CORPS OVERVIEW

The FY 2017 budget provides the Nation with a ready Marine Corps that is forward postured conducting operations to defeat and deter adversaries, support partners, and create decision space for national leaders. The FY 2017 budget fiscally stretches the Marine Corps to maintain current readiness and conduct modernization required to keep pace with constantly evolving and capable adversaries. Figure 16 displays Marine Corps' O&M funding in FY 2017.

Figure 16 – FY 2017 Active Marine Corps O&M Funding



SHIP OPERATIONS

The Ship Operations program provides the Navy with critical mission capabilities. The budget provides for a deployable battle force of 287 ships in FY 2017, as shown in Figure 17. This level of operational funding supports eleven aircraft carriers and 32 large amphibious ships that serve as the foundation upon which our carrier and

amphibious ready groups are based. In FY 2017, 13 battle force ships will be delivered: two Nuclear Attack Submarines (SSN), four Littoral Combat Ships (LCS), two Expeditionary Fast Transport (EPF), one Amphibious Transport Dock (LPD), three Destroyers (DDG) and one *Zumwalt* Class Destroyer (DDG 1000). A total of six battle force ships will be retired: three Nuclear Attack Submarines (SSN), two Rescue and Salvage ships (T-ARS) and one Fleet Ocean Tug (T-ATF).

Figure 17 – DON Battle Force Ships

Category	Ship Type	FY 2015	FY 2016	FY 2017
Aircraft Carriers	CVN	10	11	11
Aircraft Carrier Total		**10**	**11**	**11**
Fleet Ballistic Missile Sub	SSBN	14	14	14
Guided Missile (SSGN) Subs	SSGN	4	4	4
Nuclear Attack Submarines	SSN	54	53	52
Submarine Total		**72**	**71**	**70**
Ticonderoga Class Cruiser	CG	22	22	22
Guided Missile Destroyers	DDG	62	63	66
Zumwalt-class Destroyers	DDG 1000	-	1	2
Littoral Combat Ship	LCS	5	10	14
Mine Countermeasures Ships	MCM	11	11	11
Surface Combatants Total		**100**	**107**	**115**
Amphibious Warfare Assault Ships	LHA	1	1	1
Amphibious Assault Ships	LHD	8	8	8
Amphibious Transport Docks	LPD	9	10	11
Dock Landing Ships	LSD	12	12	12
Amphibious Warfare Ships Total		**30**	**31**	**32**
Dry-Cargo Ammunition Ships	T-AKE	12	12	12
Fleet Replenishment Oilers	T-AO	15	15	15
Fast Combat Support Ships	T-AOE	3	2	2
Combat Logistics Ships Total		**30**	**29**	**29**
Submarine Tenders	AS	2	2	2
Ocean Surveillance Ship	T-AGOS	5	5	5
High-Speed Transport	T-HST	1	1	1
Amphibious Command Ship	LCC	2	2	2
Salvage Ships	T-ARS	4	4	2
Ocean Tugs	T-ATF	4	4	3
Expeditionary Fast Transport	EPF	5	7	9
Prepo Dry-Cargo Ammunition Ships	MPS T-AKE	2	2	2
Expeditionary Transfer Dock	T-ESD	2	2	2
Expeditionary Mobile Base	T-ESB	1	1	1
Afloat Forward Staging Base (Interim)	AFSB (I)	1	1	1
Command and Support Ships Total		**29**	**31**	**30**
Battle Force Ships		**271**	**280**	**287**

Note: FY 2016 represents end of year projections.

Active Ship OPTEMPO

The FY 2017 budget request supports the Optimized Fleet Response Plan (OFRP), enabling ships to surge and reconstitute by maintaining a continuous flow from maintenance after deployment, through basic phase training back to deployable ready assets. This is achieved through a goal of seven month deployments, with CSGs moving to a 36 month OFRP cycle beginning in FY 2015. This concept enables the Department to provide multiple CSGs to meet the threat and deliver decisive military force, if necessary. The DON will support these goals and respond to global challenges by planning for 45 underway days per quarter for the active OPTEMPO of our deployed forces and 20 underway days per quarter for non-deployed forces in the baseline. The OCO request will support additional deployed/non-deployed steaming of 13/4 days per quarter.

Mobilization

The Navy's mobilization forces, displayed in Figure 18, provide logistics capability that enables rapid response to contingencies world-wide. The prepositioning ship squadrons are forward deployed in key ocean areas to provide the initial military equipment and supplies for operation. The prepositioned response is followed by the surge ships, which are maintained in a reduced operating status from four to 30 days. The number of days indicates the time from ship activation until the ship is available for tasking; e.g., Reduced Operating Status 5 (ROS-5) indicates it will take five days to make the ship ready to sail, fully crewed and operational. Figure 19

reflects the hospital ships and the capacity measured by the number of patient beds for both the USNS MERCY and USNS COMFORT.

Figure 18 – Strategic Sealift

	FY 2015	FY 2016	FY 2017
Prepositioning Ships:			
Maritime Prepo Ships (O&M,N)	14	14	14
Army Prepo Ships (O&M,A)	7	7	7
Air Force Prepo Ships (O&M,AF)	2	2	2
Navy Prepo OPDS Ship with Tender (O&M,N)	1	1	1
Surge Ships:			
Large Medium-Speed RORO Ships (FY15-FY16: NDSF, FY17: O&M,N)	9	10	10
Container/RORO Ships (former Prepo) (FY15-FY16: NDSF, FY17: O&M,N)	5	5	5
Ready Reserve Force Ships (FY15-FY16: NDSF, FY17: O&M,N)	46	46	46
Prepositioning Capacity (millions of square feet)	4.8	4.8	4.8
Surge Capacity (millions of square feet)	10.1	10.5	10.5
Total Sealift Capacity (millions of square feet)	14.9	15.3	15.3

Figure 19 – Hospital Ships

	FY 2015	FY 2016	FY 2017
Hospital Ships:			
Hospital Ships (FY15-FY16: NDSF, FY17: O&M,N)	2	2	2
Hospital Ship Capacity (number of patient beds)	2,000	2,000	2,000

Ship Maintenance

The Department's organic ship maintenance program is mission funded in O&M. It provides funding for the Navy's public shipyards, regional maintenance centers, and intermediate maintenance facilities. In addition to continued support for the organic shipyard maintenance capabilities of the four major naval shipyards, the FY 2017 budget invests in private contract maintenance to help relieve pressure on the public shipyards and provide additional workload to the private sector industrial base, while also increasing contract management oversight in the private shipyards. These efforts prevent the more expensive future execution of deferred current work, maximize utilization of private and public maintenance capacity, and support OFRP implementation. The Department's active ship maintenance baseline budget supports 70 percent of the ship depot maintenance projected in FY 2017.

Figure 20 – Department of the Navy Ship Maintenance

(Dollars in Millions)	FY 2015	FY 2016	FY 2017
Active Forces			
Ship Depot Maintenance (SDM) BA-1, 1B4B	4,868	4,934	5,168
OCO Leverage for SDM	1,635	1,366	2,278
OCO for Ship Maintenance Reset	799	557	625
Title II to Title IX Congressional Shift	400	1,000	-
Section 9018 Readiness Funding	108	-	-
% of SDM funded with Baseline	69%	68%	70%
% of SDM Funded w/ Base & OCO	100%	100%	100%
Annual Deferred Maintenance	-	-	-
SDM Funding w/ OCO	**7,810**	**7,857**	**8,072**
Depot Operations Support BA-1, 1B5B	1,376	1,555	1,576
Total Ship Maintenance (1B4B, 1B5B, & OCO)	**9,186**	**9,412**	**9,647**

AIR OPERATIONS

Active Tactical Air Forces

The budget provides for the operation, maintenance, and training of nine active Navy Carrier Air Wings (CVWs) and three Marine Corps Air Wings in FY 2017, as reflected in Figure 21. Challenges exist in Navy and Marine Corps strike-fighter inventories. Until F-35B/C aircraft are available in required numbers, the Navy plans to mitigate the inventory challenge with service life extension of legacy F/A-18 A-D airframes to 8,000-10,000 hours (over original design of 6,000 hours). Extension of legacy Hornet life requires additional inspections and deep maintenance that were not originally envisioned for the aircraft. Average repair time has significantly increased because of required engineering of unanticipated repairs, material lead times, and increased corrosion of airframes. Throughput at Navy aviation depots is improving in FY 2016 and is projected to achieve required capacity by FY 2017, which will improve inventory, as shown in Figure 22.

Figure 21 – DON Aircraft Force Structure

	FY 2015	FY 2016	FY 2017
Active Forces	20	20	19
Navy Carrier Air Wings	10	10	9
Marine Air Wings	3	3	3
Patrol Wings	3	3	3
Helicopter Maritime Strike Wings	2	2	2
Helicopter Combat Support Wings	2	2	2
Primary Authorized Aircraft (PAA) - Active	**3,123**	**3,513**	**3,555**
Navy	2,147	2,314	2,328
Marine Corps	976	1,199	1,227
Total Active Inventory (TAI)	**3,965**	**4,094**	**4,140**

Figure 22 – DON Aircraft Inventory

Class Category	FY 2015	FY 2016	FY 2017
Anti Submarine	3	3	-
Attack	257	279	286
Fighter	58	58	58
In Flight Refuel	75	80	81
Patrol	164	202	204
Rotary Wing	973	996	1,041
Strike Fighter	1,161	1,169	1,159
Tilt Rotor	241	259	280
Training Jet	286	278	276
Training Prop	317	330	312
Training Rotary	115	119	119
Transport	110	107	107
UAV	75	77	81
Utility	31	31	31
Warning	99	106	105
Total	3,965	4,094	4,140

Aircraft OPTEMPO

Mission and Other Flight Operations include all Navy and Marine Corps Tactical Air (TACAIR) and Anti-Submarine Warfare forces, shore-based Fleet Air Support, and irregular warfare. Funding provides flying hours to maintain required levels of readiness enabling Navy and Marine Corps aviation forces to perform their primary missions as required in support of national objectives. The Flying Hour Support program provides funding for transportation and travel of equipment, squadron staff, and personnel. In addition, it provides funding for aircrew training systems, commercial air services, and various information technology systems. These support accounts enable the training for and execution of primary missions.

The Navy measures aviation readiness using the Defense Readiness Reporting System Navy. CVWs maintain varied training and readiness (T&R) levels in accordance with the Optimized Fleet Response Training Plan (OFRTP) in order to provide adequately trained aircrews across a 36 month deployment cycle.

Marine Corps TACAIR readiness differs in approach and requires a steady readiness profile to be maintained in order to be prepared to rapidly and effectively deploy on short notice for operational plans or contingency operations. The Marine Corps Aviation Plan (AVPLAN) directs the T&R requirements and resources to attain readiness levels over a 12 month snapshot of a USMC 36 month squadron training cycle. The AVPLAN aligns with Department requirements by implementing a comprehensive, capabilities-based training system that provides mission skill-proficient crews and combat leaders to the Combatant Commanders.

In FY 2017, readiness levels of deployed units and units training in preparation to deploy will be attainable; however, the readiness of non-deployed units remain below entitled levels due to the effects of F/A-18 A-D Legacy Hornet Out-of-Reporting (OOR) caused by aviation depot throughput challenges and the Ready Basic Aircraft gap caused by flight line maintenance and material support issues. The intent of FY 2017 funding is to ensure appropriate pre-deployment/deployment funding levels while recovering from the above issues by

realigning funding into engineering and program-related logistics, increasing engineering support to aviation depots and flight line assessments of aircraft to speed the repair process. FY 2017 funds aviation depot maintenance inductions to an executable level given the current level of work in process and funds nine CVWs in support of OFRP goals.

Aircraft Depot Maintenance

The aircraft depot maintenance program funds repairs, overhauls and inspections of aircraft and aircraft components to ensure sufficient quantities are available to meet fleet requirements to decisively win combat operations. An increase in production of airframes, engines, and components is a result of the increase in integrated maintenance capacity and standard depot level maintenance events. These events are associated with a shift in workload and unit cost mix for priority type/model/series in an effort to reduce OOR aircraft status. In addition, inductions for legacy F/A-18 A-D aircraft were increased with an associated increase in civilian maintenance personnel hiring in order to decrease the time to complete depot level maintenance caused by the number of high flight hours inspections and additional engineering work required after these inspections. Multiple actions are in progress to improve the throughput of Navy aviation depots to return required number of legacy F/A-18 A-Ds to the flight line and sustain all Navy aircraft type/model/series. The increase in aviation logistics is associated with the introduction of additional Primary Authorized Aircraft (PAA) to the F-35 program, the flight hours support for the F-35 Engine Performance Based Logistics (PBL) and Integrated Logistics Support (ILS) programs. Additionally, aviation logistics increases also support of USMC Ready Basic Aircraft (RBA) recovery efforts for the KC-130J and MV-22 aircraft. Figure 23 displays the funding and readiness indicators for aircraft depot maintenance and aviation logistics.

Figure 23 - Aircraft Depot Maintenance and Aviation Logistics

Aircraft Depot Maintenance (1A5A)

(Dollars in Millions)	FY 2015	FY 2016	FY 2017
Airframes	431	422	498
Engines	409	454	469
Components	35	33	41
Baseline	**875**	**909**	**1,008**
Overseas Contingency Operations	178	81	114
Total	**1,053**	**990**	**1,122**
Percent Funded of Total Requirement	93%	83%	83%

Aviation Logistics (1A9A)

(Dollars in Millions)	FY 2015	FY 2016	FY 2017
KC-130J Hercules	45	45	47
MV-22 Osprey	125	141	148
E-6B Mercury	52	55	57
F-35 Joint Strike Fighter	169	264	313
Baseline	**391**	**505**	**565**
Overseas Contingency Operations	44	34	36
Total	**435**	**539**	**601**

NAVY RESERVE OPERATIONS

The Department's Reserve Component operating forces consist of aircraft, combat equipment and support units, and their associated weapons. Funding is also provided to operate and maintain Reserve Component (RC) activities and commands in all fifty states plus Puerto Rico and Guam. This geographical diversity allows the Navy's Selected Reservists the opportunity to train outside of fleet concentration centers. The facility inventory remains at 132 for the Navy Reserves in FY 2017.

Reserve Component Air Forces

RC flying hour funding enables ready Navy and Marine Corps Reserve aviation forces to operate, maintain, and deploy in support of the Department's Strategic Guidance. The Naval Air Force Reserve, as shown in Figure 24, consists of one

Logistics Support Wing (12 squadrons), one Tactical Support Wing (five squadrons), one Maritime Support Wing (four squadrons), and two integrated Helicopter Mine Countermeasures squadrons. The 4th Marine Aircraft Wing consists of 10 squadrons and supporting units. Additions in FY 2017 include the commissioning of a Marine helicopter squadron (HMLA-775) at MCAS Camp Pendleton and the creation of a Navy Reserve Maritime Support Wing, which consolidates two maritime patrol squadrons and two helicopter squadrons. Also, the Department complied with congressional direction by resourcing Helicopter Sea Combat Squadron Eight Five (HSC-85) and will stand up two Tactical Support Units (TSU) to provide rotary wing support to Special Operations Forces (SOF).

Figure 24 – Reserve Component Aircraft Force Structure

	FY 2015	FY 2016	FY 2017
Reserve Forces Air Wings	**4**	**4**	**4**
Navy Tactical Support Air Wing	1	1	1
Navy Logistics Support Air Wing	1	1	1
Navy Maritime Support Air Wing	1	1	1
Marine Aircraft Wing	1	1	1
Primary Authorized Aircraft (PAA) – Reserve	**259**	**250**	**275**
Navy	153	136	143
Marine Corps	106	114	132

Reserve Component Aircraft Depot Maintenance

The RC aircraft depot maintenance program is integrated with the Active Component (AC) program to fund repairs, overhauls, and inspections. Figure 25 displays baseline and overseas contingency operations funding requests and readiness indicators for RC aircraft depot maintenance.

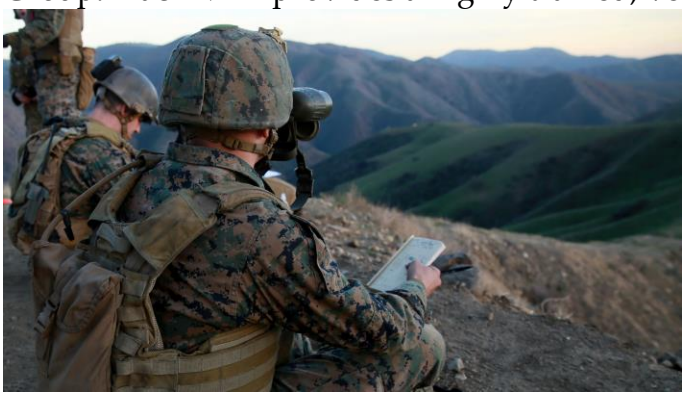
Figure 25 - Reserve Component Aircraft Depot Maintenance

(Dollars in Millions)	FY 2015	FY 2016	FY 2017
Reserve Forces			
Airframes	63	66	69
Engines	16	17	18
Baseline Reserve Aircraft Depot Maintenance	**79**	**83**	**87**
Overseas Contingency Operations	18	20	17
Total Reserve Aircraft Depot Maintenance	**97**	**103**	**104**
Percent Funded of Total Requirement	100%	95%	94%

MARINE CORPS OPERATIONS

Active Operations

The FY 2017 budget ensures the Marine Corps continues to be a versatile middleweight force, forward deployed, engaged, and able to respond across the range of military operations. The budget supports the Marine Corps operating forces, which are comprised of three active MEFs. Each MEF consists of a command element, one Marine Division, one Marine Aircraft Wing, and one Marine Logistics Group. Each MEF provides a highly trained, versatile expeditionary force capable of rapid response to global contingencies. The inherent flexibility of the MEF organization, combined with Maritime Prepositioning Force assets, allows for the rapid deployment of appropriately sized and equipped forces. Marine Expeditionary Units (MEUs) are embedded within each MEF and deploy with Amphibious Ready Groups. Three MEUs are East-coast based, three are West-coast based, and one is based in Okinawa, Japan. These scalable forces possess the firepower and mobility needed to achieve success across the full operational spectrum in either joint or independent operations.



The Navy and Marine Corps team remain the solution set to fulfilling the nation's global maritime responsibilities. With the increasing concentration of the world's population in littoral areas, the ability to operate simultaneously on the sea, ashore, in the air, and to move seamlessly between these three domains is critical. Amphibious forces, a combination of Marine Air-Ground Task Forces MAGTFs and Navy amphibious ships, remain a uniquely critical and capable component of both crisis response and meeting our maritime responsibilities. Operating as a team, amphibious forces provide operational reach and agility; they provide decision space for our national leaders in times of crisis; and they bolster diplomatic initiatives by means of their credible forward presence. Amphibious forces also provide the nation with assured access for the joint force in a major contingency operation. No other force possesses the flexibility to provide these capabilities and yet sustain itself logistically for significant periods of time. This budget supports the Marine Corps ability to maintain this flexibility and capability.

The Marine Corps FY 2017 budget provides a ready and capable Marine Corps that is forward postured, capable across the range of military operations, and promotes regionally based rapid crisis response, theater security cooperation, and humanitarian assistance. However, the FY 2017 OMMC budget is leaner than the FY 2015 budget. Accordingly, this budget prioritizes the readiness of deployed and next-to-deploy units to meet today's operational requirements at the expense of non-deployed unit readiness. Additionally, the scope and span of exercises and Theater Security Cooperation (TSC) engagements supporting Geographic Combatant Commanders will potentially be reduced.

Ground Equipment Depot Maintenance

Resetting the Marine Corps for the future after a decade of continuous combat operations is key to generating future combat readiness. Continued investment of reset and sustainment costs is necessary to reset the force by addressing equipment shortfalls and to refresh equipment worn out or degraded by years of combat. The Marine Corps has reset 77 percent of its ground equipment with 50 percent returned

to operating forces. The FY 2017 budget request will continue this effort meeting 69 percent of the baseline active force requirements, and 79 percent with OCO. Employed in multiple combat and stability operations for the past decade, the Marine Corps has utilized wartime supplemental funding to address equipment reset requirements.

Figure 26 – Marine Corps Ground Equipment Depot

(Dollars in Millions)	FY 2015	FY 2016	FY 2017
Funding Profile:			
Baseline	236	189	207
Overseas Contingency Operations	422	240	147
Total	**658**	**429**	**354**
Active Forces			
Combat Vehicles	226	124	103
Missiles	7	8	7
Ordnance, Weapons, and Munitions	35	17	25
Electronics and Communication Systems	38	26	40
Construction Equipment	73	12	22
Automotive Equipment	279	2	10
Other	0	0	0
Total Active Forces	**658**	**189**	**207**
% Funded of Total Requirement	93%	83%	79%

MARINE CORPS RESERVE OPERATIONS

The Marine Corps Reserve is a full partner in the Marine Corps' Total Force concept. The Reserve Component is trained, organized, and equipped in the same manner as the active force and provides complementary assets that enable the Marine Corps total force to both mitigate risk and maximize opportunities. The FY 2017 budget sustains a force of 38,500 Reserve Marines assigned to units across the country. Similar to the active component, the Marine Forces Reserve consists of the Marine Forces Reserve headquarters and its subordinate Marine Division, Marine Aircraft Wing, and Marine Logistics Group, all of which are headquartered

in New Orleans, Louisiana. The Reserves are unique in that the subordinate regiments/groups, battalions/squadrons, and companies/detachments are located at 189 reserve training centers and sites across the United States. The FY 2017 budget maintains the Reserve component's capability without any reductions to reserve end strength. Figure 27 reflects Marine Corps Reserve Ground Equipment Depot Maintenance.

Figure 27 – Marine Corps Reserve Ground Equipment

(Dollars in Millions)	FY 2015	FY 2016	FY 2017
Funding Profile:			
Baseline	18	18	19
Total	**18**	**18**	**19**
Reserve Forces			
Combat Vehicles	0	11	14
Tactical Missiles	2	0	0
Ordnance	16	4	3
Electrical Communication	0	2	1
Constructive Equipment	0	1	0
Total Reserve Forces	**18**	**18**	**18**
% Funded of Total Requirement	100%	100%	100%

FACILITY SUSTAINMENT, RESTORATION, AND MODERNIZATION

Continued investment in Facility Sustainment, Restoration and Modernization (FSRM) is necessary to maintain our shore installations supporting required capabilities in the Defense Strategic Guidance. The FSRM program ensures our current facilities inventory is maintained in working order and prevents premature degradation of facility condition.

Facility Sustainment

The FY 2017 budget funds Navy facility sustainment at 70 percent of the DoD-modeled requirement, down from 84 percent in FY 2016. This level of sustainment funding takes acceptable risk ashore with focused effort on sustaining critical facility components and performing facility maintenance affecting life, health, and safety of Sailors. The FY 2017 budget funds Marine Corps facility sustainment at a rate of 74 percent of the DoD-modeled value in FY 2017. This level of Marine Corps

sustainment funding prioritizes life, health, and safety projects and deferring repairs and demolition projects to support a ready and capable force.

Facility Restoration and Modernization

The Navy continues to refine the Shore Facilities Investment Model and implement condition-based maintenance to efficiently prioritize and accurately budget restoration and modernization within the FSRM program. The Navy has increased outyear funding for recapitalization of permanent party barracks and priority Fleet support facilities, directly supporting improved quality of life and quality of service for our Sailors. The Navy continues to budget funds for fleet-wide facility consolidation intended to effectively and efficiently configure installations while simultaneously reducing the overall DON facility inventory. The Marine Corps continues to resource restoration and modernization to maintain facilities at a fair condition (Q2) level.

The Navy and Marine Corps continue energy-related renovations and facility retrofits to achieve compliance with Energy Independence and Security Act and other DON energy initiatives.

ENVIRONMENTAL RESORTATION, NAVY

The Environmental Restoration, Navy (ERN) appropriation provides funds to clean-up sites polluted before 1987. While budgeted as ERN, in the funding year of execution the funds are transferred to the respective appropriations.

OPERATION AND MAINTENANCE, NAVY

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Operating Forces			
Air Operations	7,596	7,141	8,025
Ship Operations	10,776	11,103	11,001
Combat Operations/Support	3,115	3,204	3,102
Weapons Support	2,204	2,365	2,406
Base Support	6,775	7,553	6,640
Total - Operating Forces	**30,467**	**31,367**	**31,174**
Mobilization			
Ready Reserve and Prepositioning Forces	400	423	1168
Activations/Inactivations	192	368	295
Mobilization Preparedness	117	122	119
Total - Mobilization	**709**	**913**	**1,582**
Training and Recruiting			
Accession Training	303	315	296
Basic Skills and Advanced Training	975	1023	1100
Recruiting & Other Training and Education	456	481	480
Total - Training and Recruiting	**1,734**	**1,819**	**1,876**
Administration and Servicewide Support			
Servicewide Support	1,979	1,991	2,032
Logistics Operations and Technical Support	1,977	1,737	1,702
Investigations and Security Programs	1,119	1,115	1,113
Support of Other Nations	5	5	5
Cancelled Activities	9	-	-
Total - Administration and Servicewide Support	**5,089**	**4,848**	**4,852**
Sub Total: O&MN	**38,000**	**38,946**	**39,484**
Overseas Contingency Operations	7,069	7,005	6,827
Total: O&MN	**45,068**	**45,952**	**46,311**

OPERATION AND MAINTENANCE, NAVY RESERVE

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Operating Forces			
Air Operations	641	623	630
Ship Operations	17	1	1
Combat Operations/Support	128	129	122
Weapons Support	2	-	-
Base Support	191	183	154
Total - Operating Forces	**980**	**935**	**906**
Administration and Servicewide Support			
Servicewide Support	17	19	18
Logistics Operations and Technical Support	3	3	3
Total - Administration and Servicewide Support	**20**	**22**	**21**
Sub Total: O&MNR	**1,000**	**957**	**928**
Overseas Contingency Operations	57	31	26
Total: O&MNR	**1,058**	**988**	**954**

OPERATION AND MAINTENANCE, MARINE CORPS

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Operating Forces			
Expeditionary Forces	1,815	1,803	1,829
USMC Prepositioning	88	86	85
Base Support	2,526	2,567	2,769
Total - Operating Forces	**4,429**	**4,456**	**4,683**
Training and Recruiting			
Accession Training	20	17	17
Basic Skills and Advanced Training	446	486	515
Recruiting & Other Training and Education	234	226	224
Total - Training and Recruiting	**699**	**729**	**756**
Administration and Servicewide Support			
Servicewide Support	428	418	438
Logistics OPS & Technical Support	70	75	77
Total - Administration and Servicewide Support	**498**	**493**	**515**
Sub Total: O&MMC	**5,626**	**5,677**	**5,954**
Overseas Contingency Operations	1,841	1,361	1,244
Total: O&MMC	**7,467**	**7,038**	**7,199**

OPERATION AND MAINTENANCE, MARINE CORPS RESERVE

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Operating Forces			
Expeditionary Forces	111	115	113
Base Support	142	138	137
Total - Operating Forces	**253**	**253**	**250**
Administration and Servicewide Support			
Servicewide Support	17	21	21
Total - Administration and Servicewide Support	**17**	**21**	**21**
Sub Total: O&MMCR	**270**	**273**	**271**
Overseas Contingency Operations	14	3	3
Total: O&MMCR	**284**	**277**	**274**

ENVIRONMENTAL RESTORATION, NAVY

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Environmental Restoration Activities	-	300	282
Total: ERN	**-**	**300**	**282**

Note: These funds are transferred to O&MN after appropriation bill enacted and reported in executed balances in O&MN.

NATIONAL DEFENSE SEALIFT FUND

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Strategic Sealift Acquisition	37	15	-
DoD Mobilization Assets	158	161	-
Research and Development	22	25	-
Ready Reserve Force	291	273	-
Total: NDSF	**508**	**485**	**-**

Note: NDSF realigned within OMN and RDTEN.

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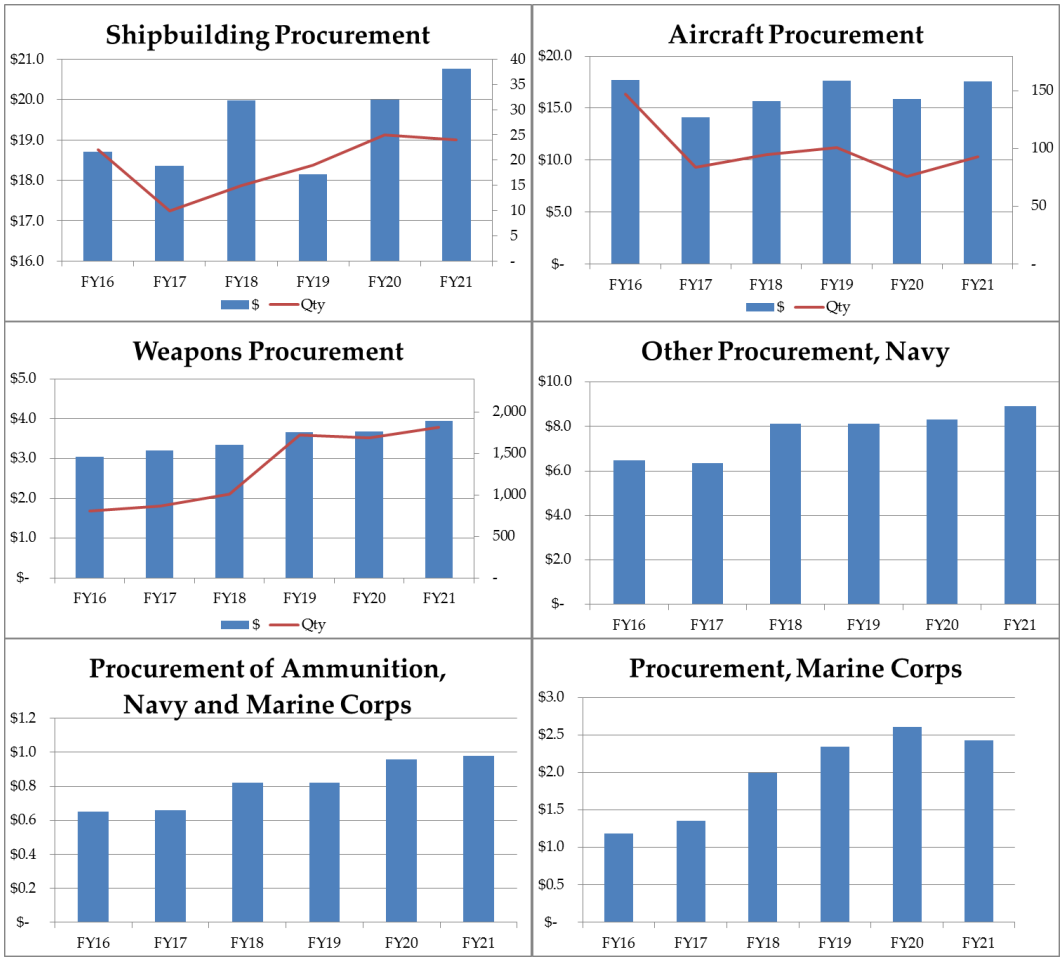
SECTION IV – PROCUREMENT

OVERVIEW

To maintain a robust Fleet and adaptable Marine Corps, we invest in platforms and systems to address today's wide-range of operations. The FY 2017 budget continues our aggressive efforts to reduce acquisition costs and builds capability that supports our industrial base. This budget provides the required level to maintain our advantage in advanced technologies and weapons, allowing us to operate in every region across the full spectrum of conflict. Figure 28 displays funding in the procurement accounts across the FYDP.

Figure 28 – Procurement Funding, FY 2016 – FY 2021 ($ Billions)



SHIP PROGRAMS

The Navy's shipbuilding budget procures 38 battle force ships across the FYDP. In FY 2017 there are seven battle force ships, including two *Virginia* Class submarines, two DDG 51 *Arleigh Burke* destroyers, two Littoral Combat Ships (LCS), and one Amphibious Warfare Assault Ship (LHA). The plan across FY 2017 to FY 2021 is shown in Figure 29.

Figure 29 – Shipbuilding Procurement

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FYDP
Ohio Replacement Program	-	AP	AP	AP	AP	1	1
CVN-21	-	-	1	-	-	-	1
SSN-774	2	2	2	2	2	1	9
DDG 51	2	2	2	2	2	2	10
LCS/FF	3	2	1	1	1	2	7
LHA(R)	-	1	-	-	-	-	1
LPD 17	1	-	-	-	-	-	-
LX(R)	-	-	-	-	1	-	1
T-ATS	1	-	1	1	1	1	4
Expeditionary Fast Transport (EPF) (formerly JHSV)	1	-	-	-	-	-	-
Expeditionary Mobile Base (ESB) (formerly MLP AFSB)	1	-	-	-	-	-	-
T-AO(X)	1	-	1	1	1	1	4
New Construction Total QTY	**12**	**7**	**8**	**7**	**8**	**8**	**38**
New Construction Total ($B)	**$16.5**	**$14.7**	**$16.8**	**$16.2**	**$16.9**	**$16.8**	**$81.4**
LCAC SLEP	4	-	-	-	-	-	-
Ship to Shore Connector	4	2	6	10	12	12	42
LCU 1700	1	-	1	2	4	4	11
Moored Training Ships	-	1	-	-	-	-	1
CVN RCOH	1	-	-	-	1	-	1
Total Shipbuilding QTY	**22**	**10**	**15**	**19**	**25**	**24**	**93**
Total Shipbuilding ($B)	**$18.7**	**$18.4**	**$20.0**	**$18.1**	**$20.0**	**$20.8**	**$97.3**

FY16 enacted includes Congressional adds for T-ATS, JHSV (EPF), MLP AFSB (ESB), LCU 1700 and Congressional reduction of one Ship to Shore Connector.

Aircraft Carriers

The next generation aircraft carrier, the *Ford* Class, is the centerpiece of the carrier strike group. Taking advantage of the *Nimitz* Class hull form, the *Ford* Class will feature an array of advanced technologies designed to improve warfighting capabilities and allow significant manpower reductions.

With $2.7 billion requested in FY 2017, the Department will continue to finance the detailed design and construction ($1.3 billion) of the second *Ford* Class carrier (USS John F. Kennedy (CVN 79)), and provide the second year of Advance Procurement ($1.4 billion) for the third *Ford* class carrier (USS Enterprise (CVN 80)). The FY 2017 President's Budget includes the second increment of funding ($1.7 billion) for USS George Washington (CVN 73) Refueling Complex Overhaul (RCOH) and the second year of Advance Procurement ($249 million) for USS John C. Stennis (CVN 74) RCOH.

Surface Ship Programs

The Navy continues to invest in capabilities to counter improved ballistic missile capabilities emerging worldwide. The FY 2017 budget requests $3.2 billion for two DDG 51 destroyers as part of the FY 2013 – FY 2017 Multi-Year Procurement (MYP) in support of this capable platform. The FY 2017 budget request also contains $1.1 billion to procure two LCS seaframes.

Submarine Programs

The Navy continues to modernize the submarine fleet. The next phase of modernization will begin by construction of the *Ohio* Replacement to provide continuous sea-based strategic deterrence. *Virginia* Class fast attack submarines continue to join the existing fleet of *Los Angeles* and *Seawolf* Class submarines to provide covert force application throughout the world's oceans. The Department received authority for a follow-on MYP contract for up to 10 submarines beginning in FY 2014. The FY 2017 budget request includes funds for two *Virginia* Class fast attack submarines ($3.2 billion) and Advance Procurement/Economic Order Quantity ($1.8 billion) as part of the FY 2014 – FY 2018 MYP. The next MYP in FY 2019 will include one *Virginia* Payload Module submarine in FY 2019 and two in FY 2020. The FY 2017 budget request also includes Advance Procurement ($773 million) for the lead *Ohio* Replacement submarine.

Moored Training Ship

The replacement Moored Training Ships (MTS) will be converted *Los Angeles* Class submarines that have completed their service lives as fast attack submarines. The second MTS begins conversion and overhaul in FY 2017 at Norfolk Naval Shipyard using modules constructed by General Dynamics Electric Boat. The FY 2017 budget request includes funds for one MTS ($625 million).

Amphibious and Logistics Platforms

The Ship to Shore Connector (SSC) program continues to procure craft, with two requested in FY 2017 ($128 million). The SSC serves as the functional replacement for the Landing Craft Air Cushion (LCAC), which is reaching the end of service life, and provides the capability to rapidly move USMC assault forces from amphibious ships to the beach.

AVIATION PROGRAMS

Navy and Marine Corps aviation provides forward deployed air presence in support of our national strategy. The FY 2017 budget request procures 94 manned and unmanned aircraft. The budget continues the FY 2014 – FY 2018 multi-year procurement contracts for E-2D and KC-130J and the FY 2013 – FY 2017 multi-year contract for the MV-22. The first low rate initial production contract for CH-53K is also in FY 2017. The aviation program is shown in Figure 30.

Figure 30 – Aircraft Programs

Fixed Wing	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FYDP
F-35B (STOVL JSF)	15	16	20	20	20	21	97
F-35C (CV JSF)	6	4	6	12	18	24	64
F/A-18E/F	5	2	14	-	-	-	16
EA-18G	10	-	-	-	-	-	-
E-2D AHE	5	6	5	3	4	5	23
P-8A (MMA)	17	11	6	13	-	-	30
UC-12W (USMC)	1	-	-	-	-	-	-
KC-130J (USMC)	2	2	2	2	2	2	10
Rotary Wing							
AH-1Z/UH-1Y	29	24	27	27	0	0	78
CH-53K (HLR)	-	2	4	7	13	14	40
VH-92A	-	-	-	6	6	5	17
MV-22B	19	16	6	6	6	14	48
MH-60R	29	-	-	-	-	-	-
UAV							
MQ-8C Firescout	5	1	2	2	2	2	9
RQ-21A Blackjack (APN/PMC)	6	8	4	5	5	3	25
MQ-4C Triton	4	2	3	3	5	6	19
Total Major Aircraft Programs	**153**	**94**	**99**	**106**	**81**	**96**	**476**

NOTE: FY 2016 reflects A-12 settlement for 3 EA-18G and the DON plan to procure 1 additional P-8A (MMA). FY 2017 includes the OCO request for 2 F/A-18E/F and 4 RQ-21A Blackjack. The Navy plans to procure 6 V-22 per year from FY 2018 – FY 2021.

Fixed Wing

The F-35B Short Takeoff and Vertical Landing (STOVL) variant is a multi-role strike fighter replacing the AV-8B and F/A-18 A/B/C/D for the Marine Corps. The F-35C carrier variant provides the Navy with a multi-role stealthy strike fighter to complement the F/A-18.

The E-2D Advanced Hawkeye program is the next generation, carrier based early warning, command and control aircraft that provides improved battle space detection, supports Theater Air Missile Defense, and offers improved operational availability.

The missions performed by the aging P-3 Orion fleet continue to transition to the P-8A Multi-Mission Maritime Aircraft, based on the Boeing 737 platform. The P-8A's ability to perform undersea warfare to include high altitude torpedo capability; surface warfare; and Intelligence, Surveillance, and Reconnaissance (ISR) missions make it a critical force multiplier for the joint task force commander.

The KC-130J aircraft is designed for cargo, tanker, and troop carrier operations. The mission of the KC-130J is to provide tactical in-flight refueling and assault support transport.

Rotary Wing

The UH-1Y/AH-1Z aircraft fulfill the Marine Corps attack and utility helicopter missions. The FY 2017 base budget supports the procurement of 24 AH-1Z aircraft.

The Osprey MV-22B Tilt Rotor continues the MYP with the Air Force from FY 2013 through FY 2017. The MV-22B fills a critical capability role with the Marine Corps by incorporating the advantages of a Vertical/Short Takeoff and Landing aircraft that can rapidly self-deploy to any location in the world. The Navy plans to replace the C-2A Carrier Onboard Delivery by procuring a version of the V-22 Osprey.

Unmanned Aerial Vehicles (UAVs)

The FY 2017 budget continues procurement of a broad range of unmanned platforms in support of Joint Force and Combatant Commander demands for increased ISR capability and capacity.

The RQ-21 Blackjack, formerly called Small Tactical Unmanned Aircraft System (STUAS), is a combined Navy and Marine Corps program for a common solution that provides persistent ISR/Target Acquisition support for tactical level maneuver decisions and unit level force defense/force protection for naval amphibious assault ships (multi-ship classes) and Navy and Marine land forces.

The MQ-8 Fire Scout program went through a Title 10 Section 2433 (Nunn-McCurdy Breach) review in FY 2014 due to a unit cost breach. The Department certified a restructured program to Congress on 16 June 2014. The FY 2017 President's Budget continues to support the restructured program which includes 70 air vehicles (61 procurement and nine RDT&E) comprised of MQ-8B and MQ-8C variants. The restructured program also includes the endurance upgrade, radar, and weapons capabilities, previously developed as Navy Rapid Deployment Capabilities.

MQ-4C Triton, a High Altitude-Long Endurance Unmanned Aircraft System designed to provide persistent maritime ISR of nearly all the world's high-density sea-lanes, littorals, and areas of national interest, will continue low-rate initial production in FY 2017.

WEAPONS PROGRAMS

Figure 31 shows quantities across the FYDP for specific weapons programs. The FY 2017 weapons procurement budget is $3.2 billion.

Figure 31 –Weapons Quantities

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FYDP
Ship Weapons							
TACTOM	149	100	-	-	-	-	100
SM6	113	125	125	125	125	125	625
RAM	90	90	90	90	90	90	450
ESSM	30	75	28	52	46	56	257
MK 48 HWT	8	11	15	24	33	40	123
MK 48 HWT Mods	81	73	64	50	43	52	282
MK 54 LWT Mods	140	144	167	174	170	130	785
LCS SSMM	-	24	110	110	110	110	464
Aircraft Weapons							
AIM-9X	227	152	150	153	153	150	758
AMRAAM	167	163	247	260	252	248	1,170
AARGM	155	253	336	322	183	197	1,291
LRASM	-	10	25	25	-	-	60
JAGM	-	96	104	110	110	221	641
SOPGM	27	24	24	24	24	24	120
HELLFIRE*	-	100	-	-	-	-	100
SDB II	-	-	90	750	750	750	2,340

**Includes Overseas Contingency Operations funding for 100 HELLFIRE weapons in FY 2017.*

Ship Weapons

The Tactical Tomahawk (TACTOM) missile provides a premier attack capability against long range, medium range, and tactical targets on land and can be launched from both surface ships and submarines. The Block IV Tactical Tomahawk preserves Tomahawk's long-range precision-strike capability while significantly increasing responsiveness and flexibility. Tactical Tomahawk procurement ends in

FY 2017 as efforts transition to the missile recertification program. The Navy has acquired sufficient inventory of the Block IV TACTOM with the FY 2017 procurement of 100 missiles to meet the combat needs and will begin development of a follow-on Next Generation Land Attack Weapon.

The SM-6 is the primary air defense weapon for AEGIS cruisers and destroyers. The SM-6 Block I possesses an extended range engagement capability to provide an umbrella of protection for U.S. forces and allies against the full spectrum of manned-fixed and rotary-winged aircraft, unmanned aerial vehicles, and land attack and anti-ship cruise missiles in flight. The DON has focused on its efforts to integrate the kill chain consisting of the E-2D Hawkeye, CEC, AEGIS, and the SM-6 missile. SM-6 Block IA will reach FOC in FY 2018.

The Rolling Airframe Missile (RAM), a cooperative effort with Germany, is a high firepower, low-cost, lightweight ship self-defense system designed to engage anti-ship cruise missiles and asymmetric threats. FY 2017 is the sixth year of production for Block II missiles to provide increased kinematic capability against high maneuvering threats and improved radio frequency (RF) detection against low probability of intercept threats.

The Evolved Sea Sparrow Missile (ESSM) serves as the primary surface-to-air ship self-defense missile system. ESSM is an international cooperative effort to design, develop, test, produce, and provide in-service support to a new and improved version of the SPARROW missile (RIM-7P) with a kinematic performance to defeat current and projected threats that possess low altitude, high velocity, and maneuver characteristics beyond the engagement capabilities of the RIM-7P. In FY 2017, the Department modified the MYP contract for ESSM BLK I missiles to two years. This was done in order to shift to ESSM Block II missile procurement commencing in FY 2018.

The MK 48 Advanced Capability heavyweight torpedo is used solely by submarines and is employed as the primary anti-submarine warfare and anti-surface warfare weapon aboard attack, ballistic missile, and guided missile submarines. FY 2017 efforts will continue the Common Broadband Advanced Sonar System, and

guidance and control modifications to the existing torpedo, optimizing the weapon for both deep and littoral waters, and adding advanced counter-countermeasure capabilities. FY 2017 is the second year of procurement of new torpedoes.

The Littoral Combat Ship Surface-to-Surface Missile Module (LCS SSMM) is a segment of the Surface Warfare (SUW) mission package which increases firepower and offensive/defensive capabilities against large numbers of highly maneuverable, fast, small craft threats, giving LCS the ability to protect the sea lanes and move a force quickly through a choke point or other strategic waterway. FY 2017 is the first year of procurement.

Aircraft Weapons

Aircraft weapons arm the warfighter with lethal, interoperable, and cost effective weapons systems. The AIM-9X (Sidewinder) missile is a "launch-and-leave" munition that employs passive infrared energy for acquisition and tracking of enemy aircraft. FY 2017 continues full rate production for AIM-9X Block II and procures the first lot of AIM-9X Block II+, which incorporates specialized external materials to enhance aircraft platform survivability.

The Advanced Medium Range Air-to-Air Missile (AMRAAM) is the next generation, all weather radar guided missile designed to counter existing air-vehicle threats having advanced electronic attack capabilities. Upgrades to the missile incorporate active radar in conjunction with an inertial reference unit and microcomputer that make the missile less dependent on the aircraft fire control system. Procurement continues in FY 2017.

The Advanced Anti-Radiation Guided Munition (AARGM) is an upgrade to the legacy High Speed Anti-radiation Missiles (HARM), with a multi-mode guidance and targeting capability. The Department continues with the sixth year of AARGM production in FY 2017.

The Long Range Anti-Ship Missile (LRASM) is the next generation anti-surface warfare missile that is designed to provide precise, discriminating, and lethal long-range air-launched capabilities. LRASM is a semi-autonomous anti-ship missile

which reduces dependence on external platforms and GPS navigation in order to penetrate sophisticated enemy air defense systems. FY 2017 is the first year of procurement.

The Joint Air-to-Ground Missile (JAGM) is the replacement for Hellfire. JAGM is an air-launched missile system which utilizes multi-mode seeker technology providing advanced line-of-sight and beyond-line-of-sight capabilities. FY 2017 is the first year of procurement.

Stand-Off Precision Guided Munitions (SOPGM), Griffin missile, is a short range rocket propelled missile that uses GPS/Inertial Navigation System (INS) to the target vicinity and a semi-active laser seeker for terminal guidance. The missile, included in the roll-on/roll-off KC-130J Intelligence, Surveillance and Reconnaissance Weapon Mission Kit for USMC, has been adapted for use on surface combatants (Patrol Coastal and Littoral Combat Ship platforms) as a short range anti-surface missile to increase defensive capability against small boat attacks.

The AGM-114 Hellfire is a family of laser guided missiles employed against point and moving targets by both rotary and fixed wing aircraft. The FY 2017 request replaces Hellfire missiles that were expended to support OCO.

Small Diameter Bomb Increment II (SDBII) is an Air Force led ACAT I joint program, which provides the warfighter a capability to attack mobile targets in all weather from stand off range. The Navy's first buy is in FY 2018.

PROCUREMENT, MARINE CORPS (PMC)

The Marine Corps continues to balance its ground equipment procurement and system development efforts to ensure Marines are supported in the current fight while simultaneously modernizing in preparation for future contingencies. The FY 2017 PMC budget is $1.4 billion.

Major Procurement Programs

The Light Armored Vehicle Anti-Tank Modernization (LAV-ATM) Program will modernize the legacy turret and Tube-launched, Optically-tracked, Wire-guided (TOW) system to sustain the capability, improve readiness, and ensure a high degree of commonality with USMC and U.S. Army systems.

The Marine Corps portion of the RQ-21A Blackjack program is funded in PMC. It will provide persistent maritime and land-based tactical Reconnaissance, Surveillance, and Target Acquisition (RSTA) data collection and dissemination capability to the war fighter.

Ground/Air Task Oriented Radar (G/ATOR) is an expeditionary, three-dimensional, short/medium range multi-role radar designed to detect cruise missiles, air breathing targets, rockets, mortars, and artillery. 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.

Joint Light Tactical Vehicle (JLTV) Family of Vehicles (FoV) is a joint Army and Marine Corps program of which Army is the lead service. The program objectives are to restore the mobility and payload of the original High Mobility Multi-Wheeled Vehicle to the future light tactical vehicle fleet while providing increased modular protection within the weight constraints of the expeditionary force. The JLTV program strives to minimize ownership costs by maximizing commonality, reliability, and fuel efficiency, while achieving additional savings through effective competition in all stages of program execution. JLTV configurations will be derived from two basic vehicle variants, the Combat Tactical Vehicle and the Combat Support Vehicle. The commonality of components, maintenance procedures, and training among all configurations will minimize total ownership costs. The FY 2017 request reflects increased production of JLTV, associated kits, and delivery to receiving units in support of IOC scheduled for FY 2018.

PROCUREMENT OF AMMUNITION, NAVY AND MARINE CORPS (PANMC)

The Procurement of Ammunition, Navy and Marine Corps (PANMC) appropriation supports the inventory and replenishment of munitions and related weaponry. PANMC is paramount for force capability and success in meeting future contingencies. It includes major fleet requirements such as general purpose bombs like the 2,000-pound laser-guided "bunker buster" Penetrator bomb. Airborne Rockets include the Advanced Precision Kill Weapon System (APKWS), which provided Marine Corps ground forces in Operation Enduring Freedom in Afghanistan greater precision and effectiveness while increasing firing standoff range. Pyrotechnics and Demolition reinforces Explosive Ordnance Disposal (EOD), the world's premier combat force for countering explosive hazards including Improvised Explosive Device (IED) and underwater mines. The ammunition portfolio is a comprehensive array of capabilities that encompasses munitions for everything from the five inch MK 54 Guns on Cruiser and Destroyer combatant ships used against air, surface, and shore targets, to Precision-guided Artillery supporting the Marine Corps with accurate, first round fire-for-effect capability, and Small Arms, that are essential for the Navy Sea Air Land Teams (SEALs), Special Boat Teams and the Coastal Riverine Forces. In FY 2017 PANMC's baseline and OCO budget of $731 million will fund the procurement of these and other vital ammunitions in support of the warfighter in virtually every aspect of air, land, and sea combat.

OTHER PROCUREMENT, NAVY (OPN)

The procurement, production, and modernization of equipment not provided for in the previous appropriations which generally support multiple platforms, is financed in the Other Procurement, Navy (OPN) appropriation. This equipment ranges from electronic sensors to training equipment to spare parts, and is integral to improve the fleet and shore establishment. The FY 2017 OPN budget is $6.3 billion.

Ship Programs

The FY 2017 other procurement budget continues to support Surface Combatant modernization programs across the Fleet in order to keep pace with emerging threats, provide capabilities to maneuver in the Electromagnetic Spectrum, and maximize surface ship service life. The DDG modernization program funds three availabilities (two Hull, Mechanical & Electrical (HM&E)) availabilities and one Combat System availability) and procurement for five HM&E availabilities and one Combat System availability in FY 2019. Shipboard Information Warfare installations in FY 2017 include six Ship's Signal Exploitation Equipment (SSEE), 16 Consolidated Afloat Networks and Enterprise Services (CANES) and 13 Surface Electronic Warfare Improvement Program (SEWIP) block upgrades to the AN/SLQ-32.

Networks and C4I Programs

The Department's ability to carry out missions is dependent on Command, Control, Communication, Computers, and Intelligence (C4I) programs. Cyber security and resiliency are of principal concern to protect warfighting capabilities. The Navy and Marine Corps continue to issue technical standards and certifications to keep our C4I systems modernized and resilient against threats. Along with DoD, the Department continues to streamline our network operations through the use of common technologies and the synchronization of IT networks.

SHIPBUILDING AND CONVERSION, NAVY

(Dollars in Millions)

	FY 2015		FY 2016		FY 2017	
	QTY	$	QTY	$	QTY	$
New Construction						
Ohio Replacement Program	-	-	-	-	-	773
CVN 21	-	1,219	-	2,432	-	2,663
SSN 774	2	5,832	2	5,318	2	4,955
DDG 51	2	2,796	2	4,133	2	3,211
DDG 1000	-	461	-	433	-	272
LCS	3	1,507	3	1,332	2	1,126
LPD 17	-	1000	1	550	-	-
LHA(R)	-	29	-	477	1	1,623
LX(R)				250	-	-
Expeditionary Fast Transport (EPF) (formerly JHSV)	1	200	1	225	-	-
Expeditionary Mobile Base (ESB) (formerly MLP AFSB)	-	-	1	635	-	-
T-ATS	-	-	1	75	-	-
TAO (X)	-	-	1	674	-	73
Total New Construction	**8**	**13,044**	**12**	**16,534**	**7**	**14,696**
Other						
CVN RCOH	-	484	1	653	-	1,992
Moored Training Ship	1	802	-	138	1	625
LCU Replacement	-	-	1	34	-	-
LCAC SLEP	2	40	4	81	-	2
Outfitting/Post Delivery	-	474	-	613	-	666
Ship to Shore Connector	3	160	4	211	2	128
Service Craft	-	-		30	-	65
YP Craft Maintenance/ROH/SLEP	-	-	-	22	-	21
Completion of PY Shipbuilding Programs	-	991	-	389	-	160
Total Other	**6**	**2,951**	**10**	**2,171**	**3**	**3,659**
Total: SCN	**14**	**15,995**	**22**	**18,705**	**10**	**18,355**

SHIP MAINTENANCE, OPERATIONS AND SUSTAINMENT FUND

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Ship Maintenance, Operations and Sustainment	294	-	-
Total: SMOSF	**294**	**-**	**-**

AIRCRAFT PROCUREMENT, NAVY

(Dollars in Millions)

	FY 2015		FY 2016		FY 2017	
	QTY	$	QTY	$	QTY	$
Combat Aircraft	122	10,607	135	12,205	79	8,947
Trainer Aircraft	-	-	-	9	-	6
Other Aircraft	3	200	12	1011	5	691
Modification of Aircraft	-	2,259	-	2,496	-	2,565
A/C Spares & Repair Parts	-	1,215	-	1,464	-	1,408
A/C Support Equip & Facilities	-	475	-	535	-	493
Sub Total: APN	**125**	**14,755**	**147**	**17,719**	**84**	**14,109**
Overseas Contingency Operations	7	243	3	211	6	393
Total: APN	**132**	**14,998**	**150**	**17,930**	**90**	**14,502**

WEAPONS PROCUREMENT, NAVY

(Dollars in Millions)

	FY 2015		FY 2016		FY 2017	
	QTY	**$**	**QTY**	**$**	**QTY**	**$**
Ballistics and Other Missile						
TRIDENT II Mods	-	1,161	-	1,089	-	1,103
Evolved Sea Sparrow Missile (ESSM)	104	117	30	92	75	53
Tomahawk	243	317	149	202	100	187
AMRAAM	-	2	167	203	163	205
Sidewinder	167	68	227	93	152	71
JT Standoff Weapon (JSOW)	200	108	-	13	-	2
Standard Missile	100	404	113	417	125	501
Rolling Airframe Missile (RAM)	90	77	90	75	90	72
Aerial Targets	-	46	-	41	-	137
Joint Air Ground Missile (JAGM)	-	-	-	-	96	26
LRASM	-	-	-	-	10	30
Stand Off Precision Guided Munitions (SOPGM)	54	7	27	4	24	3
Other	-	210	-	170	-	261
Torpedo and Related Equipment						
MK-48 Torpedo	-	2	8	60	11	45
MK-54 Torpedo Mods	-	64	-	113	-	98
MK-48 Torpedo ADCAP Mods	-	41	-	57	-	46
Torpedo Support Equipment	-	50	-	63	-	60
Other	-	18	-	23	-	20
Other Weapons						
Close-In Wpns Sys (CIWS) Mods	-	107	-	53	-	51
Gun Mount Mods	-	57	-	64	-	77
LCS Module Weapons	-	-	-	-	24	3
Other	-	293	-	69	-	96
Spares and Repair Parts	-	74	-	150	-	62
Sub Total: WPN	**958**	**3,223**	**811**	**3,050**	**870**	**3,209**
Overseas Contingency Operations	-	16	-	-	100	9
Total: WPN	**958**	**3,240**	**811**	**3,050**	**970**	**3,218**

PROCUREMENT, MARINE CORPS

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Weapons and Combat Vehicles			
AAV7A1 PIP	15	21	74
LAV PIP	73	86	53
Modification Kits	21	14	15
155MM Ltwt Towed Howitzer	4	7	3
High Mobility Artillery Rocket System	23	16	34
Wpns & Cmbt Vehs under $5 million	6	8	7
Other	2	-	3
Guided Missiles and Equipment			
Ground Based Air Defense (GBAD)	30	7	9
Other	29	142	43
Communications and Electronic Equipment			
Repair and Test Equipment	27	15	16
Common Computer Resources	38	30	39
Command Post Systems	34	28	91
Radio Systems	69	70	34
Comm Switching & Control Systems	62	64	66
Comm & Elec Infrastructure Supt	32	75	30
Night Vision Equipment	7	2	-
RQ-21 UAS	69	78	80
Ground/Air Task Oriented Radar (G/ATOR)	88	127	124
Other	130	195	242
Support Vehicles			
Commercial Cargo Vehicles	13	20	88
5/4T Truck HMMWV (MYP)	46	-	-
Joint Light Tactical Vehicle	7	60	113
Other	16	20	16
Engineer and Other Equipment	64	118	142
Spares and Repair Parts	13	8	23
Sub Total: PMC	**920**	**1,211**	**1,347**
Overseas Contingency Operations	66	57	119
Total: PMC	**986**	**1,268**	**1,466**

PROCUREMENT OF AMMUNITION, NAVY AND MARINE CORPS

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Navy Ammunition	562	506	469
Marine Corps Ammunition	112	146	195
Sub Total: PANMC	**674**	**652**	**664**
Overseas Contingency Operations	155	118	66
Total: PANMC	**829**	**770**	**731**

OTHER PROCUREMENT, NAVY

(Dollars in Millions)

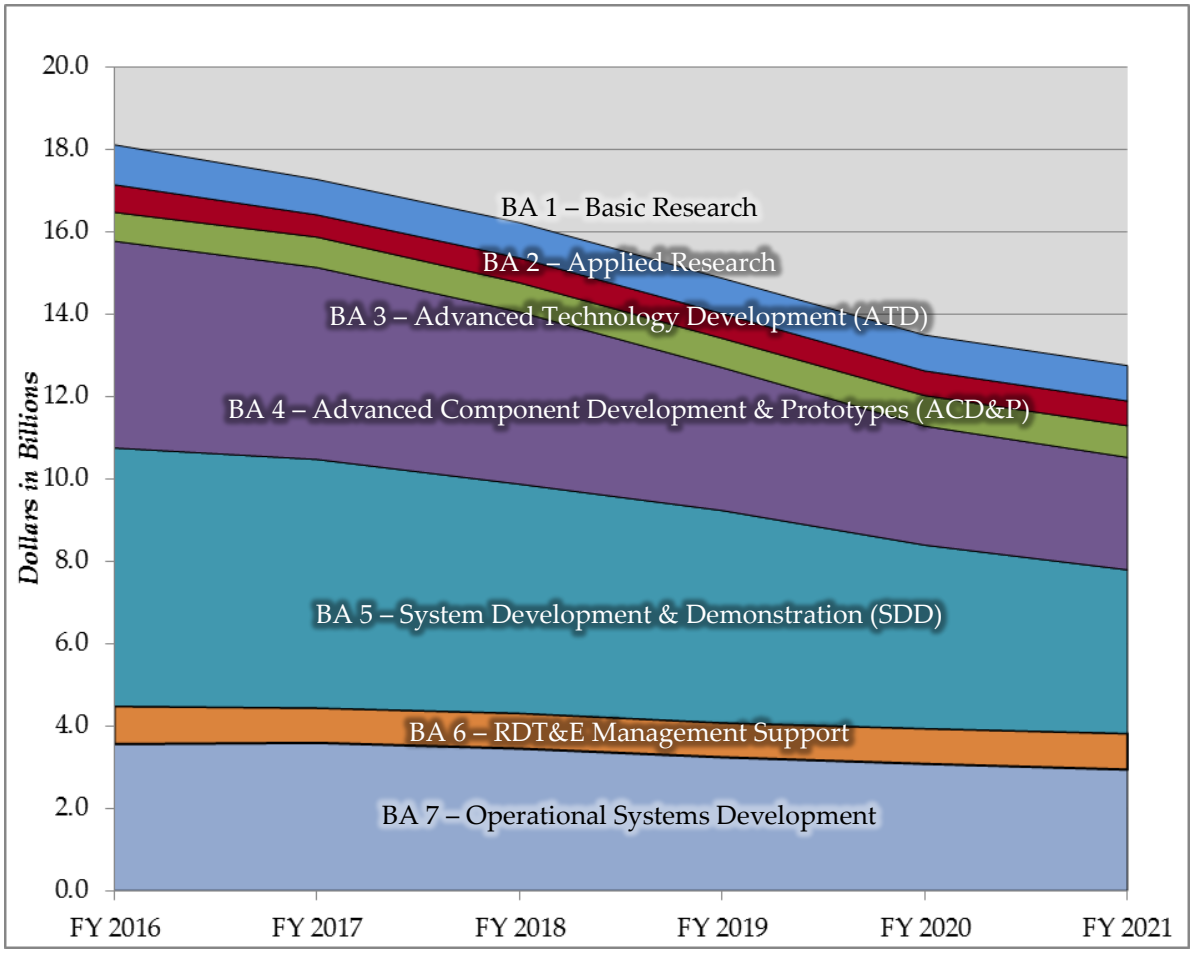
	FY 2015	FY 2016	FY 2017
Ship Support Equipment	2,267	1,846	1,878
Communications and Electronics Equipment	2,223	2,354	2,123
Aviation Support Equipment	371	419	439
Ordnance Support Equipment	589	852	934
Civil Engineering Support Equipment	51	55	84
Supply Support Equipment	93	247	317
Personnel and Command Support Equipment	385	403	364
Spares and Repair Parts	302	307	200
Sub Total: OPN	**6,281**	**6,484**	**6,339**
Overseas Contingency Operations	124	12	124
Total: OPN	**5,690**	**5,970**	**6,463**

SECTION V – DEVELOPMENT

RESEARCH AND DEVELOPMENT SUPPORT

The Department of the Navy's Research, Development, Test and Evaluation (RDT&E) program supports DON missions by giving the Department asymmetric and technological advantages against adversaries in all environments and spectrums. Science and technology research is vital to provide for future technologies that support innovative capabilities in shipbuilding, aviation, weapons, and ground equipment. Investment in R&D is also fundamental in the *Ohio* Replacement Program, *Virginia* Payload Module, unmanned systems, electromagnetic warfare, and protecting our national interests across space and cyberspace. RDT&E funding is shown by budget activity in Figure 32.

Figure 32 – RDT&E Funding



Science and Technology

The FY 2017 budget requests $2.1 billion for the Science and Technology (S&T) program, including $64.9 million for 16 new Future Naval Capability initiatives in the areas of Capable Manpower, Enterprise and Platform Enablers, Expeditionary Warfare, Force Health Protection, Forcenet, Power and Energy, and Sea Shield.

Rapid Prototyping and Development

In response to the accelerating rate of change in the global environment and landscape of potential threats, there is a critical need to improve agility in the development and delivery of warfighting capabilities to the Fleet. The Department of Defense's Better Buying Power initiatives and the SECNAV's Task Force Innovation Vision identify that prototyping and experimentation activities are fundamental to meeting this need. The budget requests $55 million in FY 2017 to establish a dedicated funding line for rapid prototype development and experimentation. FY 2017 efforts will address warfighting gaps with prototype development and experimentation projects. Project selection occurs rapidly on the heels of current year mission area assessments and gap analysis. Focus areas and prototyping efforts for FY 2017 will be finalized by the Naval Prototyping and Experimentation Office during the 4th quarter in FY 2016.

Ship Research and Development

***OHIO* Class Replacement**

The Department of Navy has budgeted $1.1 billion in FY 2017 for the *Ohio* Class submarine replacement program (SSBN(X)). FY 2017 research and development efforts will focus on the propulsion plant, common missile compartment development, and platform development technologies like the propulsor, Strategic Weapons System, and maneuvering/ship control.

***FORD* Class**

The budget requests $223 million in FY 2017 for integration efforts, test planning and support, and funds to continue System Development and Demonstration (SDD) and developmental testing on Advanced Arresting Gear (AAG) and the Electromagnetic Aircraft Launch System (EMALS).

***VIRGINIA* Class**

Virginia Class submarine research and development efforts continue to focus on cost reduction efforts, operational evaluation testing, development of sonar, combat control, and electronic support systems, and submarine multi-mission team trainer efforts. The FY 2017 budget includes $111 million which continues efforts to improve electronic systems and subsystems, development of improved silencing capability and reduced Total Ownership Costs for Block IV submarines. In addition, the FY 2017 budget includes $98 million for platform design efforts on future *Virginia* submarine strike payload capacity for Tomahawk Land Attack and follow on missiles

Air and Missile Defense Radar (AMDR)

The budget requests $144 million in FY 2017 to continue the Air and Missile Defense Radar's Engineering Manufacturing Development phase and test the radar at the Pacific Missile Range Facility (PMRF). The radar is an open-architecture solution for DDG 51 Ballistic Missile Defense sensors, while also improving the DDG 51 class air defense capabilities. AMDR is to be installed on the second FY 2016 and both FY 2017 DDG 51 ships and beyond. AMDR is a key component of the DDG 51 Flight III configuration.

Surface Electronic Warfare Improvement Program (SEWIP)

In response to current threats, the budget requests $76 million for continuing research and development efforts associated with SEWIP, which provides enhanced electronic warfare (EW) capabilities to both existing and new ship based combat systems. These capabilities will improve anti-ship missile defense, counter targeting, and counter surveillance activities. SEWIP Block II will develop an upgraded antenna, receiver, and combat system interface for the currently installed AN/SLQ-32 EW suite, providing improved detection, accuracy, and mitigation of electronic interference. Also funded in the budget is SEWIP Block III which will add an electronic attack (EA) capability to the AN/SLQ-32 EW suite, providing an EA transmitter, array, and advanced processing techniques. These system improvements will ensure the Department keeps pace with the anti-ship missile threat.

Aviation Research and Development

The Super Stallion CH-53E, the only heavy-lift helicopter specifically configured to support Marine Corps missions, entered the fleet in 1980. An improved CH-53K is required to support MAGTF heavy-lift requirements in the 21st century joint environment. The CH-53K will conduct expeditionary heavy-lift transport of armored vehicles, equipment, and personnel to support distributed operations deep inland from a sea-based center of operations. The system demonstration phase completed initial flight in 2015. Milestone C will complete in FY 2017. Advance Procurement funding for long-lead items is included in FY 2016 for low rate initial production in FY 2017.

The VH-92A Presidential Helicopter replaces the legacy VH-3D which was fielded in 1974 and the VH-60N which was fielded in 1989. The Engineering and Manufacturing Development Phase continues in FY 2017 to include the integration of systems, production, qualification, and support of test articles; logistics products development; and demonstration of system integration, interoperability, safety, and utility.

The Next Generation Jammer (NGJ) is the next step in the evolution of Airborne Electronic Attack (AEA) and is needed to meet current and emerging Electronic Warfare gaps, ensure kill chain wholeness against growing threat capabilities and capacity, and to keep pace with threat weapons systems advances and expansion of the AEA mission area. The NGJ AEA pod will replace the aged ALQ-99 Tactical Jamming System and will be integrated into the EA-18G aircraft. Increment 1 (Mid Band) technology maturation and risk reduction effort continue until Milestone B in FY 2016.

F/A-18E/F Advanced Infrared Search and Track (IRST) is a passive long-wave Infra-Red (IR) sensor which provides an alternate fire control system in a high Electronic Attack / Radio Detection and Ranging (RADAR) denied environment. Block II IRST upgrades the Infra-Red Receiver (IRR) and processor to provide full Capabilities Development Document (CDD) capability, enhanced warfighting capability through an improved engagement timeline, improved situational awareness, longer range passive detection and tracking, and a larger field of regard with specification performance. FY 2017 funding supports both Block I and Block II efforts including the procurement of six IRST Block II EDMs.

The Unmanned Carrier-Launched Airborne Surveillance and Strike (UCLASS) program underwent a restructure with near term focus on the new Carrier Based Aerial Refueling System (CBARS) and accelerating fielding timelines. The CBARS program rapidly develops an unmanned capability to embark on CVNs as part of the Carrier Air Wing (CVW) to conduct aerial refueling and provide some Intelligence, Surveillance, Reconnaissance (ISR) capability. These efforts restore strike fighter aircraft to conduct combat missions vice refueling missions and preserves Fatigue Life Expectancy. Additionally, CBARS extends CVW mission effectiveness range, fills the future CVW tanker gap, partially mitigates the current Carrier Strike Group (CSG) organic ISR shortfall and is essential to the CVW Multi-Mission concept of the future. FY 2017 will leverage previous work completed and focus on the three segment areas: air, control system and connectivity, and carrier development.

The F-35 Joint Strike Fighter is in the 15th year of System Development and Demonstration (SDD) program. Approximately two more years of SDD work remain to achieve an Operational Requirements Document (ORD) compliant Block III configured aircraft. F-35C Initial Sea Trials on USS Nimitz was successfully completed in November 2014. The redesigned Arresting Hook System allowed for 124 aircraft arrestments with no bolters. The Initial Operational Capability (IOC) date for the F-35B STOVL is FY 2015 and the F-35C CV is FY 2019.

Marine Corps Research and Development

Amphibious Combat Vehicle

This new Amphibious Combat Vehicle (ACV) is an armored personnel carrier balanced in performance, protection, and payload for employment with the Ground Combat Element across the range of military operations to include a swim capability. The program has been structured to provide a phased, incremental capability. ACV Increment 1.1 leverages and continues the work that was previously accomplished under the Marine Personnel Carrier program. The FY 2017 budget will support the Engineering, Manufacturing, and Development contracts including the delivery of 32 test vehicles, Test & Evaluation activities, and associated program support.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, NAVY

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Basic Research	634	672	543
Applied Research	856	966	861
Advanced Technology Development	626	696	737
Advanced Component Development	4,356	5,022	4,663
System Development and Demonstration	5,119	6,275	6,026
RDT&E Management Support	1,278	918	854
Operational Systems Development	3,161	3,562	3,593
Sub Total: RDT&E,N	**16,030**	**18,111**	**17,276**
Overseas Contingency Operations	37	36	78
Total: RDT&E,N	**16,067**	**18,147**	**17,355**
By Service			
Navy	15,276	17,310	16,490
Marine Corps	755	801	787

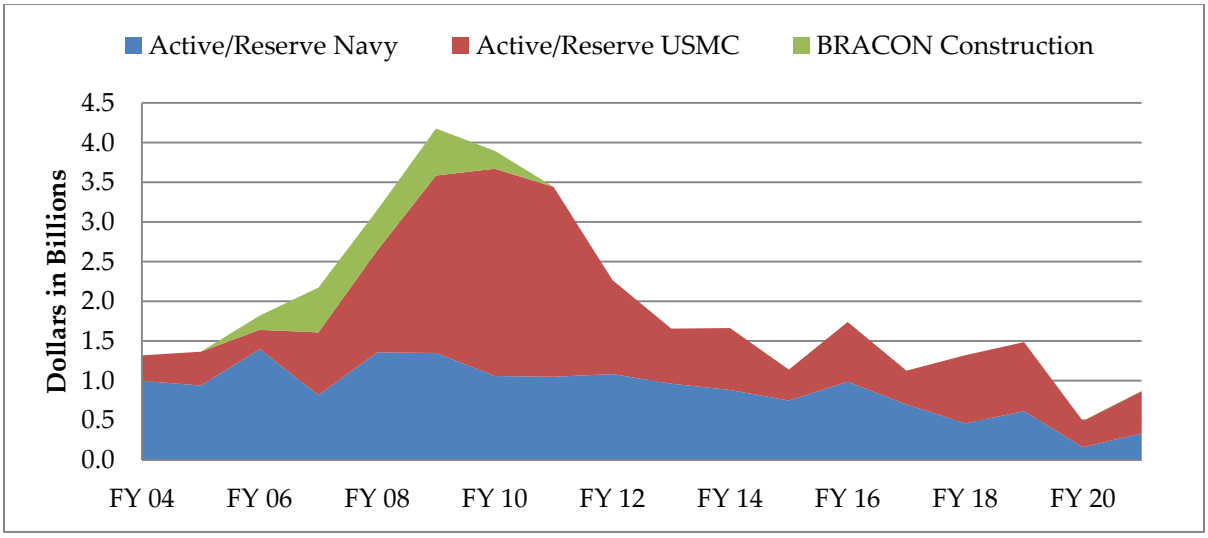
SECTION VI – INFRASTRUCTURE

The mission of the Department could not be achieved without high quality facilities that support our Sailors, Marines, and their families. Further, our ability to rapidly deploy around the globe is directly connected to an effective shore infrastructure.

MILITARY CONSTRUCTION

The FY 2017 budget request supports the Department's critical goals, financing 36 military construction projects, including 33 baseline projects and three OCO projects. Of these, 24 are for the active Navy and eight for the active Marine Corps, one is for the Navy Reserve Component, and three for the Marine Corps Reserve Component.

Figure 33 – Historical Military Construction Funding



Key tenets in the Department's facilities investment strategy are as follows, with examples of FY 2017 funding for each:

- Improving Quality of Life and Safety
  - Unaccompanied Housing, NSS Portsmouth Navy Shipyard, ME ($18 million)
  - Recruit Barracks and Reconditioning Center, MCRD Parris Island, SC ($30 million)
- Enhancing the Global Defense Posture

  - Power Upgrades, Joint Region Marianas, Guam ($62 million)
- Replacing Aging Facilities
  - Consolidation of Communications, Electrical, and Maintenance Shops, MCB Hawaii, HI ($73 million)
- Supporting New Systems
  - Triton Mission Control Facility, NAS Whidbey Island, WA ($30 million)
  - F-35 Aircraft Maintenance Hangar, MCAS Beaufort, SC ($83 million)
- Upgrading Operations, Training, and Security Facilities
  - WMD Training Applied Instruction Facility, NAS Whiting Field, FL ($20 million)
  - Range Safety Improvements, MCB Camp Lejeune, NC ($18 million)
- Upgrade Infrastructure
  - Electrical Power Supply, Reserve Center Brooklyn, NY ($2 million)

FAMILY HOUSING

The family housing budget includes the operation, maintenance, recapitalization, leasing, and privatization oversight of the Department's family housing worldwide. The budget request represents the funding level necessary to provide safe and adequate housing either through the community or in government quarters.

The Navy's FY 2017 budget request includes $78.8 million for the construction of 126 units at Naval Support Activity Andersen, Guam. The Navy's budget also includes $267 million for the operation, maintenance, and leasing of approximately 9,000 units located worldwide. The level of funding translates to 75 percent of the government owned inventory meeting adequate standards, which is below the 90 percent DoD goal.

The Marine Corps' FY 2017 budget request includes $11.0 million for the improvement and repair of 36 family housing units at Marine Corps Air Station, Iwakuni, Japan. The Marine Corps budget also includes $34 million for the operation, maintenance and leasing of approximately 1,500 units located worldwide. The level of funding translates to 99 percent of the government owned inventory meeting adequate standards.

Figure 34 – Navy & Marine Corps Family Housing Units

		FY 2015	FY 2016	FY 2017
Privatized inventory		63,426	62,673	62,706
Government Owned inventory		9,248	8,624	8,414
Leased inventory		2,351	2,231	2,123
	Total	75,025	73,528	73,243

BASE REALIGNMENT AND CLOSURE

The Base Realignment and Closure (BRAC) Budget in FY 2017 is $134 million. These funds will be used to continue environmental clean-up and monitoring at legacy locations.

MILITARY CONSTRUCTION, NAVY AND MARINE CORPS
ACTIVE AND RESERVE

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Significant Programs			
Major Construction	1,040	1,590	910
Minor Construction	7	23	30
Planning and Design	33	92	88
Foreign Currency	4	-	-
Sub Total: Navy	**1,084**	**1,704**	**1,028**
Overseas Contingency Operations	-	-	60
Total: Navy	**1,084**	**1,704**	**1,088**
Naval Reserve			
Major Construction	49	32	35
Minor Construction	4	1	-
Planning and Design	2	2	4
Total: Naval Reserve	**55**	**35**	**39**
By Service			
Navy	749	986	700
Marine Corps	390	754	426

FAMILY HOUSING, NAVY AND MARINE CORPS

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Navy			
Construction (Incl P&D)	-	8	82
O&M	314	316	267
Total: Navy	**314**	**324**	**349**
Marine Corps			
Construction (Incl P&D)	16	8	12
O&M	31	37	34
Total: Marine Corps	**47**	**45**	**46**
Total: FH,N&MC	**361**	**369**	**395**

BASE REALIGNMENT AND CLOSURE ACCOUNTS

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
Base Realignment and Closure IV	6	-	-
Base Realignment and Closure V	3	-	-
Consolidated Prior BRAC	216	170	134
Total: BRAC	**225**	**170**	**134**

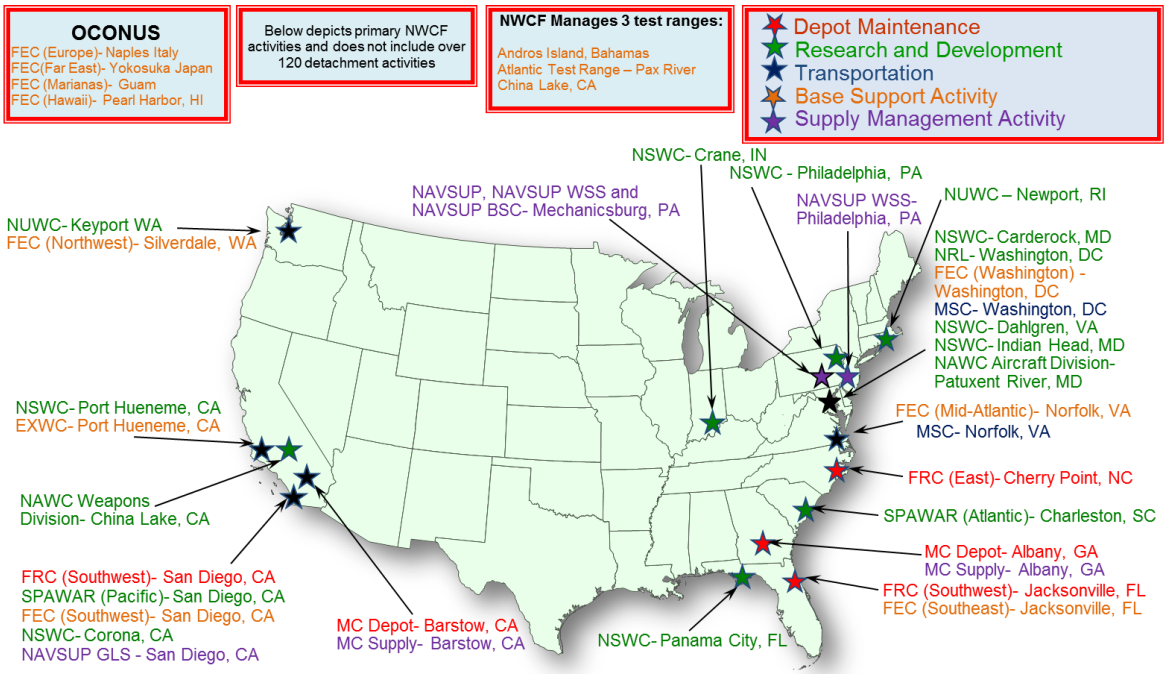
SECTION VII – REVOLVING FUND

Navy Working Capital Fund Overview

The Navy Working Capital Fund (NWCF) is a revolving fund that finances Department of the Navy (DON) activities providing products and services on a reimbursable basis, based on a customer-provider relationship between operating units and NWCF support organizations. Unlike for-profit commercial businesses, NWCF activities strive to break even over the budget cycle. The NWCF provides stabilized pricing to customers and acts as a shock-absorber to fluctuations in market prices during the year of execution. These fluctuations are recovered from customers in future years via rate changes. The NWCF is key to supporting the DON's posture and presence through capability, capacity, and readiness.

NWCF activity groups comprise five primary areas: Supply Management, Depot Maintenance, Transportation, Research and Development, and Base Support. The wide range of goods and services provided by NWCF activities are crucial to the DON's afloat and ashore readiness and maintaining a relevant industrial base. Figure 35 shows NWCF activities across the country.

Figure 35 – Map of NWCF Activities



The FY 2017 NWCF budget request reflects the DON's continued focus on ensuring the right products and services are provided where it matters, when it matters, and at the right cost. The value of goods and services provided by NWCF activities in FY 2017 is projected to be approximately $28.2 billion, as shown in Figure 36. The NWCF FY 2017 budget request reflects a total cost that is relatively stable with a slight decrease from FY 2016. The cost decrease is primarily attributable to savings generated from energy conservation and productivity initiatives that are reducing the DON's overall consumption of energy as well as from other primary contributing factors such as favorable fuel prices and foreign currency exchange rates.

Figure 36 - Summary of NWCF Costs

COST (*In Millions of Dollars)*	**FY 2015**	**FY 2016**	**FY 2017**
Supply (Obligations)	6,364	6,805	6,766
Depot Maintenance - Aircraft	2,016	2,135	2,179
Depot Maintenance - Marine Corps	563	563	456
Transportation	2,988	2,907	2,703
Research and Development	12,239	12,822	12,933
Base Support	3,017	3,261	3,124
TOTAL	27,188	28,493	28,161

NWCF Cash

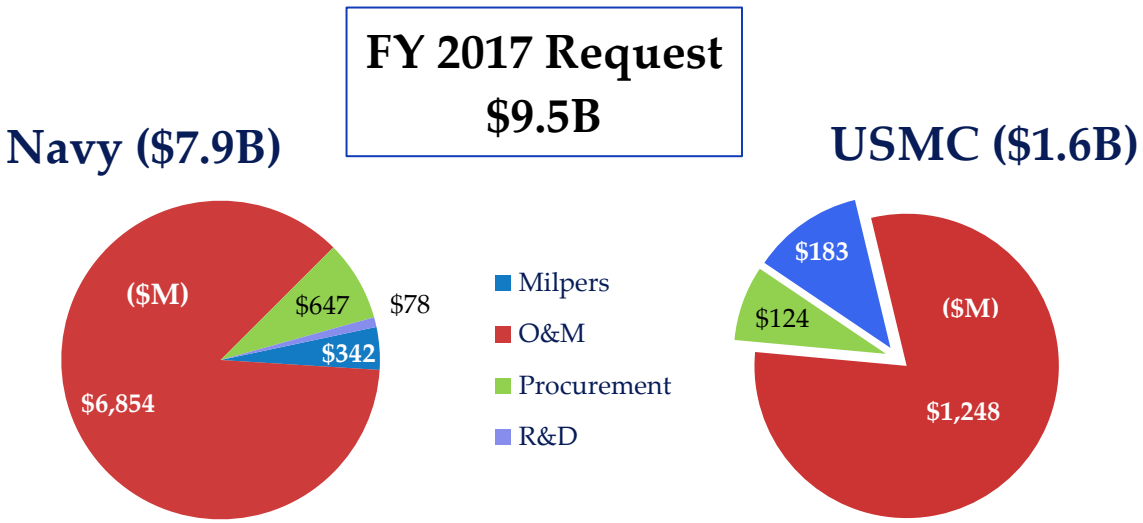
The DON's goal is to maintain the cash balance within the upper and lower operational range. The DON's operational range calculation begins with the former seven to ten day methodology based on average daily expenditure rates and a projection of outlays to procure capital investments. The operational range also takes into consideration DON specific cash volatility to ensure an adequate cash balance is maintained to meet projected outlays throughout the year. The DON's NWCF cash requirement includes a forecast of collections and disbursements and considers cyclical timing of outlays.

SECTION VIII - OVERSEAS CONTINGENCY OPERATIONS (OCO)

OVERVIEW

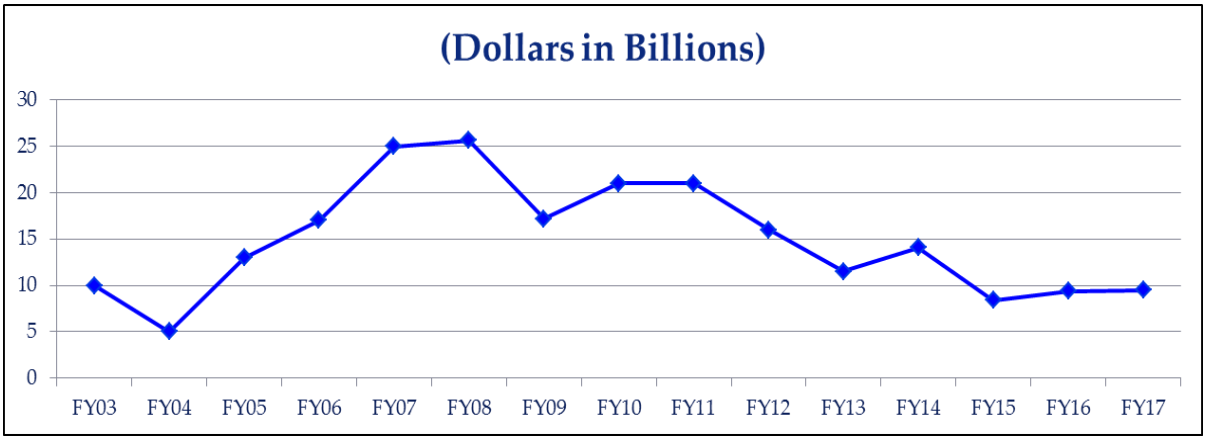
The Navy and Marine Corps overseas force posture is shaped by ongoing and projected operational commitments. FY 2017 continues funding to counter the Islamic State of Iraq and the Levant (ISIL) and for operations in Afghanistan, the Horn of Africa, and other locations in theater, as well as for the European Reassurance Initiative. The FY 2017 request includes incremental costs to sustain operations, manpower, equipment, and infrastructure repair, as well as equipment repair and replacement. These costs include aviation and ship operations and maintenance, combat support, base support, Marine Corps operations and field logistics, mobilized reservists, and other special pays. Figure 37 shows a breakout of Navy and Marine Corps funding by appropriation.

Figure 37 – Navy and Marine Corps FY 2017 OCO Funding



The level of funding requested in FY 2017 increases slightly, as shown in Figure 38, commensurate with the revised Afghanistan plan. Today the Marine Corps has a force of ~3,000 Marines ashore in the U.S. Central Command (CENTCOM) and another ~1,800 afloat throughout CENTCOM.

Figure 38 – Historical OCO Funding, FY 2003 – FY 2017



Beyond the Marines participating in counterinsurgency, security cooperation, and civil-military operations, on any given day there are ~4,600 Sailors ashore and another ~10,000 afloat throughout CENTCOM. These sailors are conducting operations such as air operations, maritime infrastructure protection, explosive ordnance disposal (counter-IED), combat construction engineering, cargo handling, combat logistics, maritime security, detainee operations, customs inspections, civil affairs, base operations, and other forward presence activities. For the foreseeable future, the demand for naval presence in theater remains high as we uphold commitments to allies and partner states.

The Navy has active and reserve forces continually deployed in support of contingency operations overseas serving as members of Carrier Strike Groups, Expeditionary Strike Groups, Special Operating Forces, Seabee units, Marine forces, medical units, and Individual Augmentees (IAs). Figure 39 provides the Overseas Contingency Operations funding profile.

Figure 39 – Department of the Navy OCO Funding

(Dollars in Millions)

	FY 2015	FY 2016	FY 2017
USN OCO			
Appropriation			
Military Personnel, Navy	351	251	331
Reserve Personnel , Navy	14	13	12
Operation and Maintenance, Navy	5,922	7,005	6,665
Operation and Maintenance, Navy Reserve	46	31	26
Aircraft Procurement, Navy	243	211	393
Weapons Procurement, Navy	67	-	9
Other Procurement, Navy	124	12	124
Procurement of Ammuniton, Navy/Marine Corps	62	51	61
Military Construction, Navy	-	-	60
Research, Development, Test, and Evaluation, Navy	36	36	78
Sub Total USN OCO	**6,864**	**7,611**	**7,758**
USMC OCO			
Appropriation			
Military Personnel, Marine Corps	306	171	180
Reserve Personnel , Marine Corps	4	3	4
Operation and Maintenance, Marine Corps	1086	1361	1244
Operation and Maintenance, Marine Corps Reserve	11	3	3
Procurement, Marine Corps	66	57	119
Procurement of Ammuniton, Navy/Marine Corps	92	67	5
Sub Total USMC OCO	**1,564**	**1,663**	**1,555**
US Coast Guard	**-**	**-**	**163**
DON Grand Total	**8,429**	**9,273**	**9,476**

*The FY 2015 column reflects cost of war (CoW) report data, submitted monthly.

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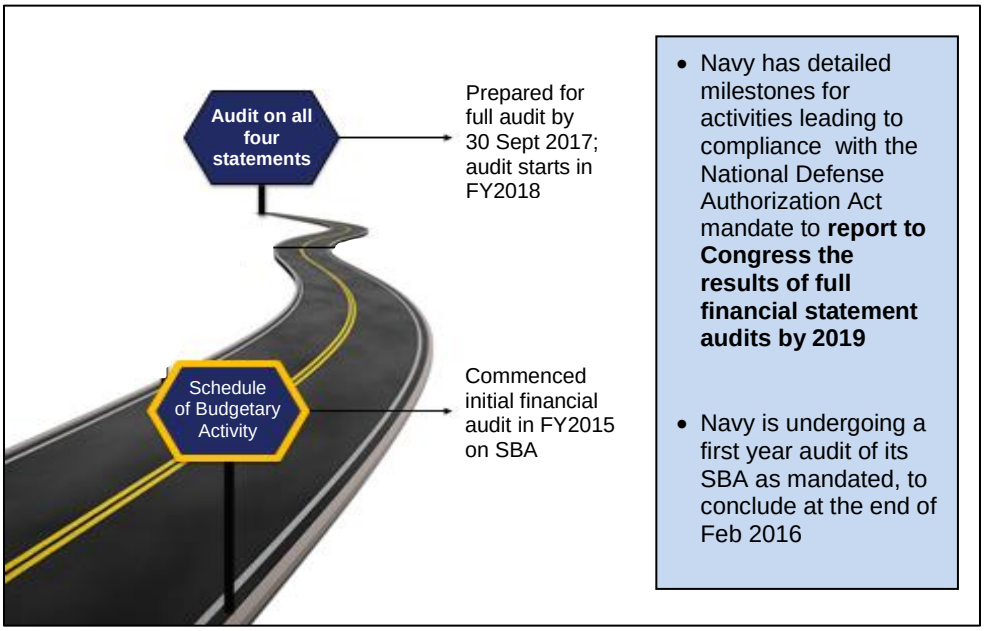
SECTION IX – FINANCIAL OPERATIONS

The Department's transformation of the DON's business enterprise is of paramount importance, ensuring that all available resources are directed to our Sailors and Marines. The Department's drive to provide stronger financial management and to achieve auditability will continue its momentum across the FYDP.

Figure 40 – Department of the Navy Road to Financial Auditability



AUDITABILITY BRINGS TRANSFORMATION

The DON's plan to achieve compliance with financial audit standards is the Department's most comprehensive business transformation initiative to date. The purpose of the congressional mandate to achieve financial auditability is to improve the accuracy and accessibility of Departmental financial information. These improvements in turn will: provide DON leaders with more-accurate data to make resource decisions; increase accountability for funds appropriated and reduce the risk of funds misuse; and reduce the number of unsuccessfully-processed financial transactions causing re-work. The result will be improved efficiency, better capability to manage resources, and a business culture based on increased accountability.

The focal point of the DON's auditability strategy is upgrading the quality of data flowing from the Department's business and accounting systems. Audit standards require this information to be accurate, timely and completely captured as it flows end-to-end – from origination of a business transaction to its endpoint on a financial statement. Without this proven, reliable automated data stream, enhanced accountability will not be attainable and a favorable audit of large, complex DON will not be possible.

To construct this unimpeded data path, the DON must execute a two-prong plan: first, cast off duplicative and unneeded business and financial systems, arriving at a "best of breed" inventory; and, simultaneously, ensure that the remaining IT systems comply with accounting and audit standards. These actions will provide the Department with assurance that business data is accounted for completely and is accurate as it is directed to the financial statements.

Pursuing these objectives, the Department continues to rationalize and upgrade its suite of business and financial systems. For example, the DON is reducing its number of enterprise accounting systems by transferring Navy commands not using Navy Enterprise Resource Planning (ERP), to the more-capable Marine Corps' accounting system. In addition, the Department is aggressively implementing Treasury's Invoice Processing Platform (IPP), a proven web-based system which will provide a now-missing capability – an efficient, compliant means to perform receipt-and-acceptance for reimbursable activity between government organizations. Using IPP will not only correct deficiencies identified in the initial Schedule of Budgetary Activity (SBA) audit, but it will help DON comply with accepted standards of stewardship as it spends taxpayer dollars. Similarly, the Department is methodically strengthening business systems' internal controls which govern the flow of business data. By ensuring these controls comply with audit standards, the DON will achieve its dual objectives of a favorable audit opinion as well as increased financial accountability.

In addition to improving the capability and compliance of its business system suite, the Navy has other major steps to take to arrive at full financial statement auditability. These include strengthening business process controls governing working capital fund operations and increasing the accountability for mission essential major assets.

AUDITABILITY PROGRESS

The DON continues to make steady progress toward meeting congressional and DoD mandates for DON financial audit readiness. The Navy reached the first required audit milestone by undergoing audit on its FY 2015 SBA, a big step toward full financial auditability – or, audit readiness on all four of the DON financial statements. Congress has mandated in legislation that the Military Departments achieve full auditability during FY 2017, followed by an independent audit of all four of its financial statements the following fiscal year.

The Navy, like the Army and the Air Force, will receive no opinion on the first year audit of its SBA. Auditors are finding that internal controls governing business processes and IT systems are not robust enough to produce accurate SBAs. In all three Departments, auditors found three common deficiencies, including: inability to completely account for every business transaction and accurately record each transaction's impact on financial statements; second, an ineffective IT control environment, which not only impedes accurate data flow but cannot guarantee that systems are secure and free from improper access; and lack of a robust audit response capability which are essential in providing auditors' promptly with large volumes of documentation. The Military Departments must continue to address shortcomings in these three areas and quickly improve their respective performance.

In one area – responding quickly to audit requests for information – the Navy has demonstrated outstanding performance. During the testing phase of its SBA audit, Navy commands were able to provide large volumes of substantiating documentation to the audit team – almost all of it within required timeframes. This achievement indicates the Navy is not only succeeding in its ability to meet the rigors of an audit – but it is also making real progress toward documented accountability of its business activity.

Financial audit readiness will not be a one-time achievement – rather, it will be marked by a progressively changing business environment in which improvements must be incorporated into permanent work processes. The DON is committed to promoting a business culture in which everyone understands their respective roles in achieving and sustaining financial auditability, from senior leaders down to the business managers who support our warfighting team each day. The result will be strengthened stewardship of public funds, institutionalized by performing effective internal controls over business processes and systems, and by making business policies and procedures more precise and compliant with audit standards.

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LIST OF ACRONYMS

A

A2/AD – Anti-Access/Area-Denial
AAG – Advance Arresting Gear
AARGM – Advanced Anti-Radiation Guided Munition
AC - Active Component
ACAT – Acquisition Category
ACV – Amphibious Combat Vehicle
AFSB – Afloat Forward Staging Base
AEA – Airborne Electronic Attack
AMDR – Air and Missile Defense Radar
AMRAAM – Advanced Medium Range Air-to-Air Missile
AOR – Area of Responsibility
AP – Advance Procurement
APKWS – Advanced Precision Kill Weapon System
ARGs – Amphibious Ready Groups
AS – Submarine Tenders
AT/FP – Anti-Terrorism/Force Protection
AVPLAN – Aviation Plan

B

BA – Budget Authority
BRAC – Base Realignment and Closure

C

CBARS – Carrier Based Aerial Refueling System
CDD – Capabilities Development Documentation
CENTCOM – US Central Command
CG – Cruiser
COCOM – Combatant Commander
COD – Carrier Onboard Delivery
CSG – Carrier Strike Groups
CV – JSF Carrier Variant
CVN – Nuclear Aircraft Carrier
CVW – Carrier Air Wing
C4I – Command, Control, Communication, Computers and Intelligence

D

DDG – Guided Missile Destroyer
DoD – Department of Defense
DON – Department of the Navy
DSG – Defense Strategic Guidance

E

EA – Electronic Attack
EMALS – Electromagnetic Aircraft Launch System
ESB – Expeditionary Mobile Base
EOD – Explosive Ordinance Disposal
EPF – Expeditionary Fast Transport
ERN – Environmental Restoration, Navy
ERP - Enterprise Resource Planning
ES – End Strength
ESSM – Evolved Sea Sparrow Missile
EW – Electronic Warfare
EXWC – Engineering and Expeditionary Warfare Center

F

FEC – Facilities Engineering Command
FHP – Flying Hour Program
FOC – Full Operation Capability
FOS – Full Operating Status
FRC – Fleet Readiness Center
FRP – Fleet Response Plan
FRTP – Fleet Response Training Plan
FSRM – Facility Sustainment, Restoration, and Modernization
FTE – Full-Time Equivalent
FY – Fiscal Year
FYDP – Future Years Defense Plan

G

G/ATOR – Ground/Air Task Oriented Radar

H

HADR – Humanitarian Assistance and Disaster Relief
HARM – High-Speed Anti-Radiation Missile
HM&E - Hull, Mechanical and Electrical

I

IA – Individual Account
IA – Individual Augmentee
IOC – Initial Operational Capability
IED – Improvised Explosive Device
ILS – Integrated Logistics Support
IMA – Individual Mobilization Augmentee
INS – Inertial Navigation System
IPP – Invoice Processing Platform
IRR – Infrared Receiver
IRST – Infrared Search and Track
ISIL – Islamic State of Iraq and the Levant
ISR – Intelligence, Surveillance, and Reconnaissance
IT – Information Technology

J

JAGM – Joint Air-to-Ground Missile
JHSV – Joint High Speed Vessel
JLTV – Joint Light Tactical Vehicle
JPATS – Joint Primary Aircraft Training System
JSF – Joint Strike Fighter
JSOW – Joint Standoff Weapon

L

LAV – Light Armored Vehicle
LAV-ATM – LAV Anti-Tank Modernization
LCAC – Landing Craft Air Cushion
LCC – Amphibious Command Ship
LCS – Littoral Combat Ship
LCU – Landing Craft Utility
LHA – Amphibious Warfare Assault Ship
LHD – Amphibious Assault Ship
LMSR – Large, Medium Speed Roll-On/Roll-Off Ships
LOC – Limited Operational Capability
LPD – Amphibious Dock Ship
LRASM – Long Rang Anti-Ship Missile
LRIP – Low-Rate Initial Production
LSD – Dock Landing Ship
LX(R) – Amphibious Ship Replacement

M

MAGTF – Marine Air-Ground Task Force
MCB – Marine Corps Base
MCM – Mine Countermeasures Ships
MCAS – Marine Corps Air Station
MCRD – Marine Corps Recruiting Depot
MEF – Marine Expeditionary Force
MEU – Marine Expeditionary Unit
MILCON – Military Construction
MILPERS – Military Personnel
MLP – Mobile Landing Platform
MPS – Maritime Prepositioning Ships
MPMC – Military Personnel, Marine Corps
MPN – Military Personnel, Navy
MSC – Military Sealift Command
MTS – Moored Training Ship
MYP – Multi-Year Procurement

N

NAS – Naval Air Station
NAWC – Naval Air Warfare Center
NCDOC – Navy Cyber Defense Operations Command
NDSF – National Defense Sealift Fund
NECC – Navy Expeditionary Combat Command
NGJ – Next Generation Jammer
NOSC – Navy Operational Support Center
NSWC – Naval Surface Warfare Center
NUWC – Naval Undersea Warfare Center
NWCF – Navy Working Capital Fund

O

OCO – Overseas Contingency Operations
OEF – Operation Enduring Freedom
OFRP – Optimized Fleet Response Plan
OFRTP – Optimized Fleet Response Training Plan
OIF – Operation Iraqi Freedom
O&M – Operation & Maintenance
OMB – Office of Management and Budget
OOP – Out-of-Reporting
OPTEMPO - Operational Tempo
OPN – Other Procurement, Navy
ORD – Operational Requirements Document
ORT – Operation Rolling Tide

P

PAA – Primary Authorized Aircraft
PACOM – Pacific Command

PANMC – Procurement or Ammunition, Navy and Marine Corps
PB – President's Budget
PBL – Performance Based Logistics
PC – Patrol Craft
PMC – Procurement, Marine Corps
PMRF – Pacific Missile Range Facility

Q

QDR – Quadrennial Defense Review

R

RADAR – Radio Detection and Ranging
RAM – Rolling Airframe Missile
RBA – Ready Basic Aircraft
RC - Reserve Component
RCOH – Refueling Complex Overhaul
R&D – Research & Development
RDT&E – Research, Development, Test and Evaluation
RFU – Ready-for-Use
R&M – Restoration and Modernization
ROS – Reduced Operating Status
RPN – Reserve Personnel, Navy
RSTA – Reconnaissance, Surveillance, and Target Acquisition

S

S2F – Speed to Fleet
SBA – Schedule of Budgetary Activity
SBR – Statement of Budgetary Resources
SDB – Small Diameter Bomb
SDD – System Development and Demonstration
SEAL – Sea Air Land Team
SEWIP – Surface Electronic Warfare Improvement Program
SLEP – Service-Life Extension Program
SM - Standard Missile
SMOSF – Ship Maintenance, Operations, and Sustainment Fund
SOF – Special Operations Force
SOPGM – Stand-Off Precision Guided Munitions
SSBN – Nuclear Ballistic Submarine
SSC – Ship to Shore Connector
SSGN – Guided Missile Submarine (Nuclear)
SSM – Surface-to-Surface Missile Module
SSN – Nuclear Attack Submarine
S&T – Science and Technology
STOVL – Short Takeoff and Vertical Landing
STUAS – Small Tactical Unmanned Aircraft System
SUW – Surface Warfare

T

TACAIR – Tactical Air
TACTOM – Tactical Tomahawk
T-AE – Combat Logistics Ship
T-AGOS – Ocean Surveillance Ship
T-AH – Hospital Ship
TAI – Total Aircraft Inventory
T-AKE – Dry-Cargo Ammunition Ship
T-AO – Fleet Replenishment Oilers
T-AOE – Fast Combat Support Ships
T-AO(X) – Fleet Oiler Replacement
T-ARS – Salvage Ships
T-ATF – Ocean Tugs
T-ESD – Expeditionary Transfer Dock
T-HST– High-Speed Transport
TMS – Type/Model/Series
TOA – Total Obligation Authority
TOW – Tube-Launched Optically-Tracked, Wire-Guided
T&R – Training and Readiness
TSC – Theater Security Cooperation

U

UAS - Unmanned Aerial System
UAV – Unmanned Aerial Vehicle
UCLASS – Unmanned Carrier Launched Airborne Surveillance and Strike
USMC – United States Marine Corps
USN – United States Navy

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