








Highlights

of the

Department

of the

Navy

FY **2019**

Budget

Office of Budget-2018

Highlights of the Department of the Navy FY 2019 Budget
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All DON budget materials are available at
http://www.finance.hq.navy.mil/fmb/pb/books.htm

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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 cost of this report or study for the Department of the Navy is approximately $1,643,653 for the 2018 Fiscal Year. This includes $79,753 in expenses and $1,563,900 in DoD labor.

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SECTION I – OVERVIEW

The United States of America supports maritime operations worldwide. For more than two centuries, the Navy and Marine Corps —the Sea Services—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 overseas regions, defending key interests in those areas, protecting U.S. citizens abroad, and preventing adversaries from leveraging the world's oceans against the United States. The ability to sustain operations in international waters far from U.S. 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 the Sea Services and the Nation.

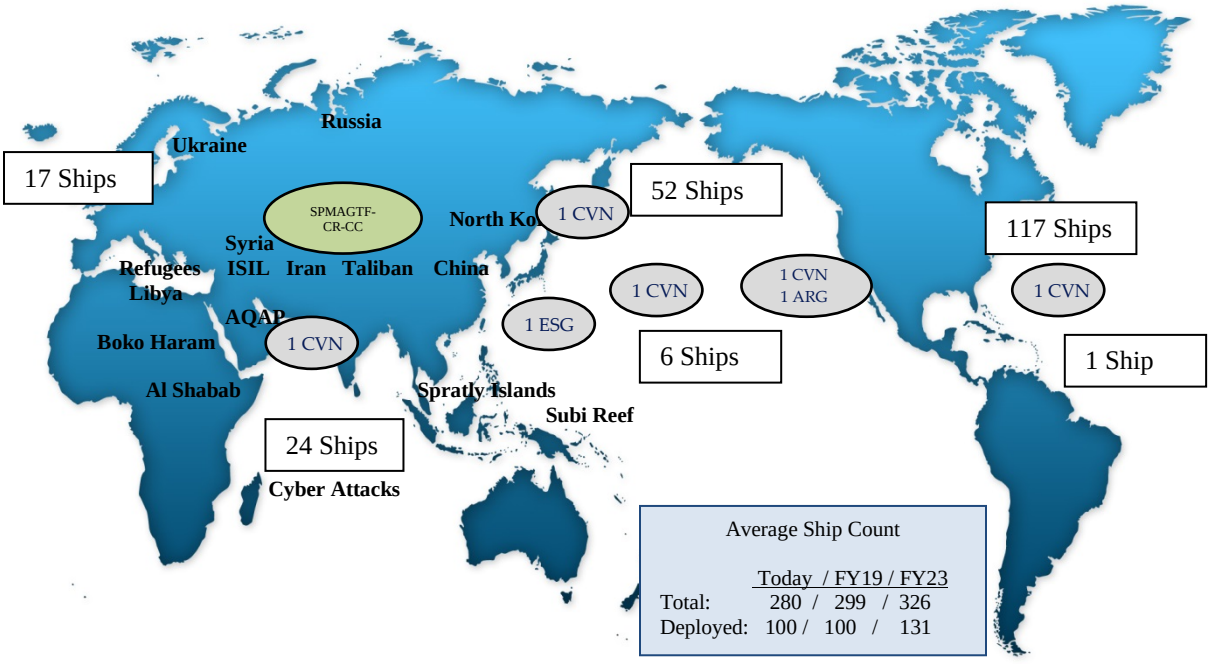
The FY 2019 request sustains and protects readiness and begins increasing the capability and capacity of the Navy and Marine Corps team. As directed within the 2018 National Defense Strategy, the FY 2019 budget submission will support the building of a more lethal, resilient, and agile force to deter and defeat aggression by great power competitors and adversaries in all domains and across the conflict spectrum. Ultimately, the budget submission reflects the DON's effort to protect the homeland and preserve America's strategic influence around the world. The Navy's overarching plan in support of this strategy is referred to as the Navy the Nation Needs (NNN). The six pillars of the NNN are: Readiness, Capability, Capacity, Manning, Networks, and Operating Concepts. The Marine Corps overarching plan in support of this strategy is referred to as the Marine Corps Operating Concept which generates the Nation's Force of Choice.

The global security environment is rapidly changing and the Navy and Marine Corps is engaged in a competition that they have not faced in over twenty years. To meet the objectives in the National Security Strategy, as part of the Joint Forces, the Navy and Marine Corps primary force contributors are two Carrier Strike Groups

(CSG) and two Amphibious Ready Groups (ARG) forward at all times, and keeping three additional CSGs and ARGs in a ready use or surge status (2+3) to deploy within 30 days. The FY 2019 budget continues to make strides in achieving CSG and ARG 2+3 posture and Naval readiness to once again re-stablish the standard that has ensured preeminence. This will be imperative to winning peer on peer competition, as we move forward to a distributed lethality.

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 they are needed, when they are needed. Coming from the sea, naval forces are on station, are able to stay longer, are self-sufficient, and by virtue of being sovereign U.S. territory, provide our country's leadership unparalleled freedom of action in the event of a crisis. Figure 1 shows areas our Navy and Marine Corps operated in 2017.

Figure 1 – DON 2017 Engagements



FY 2019 President's Budget

The FY 2019 President's Budget request focuses on urgent modernization and growth, building on the FY 2017 and FY 2018 budgets which arrested the DON readiness decline while addressing the Department's most pressing needs. In accordance with the 2018 National Defense Strategy, PB19 invests in growing the readiness, capability, and capacity of the Navy and Marine Corps team. The FY 2019 budget for the Department is $194.1 billion, an increase of $12.6 billion (7 percent) from the FY 2018 budget request (Base and OCO).

Maintaining a robust Fleet and adaptable Marine Corps, requires investments in platforms and systems to address today's wide-range of operations. The FY 2019 budget leverages our aggressive efforts to build a more lethal force, continue to improve readiness and reform for greater performance and affordability. This budget ensures we maintain our advantage in advanced technologies and weapons, allowing us to operate in every region across the full spectrum of conflict. In FY 2019, our deployable battle force is 299 ships. The FY 2019 budget request procures ten battle force ships. Navy and Marine Corps aviation provides our Nation's leaders with ashore and afloat options where it matters and when it matters. The FY 2019 budget request procures 120 manned and unmanned aircraft.

As with the FY 2018 request, this budget funds baseline and OCO funding for flight hours for the Navy and Marine Corps to deploy at a 2.0 T-rating. Ship Operations are budgeted to 58 days/quarter deployed and 24 days/quarter non-deployed with a combination of Baseline and OCO funding. Ship Depot maintenance is requested at the maximum executable level of projected maintenance. The FY 2019 base budget

also requests funds for facility sustainment of Navy and Marine Corps shore infrastructure at 80 percent of the estimated requirement.

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 military end strength with the force structure as the battle force begins to grow in size. The active Navy has increased from 327,900 in FY 2018 to 335,400 in FY 2019. The active Marine Corps is growing from 185,000 in FY 2018 to a level of 186,100 in FY 2019. Our Marines continue to be the country's 9-1-1 force, yet remain true to their expeditionary roots, with an enhanced ability to operate from the sea. Civilian personnel levels grow to accommodate shipyards, security, and cyber force requirements, while maintaining our necessary force of engineers, scientists, medical professionals, and skilled laborers.

This year's budget request marks the beginning of our investment in growing the readiness, capability, and capacity of the Navy and Marine Corps as we build a more lethal, resilient, and agile force to deter and defeat aggression by great power competitors and adversaries in all domains across the conflict spectrum and grow the capacity and capability of Navy and Marine Corps forces, properly balanced with the readiness requirements to meet Combatant Commanders needs around the globe. This FYDP reflects properly funded readiness, though there still may be a backlog of deferred work beyond the FYDP, while also adding increases in investment necessary to maintain an advantage in advanced technologies and weapons systems. The Department has also addressed former risks in spares, weapons capability, and delayed certain modernization programs, and this budget provides us with the best balance to maintain Navy and Marine Corps as a ready and decisive force.

The topline funding provided in the FY 2019 budget has enabled the Department to begin addressing the capabilities needed for full-spectrum warfighting to deter high-end adversaries. This budget makes solid progress toward countering future threats, with fully funded training and maintenance that improve readiness ensuring our forces are ready 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.

The Department is committed to follow reform guidance and has identified savings over $1 billion in FY 2019 and $5 billion over the FYDP that was reinvested in force structure and readiness. Moreover, the Department is focused on improving business processes through the audit of our financial statements. Overall, the Department's investments in readiness and infrastructure improve upon efforts in the Navy's PB18 request are essential for generating trained, properly equipped combat ready forces, and support the National Security Strategy spanning all corners of the globe.

STRATEGIC GUIDANCE AND THEMES

The FY 2019 President's Budget is developed with existing guidance ranging from the National Security Strategy, the Secretary of Defense National Defense Strategy, to the Secretary of the Navy, Strategic Messaging / Chief of Naval Operations, A Design for Maintaining Maritime Superiority and finally, the Commandant of the Marine Corps' Marine Corps Operating Concept.

The National Security Strategy identifies four vital, national interests—organized as the strategy's four "pillars":

- Protect the Homeland, the American People, and American Way of Life;
- Promote American Prosperity;
- Preserve Peace through Strength; and
- Advance American Influence.

In alignment with the National Security Strategy, the National Defense Strategy directs the Department to *Compete, Deter, and Win* alongside our allies and partners to prevail in conflict and preserve peace through strength. The National Defense Strategy is the Department's preeminent strategic guidance document and sets the course for the Department for the coming years. Without sustained and predictable investment to restore readiness and modernize our military to make it fit for our time, we will rapidly lose our military advantage, resulting in a Joint Force that has

legacy systems irrelevant to the defense of our people. Long-term strategic competitions with China and Russia are the principal priorities for the Department, and require both increased and sustained investment.

RESOURCE SUMMARY

Total Obligation Authority (TOA) for the FY 2019 DON baseline budget is $179.1 billion. Figure 2 displays the DON topline. Figure 3 displays the FY 2019 President's Budget request by Appropriation Title. Figure 4 displays individual Department of the Navy appropriation estimates. The need for stable and predictable funding remains.

Figure 2 – DON Annual Base Budget in FY 2019 Then Year Dollars, FY 2012 – FY 2023 (Dollars in Billions)

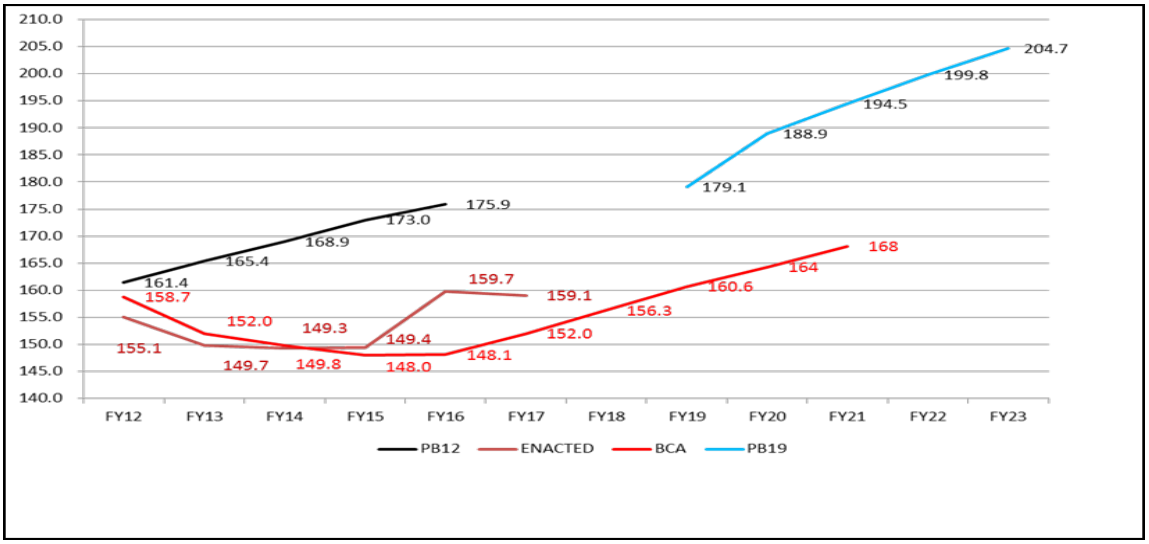


Figure 3 – FY 2019 DON Base Budget by Appropriation Title $179.1 Billion (Dollars in Billions)

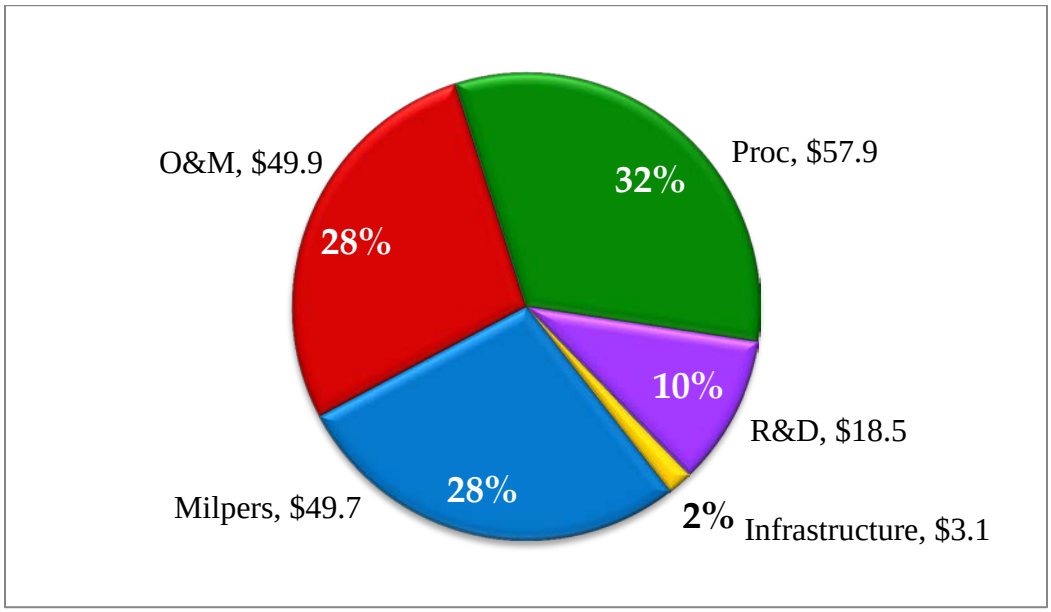


Figure 4 – Appropriation Summary, FY 2017 – FY 2019

(In Millions of Dollars)	FY 2017	FY 2018*	FY 2019
Military Personnel, Navy	27,999	28,918	30,426
Military Personnel, Marine Corps	12,723	13,279	13,891
Reserve Personnel, Navy	1,924	2,000	2,068
Reserve Personnel, Marine Corps	744	767	788
Medicare-Eligible Retiree Health Fund Contribution, Navy	1,352	1,514	1,466
Medicare-Eligible Retiree Health Fund Contribution, MC	766	866	831
Medicare-Eligible Retiree Health Fund Contribution, Res Navy	123	136	131
Medicare-Eligible Retiree Health Fund Contribution, Res MC	72	77	74
Operation and Maintenance, Navy	38,221	46,381	41,435
Operation and Maintenance, Marine Corps	5,941	6,951	6,826
Operation and Maintenance, Navy Reserve	918	1,087	1,027
Operation and Maintenance, Marine Corps Reserve	270	279	272
Environmental Restoration, Navy	-	281	329
Aircraft Procurement, Navy	16,111	14,956	19,042
Weapons Procurement, Navy	3,293	3,420	3,702
Shipbuilding and Conversion, Navy	21,157	20,404	21,871
Other Procurement, Navy	6,401	7,929	9,414
Procurement, Marine Corps	1,307	2,065	2,858
Procurement of Ammunition, Navy/Marine Corps	637	792	1,006
Research, Development, Test, and Evaluation, Navy	17,525	17,710	18,451
Military Construction, Navy and Marine Corps	1,344	1,818	2,543
Military Construction, Naval Reserve	39	65	43
Family Housing, Navy (Construction)	96	84	105
Family Housing, Navy (Operations)	306	328	315
National Defense Sealift Fund	581	509	-
Base Realignment & Closure	176	144	152
SUBTOTAL	**160,026**	**172,770**	**179,066**
Navy	***136,657***	***146,439***	***151,421***
Marine Corps	***23,370***	***26,331***	***27,644***
Overseas Contingency Operations	14,031	8,662	15,005
TOTAL	**174,058**	**181,432**	**194,071**

NOTE:
***FY 2018 reflects the FY 2018 PB request.**
****OCO details amplified in Section VIII.**
*****Displays NDSF transfer to O&M, Navy consistent with Congressional direction.**




People




SECTION II – PEOPLE

OVERVIEW

Our ability to complete our mission successfully rests on the Navy and Marine Corps team - Sailors and Marines, active duty and reserve, our civilian teammates and all our families.

People are our greatest resource and, therefore, our number one priority. Our Sailors and Marines are the world's most capable fighting force, protecting American security and prosperity around the globe. Our civilian workforce provides these men and women with the resources and support required to maintain maritime superiority through forward presence, which in turn preserves peace through strength and advances American influence.

To that end, the FY 2019 Military Personnel appropriations include funding for the Blended Retirement System (BRS). The BRS was created in the FY 2016 National Defense Authorization Act (NDAA) and blends the traditional legacy retirement pension with a defined contribution to Service members' Thrift Savings Plan (TSP) account. The BRS went into effect on January 1, 2018 and applies to all service members who enter the military on or after January 1, 2018. There is also a yearlong opt-in period for Active Component Service members with fewer than 12 years, and Reserve Component Service members who have accrued fewer than 4,320 retirement points as of December 31, 2017. Both services align end-strength with force structure. The submit funds a pay raise of 2.6%.

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. The Navy has made 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 2019 active duty manning at 335,400, with more than 100 ships deployed overseas on any given day. A continued focus on recruiting, developing, retaining, and promoting the best Sailors in FY 2019 is critical to our success in maintaining 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.

The FY 2019 Military Personnel, Navy (MPN) budget requests resources to support Navy manpower, personnel, training, and education. The budgeted end strength in FY 2019 is 7,500 higher than the estimated end strength for FY 2018. The Navy intends to end FY 2018 on an upward trajectory, approximately 1,000 additional personnel above our PB18 request which is within the 2% waiver limit for end strength. This will provide a strong starting point for budgeted FY 2019 strength increases.

Furthermore, the FY 2019 request increases funding and strength for Total Ownership Cost, alignment of Cruiser manpower to the modernization plan, initial operating capability for CVM-22, continued LCS Blue and Gold crew strategy, additional Pier Sentries, crew for Expeditionary Staging Base (ESB) 5 crewing; Fleet Recruiters; Special Operation Forces (SOF) Growth; and staff for an LCS Squadron Staff.

In FY 2019, we continue to implement Navy fitness initiatives, provide for more adaptive workforce opportunities, and further performance-based advancement programs. 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 achieve this goal Ready Relevant Learning (RRL) is a transformational Navy training initiative that will accelerate the learning of every Sailor for faster response to our rapidly changing warfighting requirements, thereby improving Sailor performance by coupling the timing of training with deckplate needs and career development milestones. RRL will create a learning continuum across a Sailor's

career to ensure every Sailor receives the right training at the correct time. Finally, RRL will modernize our training delivery methods, supplementing our traditional brick and mortar schoolhouses with modern, multi-media, multi-platform delivery solutions. Modernized training delivery will produce more efficient and effective training by leveraging new technologies and centralized training support via several Manpower, Personnel, Training and Education (MPTE) Transformation initiatives. In the end, we intend 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.

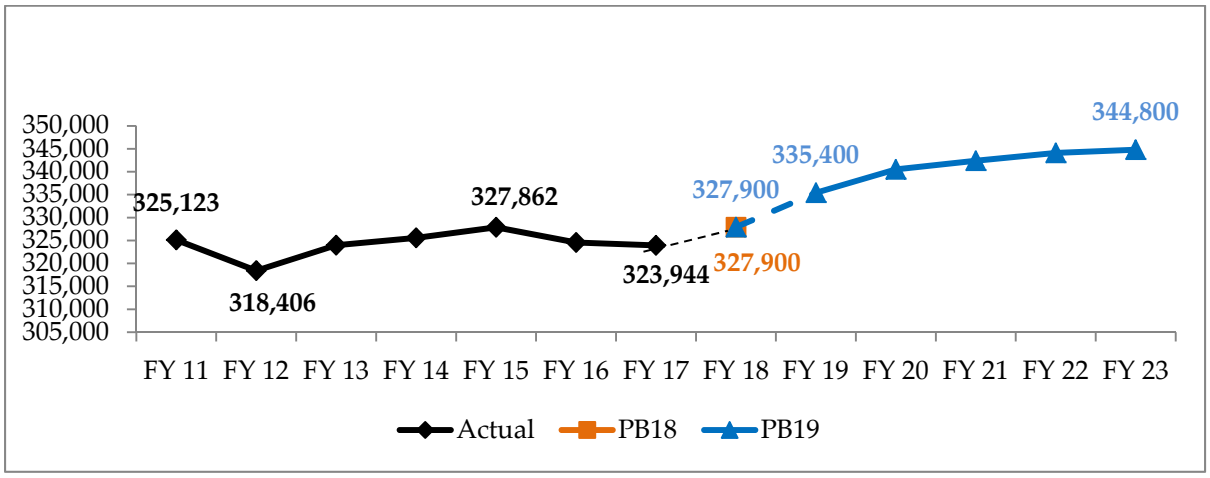
The Navy will continue improving the quality of life for Sailors and implementing quality of service initiatives begun in prior years. We will provide a comprehensive package of pay and benefits that rewards Sailors assigned to deployable units by providing increased sea pay, special and incentive pays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

OCO funding is requested for deployed pay and allowances in support of contingencies, mobilized reservists to support operations in the U.S. Central Command (CENTCOM) area of operations

Figure 5 – Active Navy Personnel Strength

	FY 2017	FY 2018	FY 2019
Officers	54,473	54,256	54,912
Enlisted	265,030	269,287	276,142
Midshipmen	4,441	4,357	4,346
Total: Strength	**323,944**	**327,900**	**335,400**

Figure 6 – Active Navy End Strength Trend



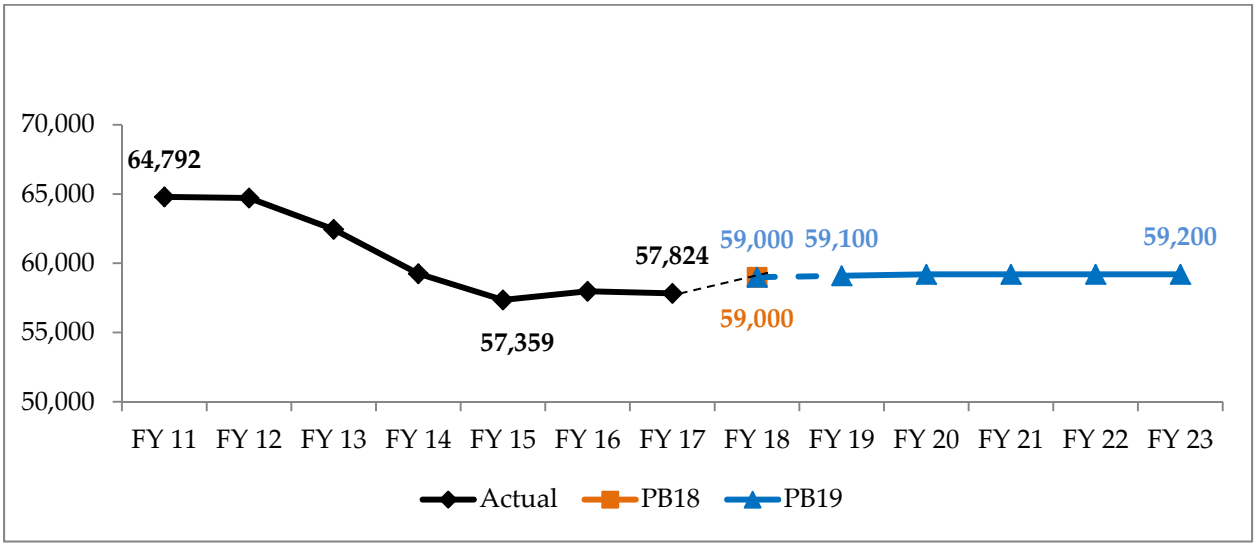
Reserve Navy Personnel

The FY 2019 Reserve Personnel, Navy (RPN) budget request supports 59,100 Selected Reservists and Full Time Support personnel to deliver relevant operational capability and preserve strategic depth, rapidly increasing the agility and lethality of the Navy Total Force. The Navy Reserve is an integrated force multiplier to the active component, leveraging experience in warfighting, industry and innovation to help stay ahead of our Nation's competitors. As a vital component of the Navy's Design for Maintaining Maritime Superiority, the Navy Reserve provides daily on-demand operational support to the fleet while filling combatant commander mobilization requirements around the globe. In FY 2019, the Navy Reserve will increase by 100 end strength as shown in Figures 7 and 8. The primary growth areas include Fire and Emergency Services personnel for augmenting base functions during contingency operations, additional maintenance and aircrew manpower to support two C-40A aircraft being delivered in FY 2019, and Theater Anti-Submarine Warfare analysts aligned with the Navy's expanded undersea sensor capability. The Navy Reserve remains a combat-ready, agile and committed force of citizen sailors who are ready to win.

Figure 7 – Reserve Navy Personnel Strength

	FY 2017	FY 2018	FY 2019
Drilling Reserve	47,859	48,978	49,070
Full Time Support	9,965	10,022	10,030
Total: Strength	**57,824**	**59,000**	**59,100**

Figure 8 – Reserve Navy End Strength Trend



Active Marine Corps Personnel

As set forth by the 82nd Congress and reaffirmed by the 114th, the Marine Corps purpose is to provide maritime expeditionary combined arms air-ground task forces that are "most ready, when the Nation is least ready." We are a naval force whose mission requires us to be ready – a fight-tonight, forward deployed force, able to respond immediately to emergent crises around the globe either from the sea or home station.

The FY 2019 Military Personnel, Marine Corps (MPMC) budget request funds an active duty end strength of 186,100. The makeup of this force was informed by Marine Corps Force 2025, a yearlong, ground up review that focused on the changes necessary to successfully operate in an increasingly complex global environment. It also supports building a more experienced, better trained, and more capable force by increasing the amount of Marines we have with special skills like those required for special operations, intelligence operations, electronic, information, and cyber warfare. Our manning requires leaders with the grade, experience, technical and tactical qualifications associated with their billets, which is essential to the Marine Corps as a "fight tonight" force.

Paired with resources guided by strategy, the force of 186,100 active personnel will provide the Marine Corps the ability to develop the capacity and vital warfighting capabilities to allow five critical tasks necessary to build a 5th Generation Marine Corps. The tasks include evolving the Marine Air-Ground Task Force for 1) fighting across all warfighting domains, 2) enhancing the ability to maneuver, 3) integrating the Naval Force to fight at and from the sea, 4) operating with resilience in a contested network environment, and 5) exploiting the competence of the individual Marine.

The Marine Corps is the Nation's crisis response force, which provides our Nation the ability to respond to unexpected crises, from humanitarian assistance and disaster relief efforts, to non-combatant evacuation operations, to major combat operations. This same element can be reinforced quickly to contribute to assured access anywhere in the world in the event of a major contingency. Figures 9 and 10 provide Marine Corps manpower levels.

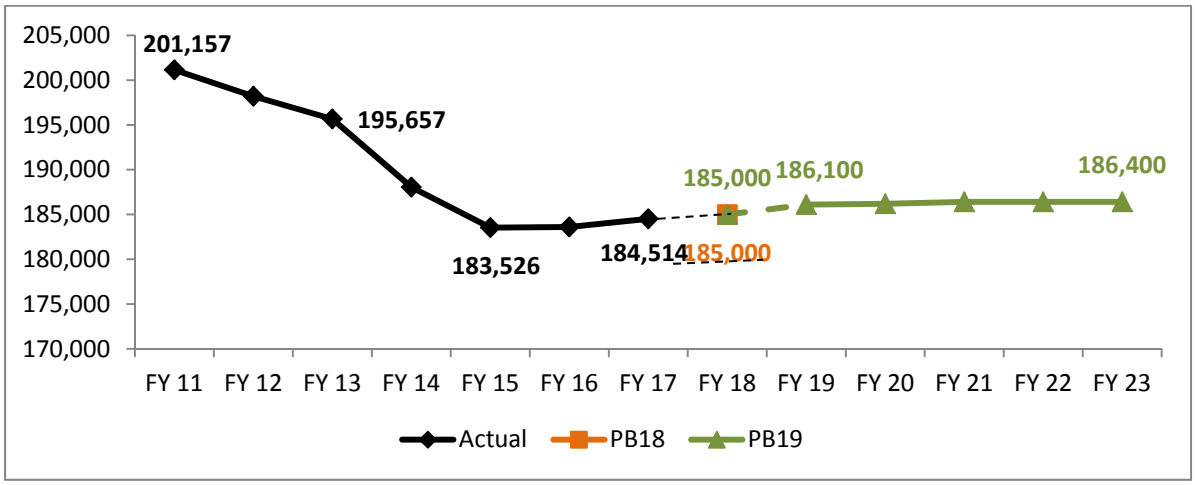
In the past year, our current posture resulted in Marines supporting multiple combatant commanders with offensive air support and strikes from our Amphibious Ready Groups / Marine Expeditionary Units (ARG/MEU) afloat; building partner capacity in both Iraqi and Afghan Armies, confronting Islamic State and Taliban fighters; providing critical fire support to coalition-enabled Syrian Democratic Forces as they fought to clear the Islamic State from Raqqa, Syria; deterring provocations in the East and South China Seas through the forward posturing of 5th Generation aircraft; providing immediate disaster response from our ARG/MEU and Special Purpose Marine Air-Ground Task Force (SPMAGTF) to Americans in the wake of four hurricanes; and supporting continued efforts to ensure freedom of navigation through the Red Sea/Bab al-Mandeb region.

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

Figure 9 – Active Marine Corps Personnel Strength

	FY 2017	FY 2018	FY 2019
Officers	21,111	21,112	21,312
Enlisted	164,403	163,888	164,788
Total: Strength	**185,514**	**185,000**	**186,100**

Figure 10 – Active Marine Corps End Strength Trend



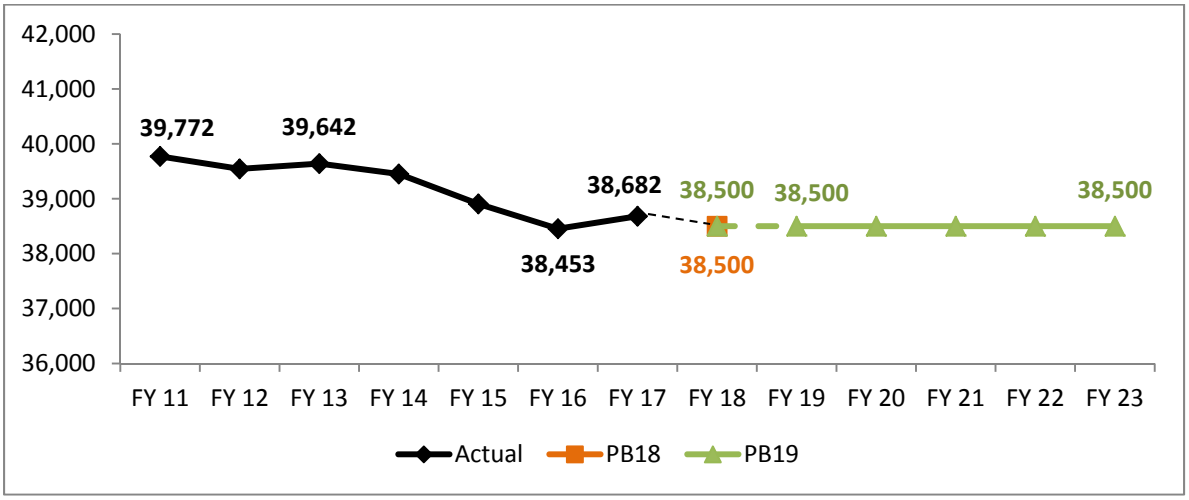
Reserve Marine Corps Personnel

The FY 2019 Budget Request supports a Marine Corps Reserve strength of 38,500. 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 Command (COCOM) and Service rotational and emergent requirements. The Reserves support each COCOM by providing forces focused on regional security cooperation, crisis response and prevention activities, and support to combat operations. The Marine Corps Reserve maintains a robust operational tempo while providing critical capabilities essential in maintaining lasting national security at the strategic level. Global deployments, along with participation in service-level, joint, and multilateral exercises, develop the depth of experience necessary to ensure the Marine Corps Reserve is relevant and ready to meet the COCOMs' need for highly trained, experienced and motivated general-purpose forces. 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 2017	FY 2018	FY 2019
Drilling Reserve	36,429	36,239	36,239
Full Time Support	2,253	2,261	2,261
Total: Strength	**38,682**	**38,500**	**38,500**

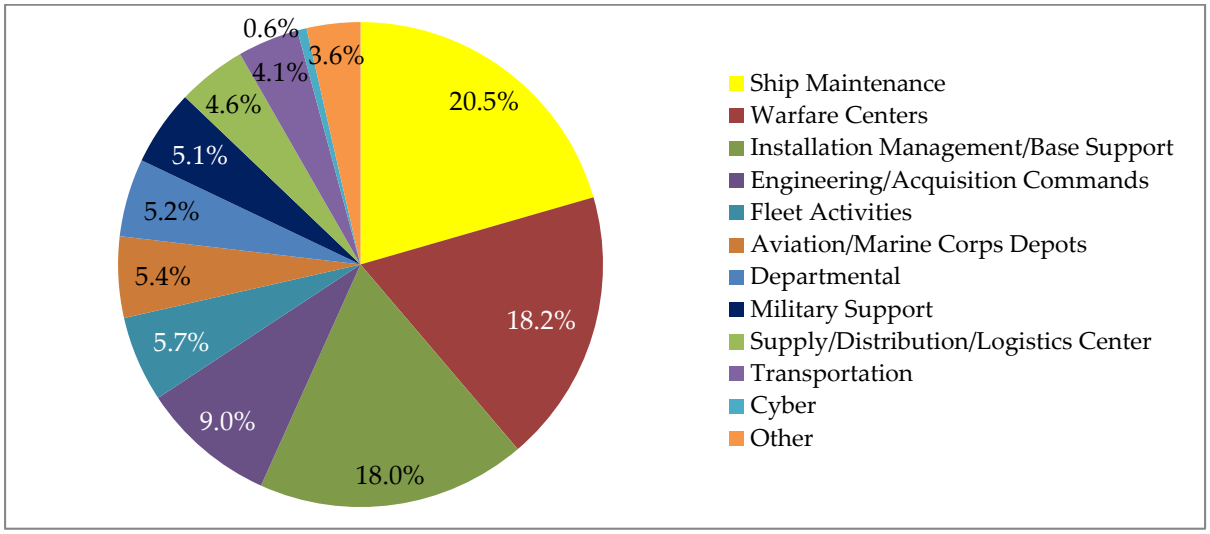
Figure 12 – Reserve Marine Corps End Strength Trend



CIVILIAN PERSONNEL

The Department of the Navy (DON) has a complex mission, balanced on a Total Force of military and civilians. DON civilian employees are essential to meeting the DON's mission to recruit, train, equip and organize to deliver combat ready naval forces to win conflicts and wars while maintaining security and deterrence through sustained forward presence. In support of our mission, DON civilians maintain our ships and aircraft, provide logistical services at home and abroad, on land and at sea for our naval forces deployed around the globe. Our civilians are also integral to executing our cyber mission, providing engineering services and conducting research and development to generate cutting-edge technology that results in more capable and lethal equipment and weapon systems. Figure 13 displays the diverse nature of the civilian workforce.

Figure 13 – Civilian Manpower Work Areas, FY 2019



Given the vitality of our civilian workforce to meet the DON mission, we continually manage our workforce to efficiently and effectively achieve that mission. DON growth is focused on those areas that restore readiness and increase lethality, capability, and capacity of our military force.

The FY 2019 budget request provides funding for the civilian workforce to improve readiness and build a more lethal force. To accomplish this, the budget reflects growth in ship and aircraft maintenance workforce to meet scheduled maintenance, to support additional vessels, and to reduce the backlog that has accumulated from over a decade of increased Operational Tempo (OPTEMPO). To combat the

challenges of day-to-day operations in a quickly changing world, we have added personnel for cyber support. We have also added civilians to protect our Sailors and Marines with intelligence agents added to monitor threats at port locations around the globe, and added security personnel for base protection, including experts to assess the physical security and incident response at our installations. To manage our larger, more lethal force we are adding personnel for weapons systems support. Finally, this budget remains committed to achieving a more efficient and effective Department and continues implementing the 25 percent headquarters funding reduction required by Congress.

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

Figure 14 – DON Civilian Manpower Full-Time Equivalent

	FY 2017	FY 2018	FY 2019
Total - Department of the Navy*	206,227	209,008	212,195
By Component			
Navy	185,758	187,900	190,642
Marine Corps	20,469	21,108	21,553
By Type Of Hire			
Direct	195,567	197,596	200,797
Indirect Hire, Foreign National	10,660	11,412	11,398
By Appropriation/Fund			
Operation and Maintenance, Navy	98,037	101,588	102,550
Operation and Maintenance, Navy Reserve	826	839	846
Operation and Maintenance, Marine Corps	18,737	19,160	19,741
Operation and Maintenance, Marine Corps Reserve	216	248	236
Total - Operation and Maintenance	**117,816**	**121,835**	**123,373**
Base Closure and Realignment	51	54	51
Family Housing (Navy/Marine Corps)	627	682	683
Research, Development, Test, and Evaluation, Navy	723	1,105	1,105
Total - Other	**1,401**	**1,841**	**1,839**
Total - Working Capital Funds	**87,010**	**85,332**	**86,983**

*FY 2019 Includes 20 O&M,N OCO Security Programs FTE

FTE by Work Area			
Ship Maintenance (e.g., Shipyards)	43,881	42,830	47,929
Warfare Centers	38,645	37,448	38,737
Installation Management/Base Support	35,418	37,781	38,141
Engineering/Acquisition Commands (excludes PEOs)	20,958	19,423	19,075
Fleet Activities (e.g., Ship/Air Operations)	8,970	12,233	7,822
Aviation/Marine Corps Depots	11,480	11,351	11,488
Departmental (e.g., Navy/Marine Corps HQ, PEOs)	10,509	10,350	11,056
Military Support (e.g., Training, Quality of Life)	10,676	10,903	10,736
Supply/Distribution/Logistics Center	9,167	9,291	9,748
Transportation	9,276	8,709	8,662
Cyber**	0	0	1,302
Other	7,247	8,689	7,499

**Cyber FTE realigned from "Other" Work Area




Capabilities

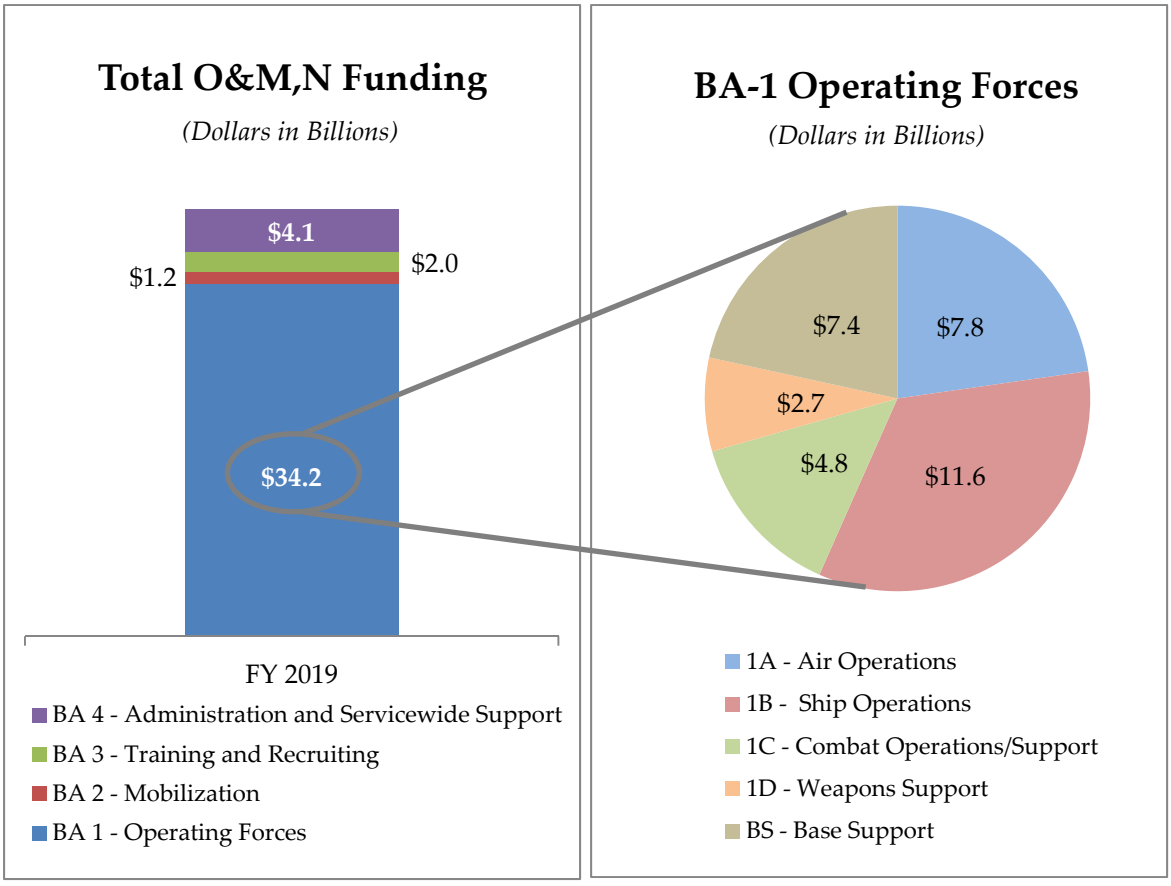



SECTION III – READINESS

NAVY OVERVIEW

The FY 2019 budget builds on the effort from PB18 focused on funding readiness gaps in Navy major readiness accounts and the enabling accounts that support training and deploying our forces. This budget request supports requirements for our Carrier Strike Groups (CSGs), Amphibious Ready Groups (ARGs), and Navy and Marine aviation units to train and 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, 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 active Navy's operation and maintenance funding in FY 2019.

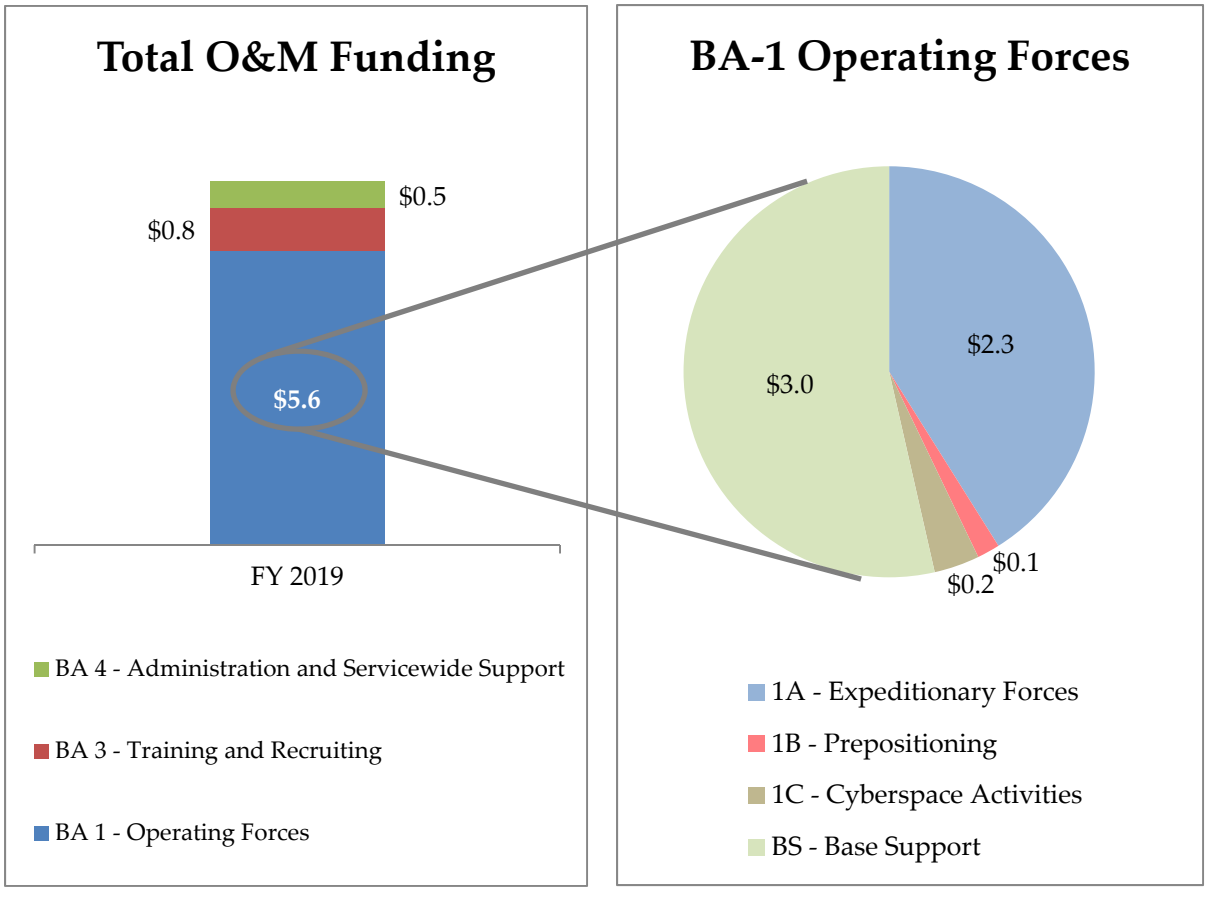
Figure 15 – FY 2019 Active Navy Operation and Maintenance (O&M) Funding



MARINE CORPS OVERVIEW

Our role as America's Expeditionary Force in Readiness informs how we man, train, and equip our force, driving how we prioritize and allocate the resources we are provided. The ultimate goal is to achieve a more lethal, maneuverable, and resilient force able to operate in the emerging strategic environment. The Marine Corps remains committed to building the most ready force, aligning with the Secretary of Defense's guidance to improve warfighting readiness, achieve program balance, and increase lethality by focusing on three key budget priorities: modernization, readiness, and manpower. While our organization, training, and equipment must continually evolve to meet changes in the operational environment, this fundamental purpose is unchanging. Particular focus within the O&M funding is on the operating forces, training exercises, and installations. Figure 16 displays active Marine Corps' O&M funding in FY 2019.

Figure 16 – FY 2019 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 299 ships at the end of FY 2019, as shown in Figure 17. This level of operational funding supports 11 aircraft carriers and 33 large amphibious ships that serve as the foundation upon which our carrier strike groups and amphibious ready groups are based. In FY 2019, 11 battle force ships will be delivered: two Nuclear Attack Submarines (SSN), four Littoral Combat Ships (LCS), one Expeditionary Fast Transports (EPF), one Expeditionary Sea Base, one Amphibious Assault Ship (LHA), and two Destroyers (DDG). One battle force ship, a Nuclear Attack Submarine (SSN), will be retired.

Figure 17 – DON Battle Force Ships

Category	Ship Type	FY 2017	FY 2018	FY 2019
Aircraft Carrier	CVN	11	11	11
Aircraft Carrier Total		**11**	**11**	**11**
Ticonderoga Class Cruiser	CG	22	22	22
Guided Missile Destroyers	DDG	66	66	68
Zumwalt-class Destroyers	DDG 1000	1	2	2
Littoral Combat Ship	LCS	11	16	20
Mine Countermeasures Ships	MCM	11	11	11
Surface Combatant Total		**109**	**117**	**123**
Amphibious Warfare Assault Ships	LHA	1	1	2
Amphibious Assault Ships	LHD	8	8	8
Amphibious Transport Docks	LPD	11	11	11
Dock Landing Ships	LSD	12	12	12
Amphibious Ships Total		**32**	**32**	**33**
Nuclear Attack Submarines	SSN	51	51	52
Fleet Ballistic Missile Sub	SSBN	14	14	14
Guided Missile (SSGN) Subs	SSGN	4	4	4
Submarine Total		**69**	**69**	**70**
Dry-Cargo Ammunition Ships	T-AKE	12	12	12
Fleet Replenishment Oilers	T-AO	15	15	15
Fast Combat Support Ships	T-AOE	2	2	2
Combat Logistics Ships Total		**29**	**29**	**29**
Afloat Forward Staging Base (Interim)	AFSB (I)	1	0	0
Submarine Tenders	AS	2	2	2
High-Speed Transport	T-HST	1	1	1
Amphibious Command Ship	LCC	2	2	2
Ocean Surveillance Ship	T-AGOS	5	5	5
Prepo Dry-Cargo Ammunition Ships	T-AKE MPS	2	2	2
Salvage Ships	T-ARS	2	2	2
Ocean Tugs	T-ATF	3	3	3
Expeditionary Fast Transport	T-EPF	8	10	11
Expeditionary Mobile Base	T-ESB	1	2	3
Expeditionary Transfer Dock	T-ESD	2	2	2
Support Ships Total		**29**	**31**	**33**
Total Battle Force Ships		**279**	**289**	**299**

Note: FY 2017 represents end of year projections.

Active Ship OPTEMPO

The FY 2019 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. This concept enables the Department to provide multiple CSGs to meet the threat and deliver decisive military force. The Navy 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. This also includes repair and consumable parts and utilities. 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 worldwide. 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 2017	FY 2018	FY 2019
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 (FY17/FY18 NDSF/FY19 OMN)*	10	10	10
Container/RORO Ships (former Prepo) (FY17, FY18 NDSF,/FY19 OMN)*	5	5	5
Ready Reserve Force Ships (FY17, FY18 NDSF/FY19 OMN)*	46	46	46
Prepositioning Capacity (millions of square feet)	4.8	4.8	4.8
Surge Capacity (millions of square feet)	10.5	10.5	10.5
Total Sealift Capacity (millions of square feet)	15.3	15.3	15.3

* Note: NDSF realigned to OMN in FY 2019.

Figure 19 – Hospital Ships

	FY 2017	FY 2018	FY 2019
Hospital Ships:			
Hospital Ships	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 repairs, overhauls, and refueling of submarines, carriers, and surface ships at the Navy's four public shipyards, regional maintenance centers, intermediate maintenance facilities, and at private shipyards via contracts. In addition to continued support for ongoing maintenance availabilities, the FY 2019 budget invests in Naval Shipyard (NSY) capacity by increasing the FTE workforce in FY 2019 in order to increase shipyard throughput. Additionally, to better align workload to capacity, FY 2019 funds private sector submarine maintenance. These efforts minimize the more expensive future execution of deferred current work, maximize utilization of private and public maintenance capacity, and support OFRP. Maintenance is still challenged by late discovery of growth/new work in execution and private shipyard workload, workforce and facility capacity challenges. Deferred maintenance in FY 2016 included the cancellation of the USS BOISE maintenance availability due to insufficient capacity at the NSY and deferred funding for USS MONTPELIER until FY 2017 due to a lack of resources in FY 2016.

The funding in Figure 20 is the assessed maximum executable ship maintenance in FY 2019. The FY 2018 funding includes $673M for emergent repairs to USS FITZGERALD and USS JOHN S MCCAIN, and accounts for the downward trend in FY 2019. The ship depot maintenance account is funded to 100% of executable capacity using base and OCO funds.

Figure 20 – Department of the Navy Ship Maintenance

(Dollars in Millions)	**FY 2017**	**FY 2018**	**FY 2019**
Active Forces			
Ship Maintenance BA-1, 1B4B	4,871	7,845	4,672
OCO Leverage for Ship Maintenance	3,253	1,858	4,672
OCO for Ship Maintenance Reset	625	625	430
% Funded with Baseline	60%	81%	50%
% Funded w/ Base & OCO	100%	100%	96%
Annual Deferred Maintenance	-	-	-
SDM Funding w/ OCO	**8,749**	**10,328**	**9,774**
Depot Operations Support BA-1, 1B5B	1,816	2,194	2,169
Total Ship Maintenance (1B4B, 1B5B, & OCO)	**10,565**	**12,522**	**11,943**

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 2019, as reflected in Figure 21. Challenges persist with Navy and Marine Corps strike-fighter mission capable aircraft inventories. The F-35C carrier variant provides a multi-role stealthy strike fighter to complement, but not replace, the F/A-18. Until F-35C 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), Service Life Modification (SLM) of F/A-18E/F to 9,000 hours, and procurement of additional F/A-18E/F aircraft. 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. SLM combines a service life extension with a capability upgrade to a Block III configuration for the F/A-18E/F. Figure 22 displays aircraft inventories.

Figure 21 – DON Aircraft Force Structure

	FY 2017	FY 2018	FY 2019
Active Forces	**20**	**19**	**19**
Navy Carrier Air Wings	10	9	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	**3,289**	**3,586**	**3,556**
Navy	2,219	2,362	2,314
Marine Corps	1,070	1,224	1,242
Total Active Inventory (TAI)	**4,047**	**4,185**	**4,094**

Figure 22 – DON Aircraft Inventory

Class Category	FY 2017	FY 2018	FY 2019
Attack	271	278	273
Fighter	57	58	58
In Flight Refuel	77	79	78
Patrol	185	206	209
Rotary Wing	1,057	1,085	1,084
Strike Fighter	1,132	1,145	1,042
Tilt Rotor	279	295	311
Training Jet	278	279	277
Training Prop	310	324	311
Training Rotary	115	113	115
Transport	103	107	108
UAV	54	83	99
Utility	30	29	29
Warning	99	104	100
Total	4,047	4,185	4,094

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 Plan (OFRP) 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.

The FY 2019 funding supports the requirements of deployed units, units training in preparation to deploy, and the maximum executable requirements of non-deployed units for sustainment and maintenance readiness levels. Funds to T-ratings of 2.0 Navy / 2.0 Marine Corps and provides for 9 active CVWs and 3 Marine Corps Air Wings.

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. The FY 2019 budget reflects an increase in production of airframes, engines, and components to the maximum executable levels of the Fleet Readiness Centers (FRC) associated with a shift in workload and unit cost mix for priority type/model/series in an effort to reduce Out-Of-Reporting (OOR) aircraft status. An increase in aviation logistics provides for maintenance costs associated with more F-35, KC-130J, and MV-22 aircraft added to the Fleet. Figure 23 displays the funding and readiness indicators for aircraft depot maintenance and aviation logistics. Additionally, FY 2019 continues the trend to significantly increase funding in Aviation Support accounts to improve mission capable aircraft availability and also includes an increase to support aircrew systems physiological episode mitigation efforts.

Figure 23 – Aircraft Depot Maintenance and Aviation Logistics

Aircraft Depot Maintenance (1A5A)

(Dollars in Millions)	FY 2017	FY 2018	FY 2019
Airframes	557	521	644
Engines	446	515	564
Components	36	52	46
Baseline	**1,039**	**1,088**	**1,254**
Overseas Contingency Operations	114	211	173
Total	**1,153**	**1,299**	**1,427**
Percent Funded of Total Requirement	85%	89%	92%

Aviation Logistics (1A9A)

(Dollars in Millions)	FY 2017	FY 2018	FY 2019
KC-130J Hercules	59	20	52
MV-22 Osprey	160	117	133
E-6B Mercury	65	64	80
F-35 Joint Strike Fighter	349	523	675
Baseline	**633**	**724**	**940**
Overseas Contingency Operations	45	103	60
Total	**678**	**827**	**1,000**

NAVY RESERVE OPERATIONS

The Department's Reserve Component (RC) operating forces consist of aircraft, combat equipment and support units, and their associated weapons in delivering strategic depth and operational capabilities to the Navy, Marine Corps and joint forces. Funding is also provided to operate and maintain 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 2019.

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 mission objectives. The Naval Air Force Reserve, as shown in Figure 24, consists of one Tactical Support Wing (five squadrons), one Logistics Support Wing (12 squadrons), one Maritime Support Wing (four squadrons), and two integrated Helicopter Mine Countermeasures squadrons. The 4th Marine Aircraft Wing (MAW) consists of 11 squadrons and supporting units. Actions in FY 2019 include the transistion of Active Component (AC) FA-18B/C's to the RC to replace legacy FA-18A's in support of adversary and training missions. Helicopter Sea Squadron (HSC-85) will transistion all HH-60H's to MH-60's in order to modernize rotary wing capabilities to Naval Special Warfare training and operational components. VR-51 will transistion C-20G's to C-40A's, to increase lift capacity and readiness, as they continue to execute the Navy Unique Fleet Essential Airlift (NUFEA) mission providing responsive, flexibile and rapid deployable air logistics support to all Navy commands and detachment operations in CENTCOM, EUCOM, and PACOM.

Figure 24 – Reserve Component Aircraft Force Structure

	FY 2017	FY 2018	FY 2019
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	**275**	**284**	**282**
Navy	140	142	141
Marine Corps	135	142	141

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 2017	FY 2018	FY 2019
Reserve Forces			
Airframes	67	72	83
Engines	19	23	27
Baseline Reserve Aircraft Depot Maintenance	**86**	**95**	**110**
Overseas Contingency Operations & RAA	19	15	11
Total Reserve Aircraft Depot Maintenance	**105**	**110**	**121**
Percent Funded of Total Requirement	90%	89%	97%

MARINE CORPS OPERATIONS

Active Operations

Our overall theme for FY 2019, Modernizing for the Future Force, continues efforts to rebuild the Marine Corps for the 21st Century by increasing resources applied to three key budget priorities: modernization, readiness, and manpower. Driven by Marine Corps Force 2025, the capability investment strategy which modernizes the force toward implementing the Marine Corps Operating Concept (MOC), we plan to rebuild a more relevant, lethal and ready Marine Corps to maintain our military advantage in a fiscally prudent and executable manner, addressing critical modernization requirements and investing in key warfighting capabilities without sacrificing near term readiness. Additionally, we plan to resource our infrastructure reset, Asia-Pacific rebalance, new structure, materiel, munitions, maintenance and training requirements that together generate the right capability and capacity required. Allocating money across our budget priorities supports Department of Defense guidance to restore military readiness and provide solutions that proactively shape the strategic environment.

Combatant Commander (CCDR) demand for Marines and tailored Marine Air-Ground Task Forces (MAGTFs) continues to drive an aggressive operational tempo. We consistently maintain about one-third of our operating forces forward deployed in more than 60 countries. Of those forward deployed forces, more than 11,000 served aboard Navy warships last year. In addition to efforts mentioned previously, the Marine Corps provided tailored military combat-skills training and advisor support to foreign forces as part of Marine Corps Forces Special Operation Command (MARSOC); and enabling full spectrum cyberspace operations while supporting Joint and Coalition Forces as part of Marine Forces Cyber (MARFORCYBER).

Ground Equipment Depot Maintenance

We continue to make strategic choices in the divestiture of certain programs to reallocate funds toward building a more lethal, modern, multi-domain, expeditionary force. This has included accepting near-term capacity risk by reducing depot level maintenance for the legacy Light Armored Vehicle (LAV) (Combat Vehicles) as we look to accelerate replacement of it with an armored reconnaissance vehicle, as well as for the legacy Assault Amphibious Vehicle (AAV) as we transition to the Amphibious Combat Vehicle (ACV). As noted in Figure 26 below, the increase provides for maintenance and overhaul of equipment sets including the Command, Personnel, and Recovery variants of the Amphibious Assault Vehicle (AAV); the Full-Tracked, M88A2 Heavy Recovery Vehicle; the Light Assault 25MM; and the 120MM Gun Combat Tank. Increase in Electronics and Communications Systems provides for additional maintenance and overhaul of equipment sets including the AN/UPX-37 Interrogator Set; the High Frequency Vehicle Radio (HFVR); the Satellite Signals Navigation Set; the Firefinder Radar Set; the AN/MRC-145/145A Radio Set Manpack; the Transportable Tactical Satellite Communications System, (SMART-T); and the Optical Power and Radio Test Sets. Decreases in Ordnance Weapons and Munitions reflects a reduction in maintenance requirements for equipment sets such as the Common #2171 Ordnance; the Explosive Ordnance Disposal (EOD) Remote Fuze Disassembly System (RFDS); the 155MM Lightweight, Towed Howitzer; as well as other systems.

Figure 26 – Marine Corps Ground Equipment Depot

(Dollars in Millions)	FY 2017	FY 2018	FY 2019
Funding Profile:			
Baseline	204	287	314
Overseas Contingency Operations	145	52	53
Total	**349**	**339**	**367**
Active Forces			
Combat Vehicles	180	135	197
Missiles	3	7	1
Ordnance, Weapons, and Munitions	35	36	16
Electronics and Communication Systems	28	38	60
Construction Equipment	20	24	6
Automotive Equipment	83	47	34
Total Active Forces	**349**	**287**	**314**

** FY 2017 Maintenance Categories include baseline and OCO.*

OCO funds continue to be a requirement for the purpose of reconstituting weapon systems, equipment and overcoming High Demand/Low Density challenges in support of forward deployed forces, like our Special Purpose Marine Air Ground Task Forces (SP-MAGTF), conducting operations within the CENTCOM and AFRICOM Area of Responsibility. The high use and harsh environment encountered during expeditionary operations necessitate frequent and thorough overhaul of these systems. The FY 2019 funding request reflects the amount needed to meet Depot and Intermediate Field level maintenance requirements that support in-theater augmented equipment while continuing to sustain the readiness and mobilization capability of the MAGTF equipment used for training and operational requirements.

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. The Reserve provides complementary assets that enable the Marine Corps total force to mitigate risk and maximize opportunities. 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 161 reserve training centers and sites across the United States. The FY 2019 budget maintains the Reserve Component's capability and invests in physical security upgrades for many sites.

Ground Equipment Depot Maintenance

Ground Equipment Depot Maintenance program supports the overhaul, repair and maintenance of combat vehicles, tactical missiles, electrical communications, automotive/construction equipment and ordnance. The FY 2019 budget ensures that the combined repairs and procurement programs provide a balanced level of attainment and maintenance of inventory in order to meet mission requirements. Though the overall maintenance budget remains constant from year to year, the variations in the categories are driven by the fact the work type and quantity are dependent upon the nature of the repair/refurbish cycles and the emergent equipment set needs of the forces. Figure 27 reflects Marine Corps Reserve Ground Equipment Depot Maintenance.

Figure 27 – Marine Corps Reserve Ground Equipment

(Dollars in Millions)	FY 2017	FY 2018	FY 2019
Funding Profile:			
Baseline	19	19	19
Total	**19**	**19**	**19**
Reserve Forces			
Combat Vehicles	9	6	8
Tactical Missiles	2	1	1
Ordnance	2	3	3
Electrical Communication	3	5	4
Constructive Equipment	2	2	1
Automotive Equipment	1	2	2
Total Reserve Forces	**19**	**19**	**19**
% Funded of Total Requirement	100%	100%	100%

FACILITY SUSTAINMENT, RESTORATION, AND MODERNIZATION

Navy and Marine Corps installations enable fleet operations, equipment reconstitution, material sustainment, total force training, unit recovery, sailor and marine administrative support, and quality of life programs. Continued investment in Facility Sustainment, Restoration, and Modernization (FSRM) is necessary to maintain our shore installations supporting required capabilities. The FSRM program maintains the working order of our facilities inventory and prevents premature condition degradation of mission critical facilities.

Facility Sustainment

The FY 2019 budget funds Navy facility sustainment at 80 percent of the DoD-modeled requirement, up from 78 percent in FY 2018. This level of sustainment funding continues to place risk ashore with a focused effort on preserving critical facility components and performing facility maintenance that affects life, health, and safety of Sailors. Similarly, the FY 2019 budget funds Marine Corps facility sustainment at a rate of 80 percent of the DoD-modeled value in FY 2019. Sustainment for both service will reach 85 percent by FY 2023 (closer to the DoD goal of 90 percent).

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 focused funding on recapitalization of those critical facilities that support warfighting readiness and the Navy is able to revive its facilities consolidation program following a three year hiatus.

Facility Demolition

Facility Demolition accounts for the demolition of obsolete and excess structures, therby reducing costly upkeep on older structures and potential fire and safety hazards from installations. The Navy added $122 million and the Marine Corps added $31 million for the demolition of facilities in FY 2019. This demolition effort removes obsolete and excess structures, reduces upkeep cost, and improves the integrity of installations by eliminating degraded facilities.

Marine Corps Infrastructure Reset

Infrastructure reset is a priority for the Marine Corps as we improve infrastructure lifecycle management and ensure infrastructure investments are aligned with Marine Corps capability-based requirements to support the warfighting mission and contribute directly to current and future Force readiness. The vision of the Commandant's Infrastructure Reset Strategy is to provide Marine Corps installations that are capable, adaptive, and economically sustainable platforms that generate readiness and project combat power. Implementation of this strategy consolidates and right-sizes the infrastructure footprint within existing installations to improve operational readiness. Marine Corps installations provide three critical force enabling functions: first, they are deployment platforms from which our expeditionary forces fight and win our Nation's battles; second, they are where our MAGTFs train and hone their combat readiness; and third, they are the home of our Marines and their families. The key to this strategy is a balanced facility investment portfolio to make informed decisions looking across four key categories - MILCON, FSRM, Recapitalization, and Demolition - and their interrelated dependence. It requires proper and steady funding to the right categories at the right time. By resetting our infrastructure and reducing our footprint, we will maximize critical capabilities, minimize total life-cycle cost and better enable readiness of our operating forces.

ENVIRONMENTAL RESTORATION, 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.

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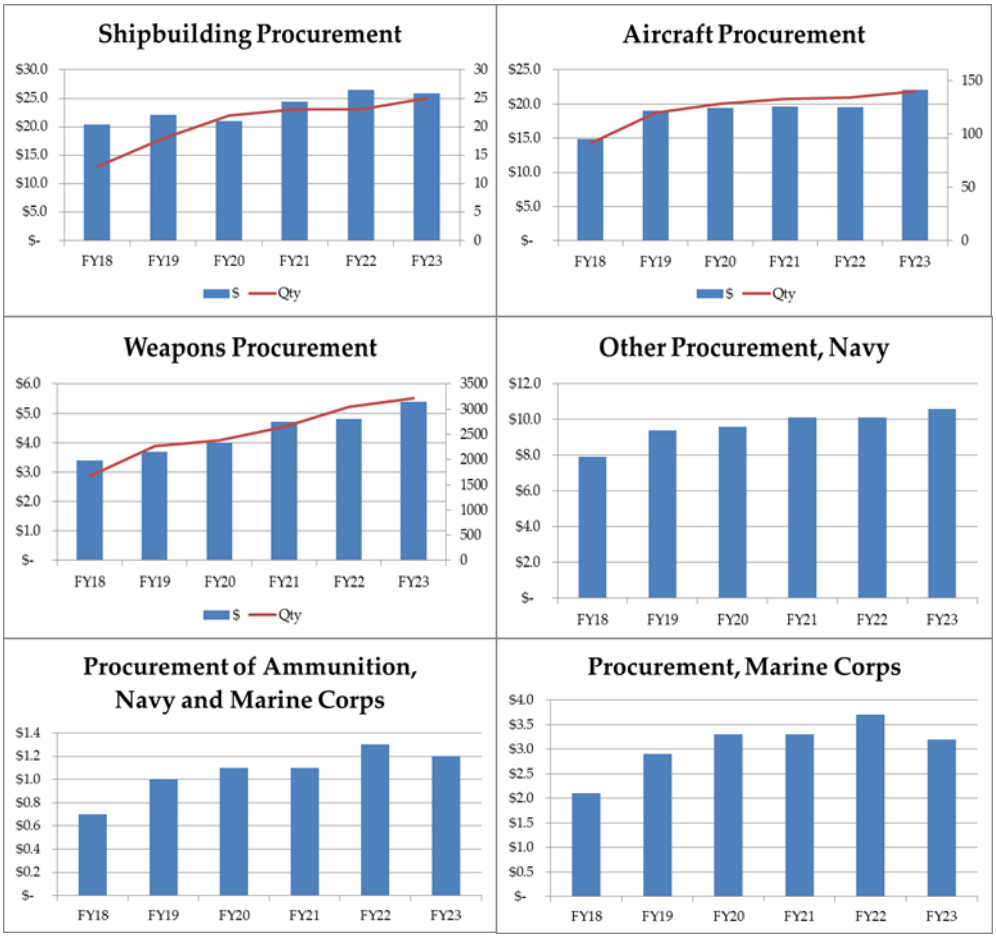
SECTION IV – PROCUREMENT

OVERVIEW

Maintaining a robust Fleet and adaptable Marine Corps, requires investments in platforms and systems to address today's wide-range of operations. The FY 2019 budget leverages our aggressive efforts to reduce acquisition costs, improves our capability, and supports our industrial base. This budget ensures we 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 in FY 2018 and FY 2019.

Figure 28 – Procurement Funding, FY 2018 – FY 2023 (Dollars in Billions)



SHIP PROGRAMS

A Force Structure Assessment, (FSA) was recently completed to determine the right balance of forces. Ships currently under construction and future procurements are needed to address the ever evolving and increasing complex threats the Navy must counter in multiple theaters. The FSA detailed a long term requirement for 355 ships in the battle force, and FY 2019 moves the Department in the right direction to meet this requirement. The Navy's shipbuilding budget procures ten battle force ships, including two *Virginia* class submarines one of which will include the Virginia Payload Module (VPM); three DDG 51 *Arleigh Burke* destroyers; one Littoral Combat Ship (LCS); two T-AO 205 oilers; one Expeditionary Sea Base (ESB); and one T-ATS towing, salvage, and rescue ship. The plan from FY 2019 to FY 2023 is shown in Figure 29.

Figure 29 – Shipbuilding Procurement

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY19-23
Columbia Class Submarine	-	-	-	1	-	-	1
CVN 78	1	-	-	-	-	1	1
SSN 774	2	2	2	2	2	2	10
DDG 51	2	3	2	3	3	3	14
LCS	2	1	-	-	-	-	1
FFG (X)	-	-	1	1	2	2	6
LHA(R)	-	-	-	-	-	-	0
LPD 17	-	-	-	-	-	-	0
LX(R)	-	-	1	-	1	1	3
T-ATS	1	1	2	1	1	1	6
Expeditionary Fast Transport	-	-	-	-	-	-	0
Expeditionary Sea Base	-	1	1	-	-	-	2
T-AO 205	1	2	1	2	1	2	8
T-AGOS (X)	-	-	-	-	1	1	2
New Construction Total QTY	**9**	**10**	**10**	**10**	**11**	**13**	**54**
New Construction Total ($B)	**$17.8**	**$20.1**	**$18.9**	**$21.0**	**$22.7**	**$24.0**	**$106.8**
LCAC SLEP	-	1	-	-	-	-	1
Ship to Shore Connector	3	5	8	8	8	8	37
LCU 1700	1	2	4	4	4	4	18
Moored Training Ships	-	-	-	-	-	-	0
CVN RCOH	-	-	-	1	-	-	1
Other Construction Total QTY	**4**	**8**	**12**	**13**	**12**	**12**	**57**
Total Shipbuilding QTY	**13**	**18**	**22**	**23**	**23**	**25**	**111**
Total Shipbuilding ($B)	**$20.4**	**$21.9**	**$21.0**	**$24.4**	**$26.4**	**$26.0**	**$119.7**

***NOTE:** The FY 2018 column in this table represents FY18 @ PB 2018 amended submission incorporating additional LCS with OMB errata changes.*

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 $1.6 billion requested in FY 2019, the Department will continue to finance the second increment of detailed design and construction for the third *Ford* class carrier (USS Enterprise (CVN 80)). The FY 2019 President's Budget includes the third increment of Advance Procurement funding ($450 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 2019 budget requests $5.6 billion for three DDG 51 destroyers as part of the Multi-Year Procurement (MYP) in support of this capable platform. These destroyers will be Flight III ships equipped with the Advanced Missile Defense Radar and are part of the FY 2018 ten ship multi year procurement. The FY 2019 budget request also contains $646 million to procure one Littoral Combat Ship (LCS) which would complete the total requirement of LCS at 32.

Submarine Programs

The Navy continues to modernize the submarine fleet. Planning, design and Advanced Construction continues for the *Columbia* class submarine to provide continuous sea-based strategic deterrence. With the third year of Advance Procurement funding for the *Columbia* class submarine ($3.0 billion), the Department will continue funding detail design efforts, continuous missile tube production, and Advanced Construction of major hull components and propulsion systems which will help stabilize the manufacturing base and reduce cost and schedule risk. *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 FY 2019 budget request includes funds for two Block V *Virginia* class fast attack submarines and related Advance Procurement and economic order quantity funds ($7.2 billion) executing as part of the FY 2019 – FY 2023 MYP. All hulls in Block V will include Acoustic Superiority, a step improvement in acoustic stealth and on-hull sensors. The second hull in FY 2019 will include the first Virginia Payload Module (VPM), a hull section with four additional payload tubes capable of carrying an additional 28 Tomahawk cruise missiles which increases the Tomahawk capacity from 12 per ship to 40 per ship.

Amphibious and Logistics Platforms

The Landing Craft Utility (LCU) 1700 program requests two crafts in FY 2019 ($42 million). The LCU 1700 serves as the functional replacement for the LCU 1610 class, and provides heavy lift capability to transport personnel and cargo from ship to shore. The Ship to Shore Connector (SSC) program continues to procure craft, with five requested in FY 2019 ($335 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. The FY 2019 budget requests funds for two *John Lewis* class oilers ($977 million) and Advance Procurement funds ($75 million). The *John Lewis* class oiler will recapitalize the existing *Henry J. Kaiser* class oilers to supply fuel and dry cargo to Navy ships at sea. The T-ATS Towing, Salvage, and Rescue ship program requests one ship ($81 million). T-ATS will be the functional replacement for the T-ATF class Fleet Tugs and the T-ARS class Salvage ships. The Department requests 1 Expeditionary Sea Base in FY 2019 which will provide more presence in support of COCOM theater campaign plans for day to day operations.

AVIATION PROGRAMS

Navy and Marine Corps aviation provides our nation's leaders with ashore and afloat options where it matters and when it matters. The FY 2019 budget request procures 120 manned and unmanned aircraft. All major aircraft procurement programs remain consistent or increase from FY 2018 to FY 2019, with just a few exceptions. The aviation program is shown in Figure 30.

Figure 30 – Aircraft Programs

Fixed Wing	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY19-23
F-35C (CV)	4	9	16	24	24	24	97
F-35B (STOVL)	20	20	20	20	20	21	101
F/A-18E/F	14	24	24	24	21	17	110
E-2D AHE	5	4	4	4	5	7	24
P-8A (MMA)	7	10	9	-	-	-	19
C-40A (USMC)	-	2	-	-	-	-	2
T-44 Replacement (USN)	-	-	-	-	-	10	10
KC-130J	2	2	2	5	6	8	23
Rotary Wing							
CH-53K (HLR)	4	8	9	14	19	19	69
MV-22B/CMV-22B	6	7	10	9	11	15	52
AH-1Z	22	25	-	-	-	-	25
TH-57 Replacement (USN)	-	-	25	25	25	10	85
VH-92A	-	6	6	5	-	-	17
UAV							
MQ-4C Triton	3	3	3	3	3	5	17
MQ-25 Stingray (USN)	-	-	-	-	-	4	4
RQ-21 (USMC)	4	-	-	-	-	-	-
Total Major Aircraft Programs	**91**	**120**	**128**	**133**	**134**	**140**	**655**

NOTE: FY 2018 includes 4 RQ-21A Blackjack procured in PMC.

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. Our Strike Fighter Inventory Management (SFIM) strategy remains challenged with F/A-18A-D aircraft that reach the end of their service lives before sufficient F-35 aircraft can be delivered into service. Our multifaceted strategy to sustain and recapitalize the Strike Fighters is reliant on fully funding sustainment accounts, reducing strike fighter utilization, and procurement of additional F/A-18E/F and F-35B/C aircraft.

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. E-2D is reduced to 4 to support a follow-on 5 year MYP profile beginning in FY 2019 for a total quantity of 24 to complete the program of record.

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; long-range surface warfare, and Intelligence, Surveillance, and Reconnaissance (ISR) missions make it a critical force multiplier for the joint task force commander. The increased performance and capabilities of the P-8A enables the crew to get on-station faster and stay on-task longer and most significantly, achieving unprecedented reliability. The topline increase aligns the warfighter requirement to the program of record which is a total of 117 aircraft to complete in FY 2020.

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. There is a 5 year MYP from FY 2019 – FY 2023 with a total procurement of 23 aircraft.

Rotary Wing

The AH-1Z aircraft fulfills the Marine Corps attack and utility helicopter missions. FY 2019 is the last year of procurement for this aircraft, 25 AH-1Z aircraft.

The CH-53 is the DoD's only ship-board compatible heavy-lift helicopter. The Marine Corps has been operating the CH-53E since the early-1980s and is replacing this legacy aircraft with the upgraded and more capable CH-53K. The new CH-53K will have heavy-lift capabilities that exceed all other DoD rotary wing-platforms. The FY 2019 budget request increases production procurement for this vital asset, keeping the schedule on track for Initial Operating Capability (IOC) in FY 2020.

The V-22 Osprey shifts procurement to the CMV-22B variant, which will replace the C-2A carrier Onboard Delivery (COD). The MV-22B variant 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.

Unmanned Aerial Vehicles (UAVs)

The FY 2019 budget continues procurement of unmanned platforms in support of Joint Force and Combatant Commander demands for increased ISR capability and capacity.

MQ-4C Triton, is 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. FY 2019 continues production and maintains our commitment to the ISR transition plan.

WEAPONS PROGRAMS

Figure 31 shows quantities in the FY 2019 request for specific weapons programs. The FY 2019 weapons procurement budget is $3.7 billion.

Figure 31 –Weapons Quantities

Ship Weapons	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY19-23
TACTOM	100	-	-	-	-	-	-
TACTOM Mod	87	112	156	156	348	274	1,046
SM-6	125	125	125	125	125	125	625
RAM Blk II	60	120	150	155	270	270	965
ESSM Blk II	31	45	60	125	175	300	705
MK 48 HWT	17	45	58	71	75	76	325
MK 48 CBA SS KITS	79	79	46	30	59	-	214
MK 54 LWT MOD 0	114	66	70	-	-	-	136
MK 54 LWT MOD 1	30	30	30	82	122	138	402
ADVANCED LWT	-	-	-	-	6	54	60
HARPOON BLK II+ MOD	54	52	35	37	20	20	164
LCS OTH Missiles	-	8	12	12	12	20	64
LCS SSMM	110	90	120	115	109	109	543
SOPGM	19	31	-	-	-	-	31
Aircraft Weapons							
SIDEWINDER (AIM-9X)*	185	192	198	200	192	192	974
AMRAAM*	120	141	222	316	347	358	1,384
AARGM BLK I	251	257	243	242	247	268	1,257
AARGM BLK II	-	-	-	16	16	16	48
JAGM	-	75	75	192	192	304	838
LRASM	25	25	25	25	-	-	75
HELLFIRE*	110	23	-	-	-	-	23
Laser Maverick	64	-	-	-	-	-	-
SDB II	90	750	750	750	750	750	3,750

**Includes OCO request for expended munitions*

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. The Department will procure 112 Anti-Access Area Denial (A2AD) modification kits in FY 2019. The Navy will continue development of a follow-on Next Generation Land Attack Weapon and future Tactical Tomahawk upgrades.

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. The FY 2019 budget proposes a five-year Multiyear Procurement with completion in FY 2023.

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. The production of Block II missiles provides increased kinematic capability against high maneuvering threats and improved radio frequency (RF) detection against low probability of intercept threats. RAM is investing in the RAM Block II Raid engineering change proposal (ECP) to provide an upgraded seeker and Missile-to-Missile Link (MML) capability to counter emerging complex raid threats. The FY 2019 budget supports the increase procurement of RAM Block II Missiles to 120 including hardware to support fleet training requirements.

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. ESSM Block II replaces the guidance section with a dual mode active/semi-active X-band seeker. In FY 2019 Navy will increase the procurement of the ESSM Block II missile to 45.

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 2019 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 2019 is the fourth year of procurement of new torpedoes.

The Harpoon Block II+ missile is a net enabled, air-launched, anti-ship cruise weapon with the ability to receive in-flight updates that improve the targeting and engagement of moving maritime targets. This system utilizes global positioning to provide in-flight updates coupled with an active radar seeker to provide accurate targeting. FY 2019 procures kits to retrofit the Harpoon 1C weapons in current inventory.

The Over the Horizon (OTH) missile provides the Littoral Combat Ship/Frigate (LCS/FFG) with long range anti-surface offensive capability against surface combatants. The OTH Weapon Systems (WS) consists of a Missile Launch System and a complement of missiles. This program is a new start in FY 2019 and procures 8 LCS OTH missiles.

The Littoral Combat Ship Surface-to-Surface Missile Module (LCS SSMM) combined with the Longbow Hellfire Missile form 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.

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.

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 2019 continues procurement of AIM-9X Block II and AIM-9X Block II+ missiles, 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. FY 2019 provides funding to procure 141 AIM-120D missiles to support warfighter requirements.

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 eighth year of AARGM production in FY 2019.

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. Milestone C has been delayed from FY 2017 to FY 2018. FY 2019 funding supports the procurement of the JAGM Low Rate Initial Production (LRIP) Lot 3 buy of 75.

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 2019 is the third year of procurement.

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 2019 request replaces Hellfire missiles that were expended to support OCO.

The AGM-65 Maverick is a tactical, air-to-surface, guided missile designed for close-air support, interdiction, and defense suppression missions. It also provides standoff capability and high strike probability against a wide range of tactical targets, including high-speed moving targets, armor, air defenses, ships, transportation equipment, and fuel storage facilities. The AGM-65E2, Laser Maverick, is a joint effort by the Navy and Air Force to modernize this capability with an enhanced laser seeker and new software that reduces the risk of collateral damage. The AGM-65E2 is a modification to the Maverick's Guidance and Control Section (GCS) to incorporate modern components, which are a suitable replacement for the obsolete components of the existing AGM-65E.

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. SDBII addresses the requirement to attack mobile targets; multiple kills per pass; multiple ordnance carriage; all weather operations; near-precision munitions capability; capability against fixed targets; reduced munitions footprint; increased weapons effectiveness; minimized potential for collateral damage; reduced susceptibility of munitions to countermeasures; and a migration path to net centric operations capability. FY 2019 is the second year of procurement for the DON.

PROCUREMENT, MARINE CORPS (PMC)

In FY 2019 the Marine Corps continues to balance its ground equipment procurement and future development to support the current fight while modernizing to determine the future fight. The Marine Corps' path to achieve maximum readiness in ground equipment in the near and far term combine key modernization efforts, select legacy systems investment, force design adjustments, and training infrastructure enhancements to attain an optimally effective force. Modernization is essential to develop the Marine Corps across all warfighting functions and is the key to ensuring tomorrow's Marine Corps is equipped to execute the Marine Corps Operating Concept and outmatch anticipated future challenges. The FY 2019 request includes key warfighting modernization efforts for Amphibious Combat Vehicles, Ground/Air Task Oriented Expeditionary Radar Systems, and Joint Light Tactical Vehicles. The FY 2019 PMC budget is $2.9 billion.

Major Procurement Programs

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. JLTV configurations will be derived from two basic vehicle variants, the Combat Tactical Vehicle and the Combat Support Vehicle. The FY 2019 request reflects procurement of 1,642 vehicles (+1,115 over FY 2018), and associated kits. The kits will support the baseline vehicle by providing the warfighter the ability to augment the vehicle's configuration to meet required capabilities.

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. Full rate production begins in FY 2019 with the procurement of 6 G/ATOR systems.

Networking on the Move (NOTM) provides Marine commanders with the ability to conduct digital command and control by providing tactical voice, video, and data services while traversing the battlefield. This force modernizing technology will enhance the Marine Corps' ability to operate as an expeditionary force. The Marine Corps has different variants based on the vehicle being used: the NOTM Ground Combat Vehicle (NOTM-GCV), NOTM-Internally Transportable Vehicle (NOTM-ITV), and NOTM-Airborne (NOTM-A). The FY 2019 budget will procure all three variants of the NOTM and critical system upgrades.

The Assault Amphibious Vehicle (AAV) modification program includes life-cycle support to ensure cost-effective combat readiness for the AAV Family of Vehicles (FOV). The AAV Survivability upgrade program centered on material upgrades in survivability to include blast mitigating seats, belly/sponson armor, spall liner, deck liner and external fuel tanks. The AAV program will procure 71 Survivability Upgraded AAVs and achieve Full Rate Production (FRP) in FY 2019.

The Amphibious Combat Vehicle (ACV) will be a partial and complementary replacement for the legacy Assault Amphibious Vehicle (AAV) in the Assault Amphibious (AA) battalions within the Marine Divisions. The ACV, an advanced generation, eight-wheeled armored personnel carrier, will mitigate current and projected capability gaps by providing improved lethality against dismounted enemy troops, more effective land and water tactical mobility, and increased force protection and survivability from blasts, fragmentation, and kinetic energy threats. The ACV program is structured to be executed in multiple phases, with the first phase designed to provide an initial operational capability of personnel carriers. The ACV Increment 1.1 variant will deliver combat ready Marines from ship-to-shore connector craft in order to mass forces at littoral penetration points and continue to maneuver onward to inland objectives. FY 2019 funding is for LRIP Lot 2 of 30 vehicles, plus procurement of related items such as production support, systems engineering/program management, Engineering Change Orders (ECOs), Government Furnished Equipment (GFE), and integrated logistics support.

PROCUREMENT OF AMMUNITION, NAVY AND MARINE CORPS (PANMC)

The Procurement of Ammunition, Navy and Marine Corps (PANMC) buys vital munitions and related weaponry for the warfighter. 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 provides Marine Corps ground forces 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 5 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 and Naval Special Warfare with accurate, first round fire-for-effect capability, and Small Arms munitions, that are essential for the Navy Sea Air Land Teams (SEALs), and the Coastal Riverine and Security Forces. In FY 2019, PANMC's baseline and OCO budget of $1.2 billion 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 2019 OPN budget is $9.6 billion.

Industrial Plant Equipment Program

The Departments Industrial Plant Equipment (IPE) program supports the capitalized personal property procurements for the Naval Shipyards (NSY) and Fleet I-level maintenance activities. These capital improvements are integral to the Nuclear Enterprise. The FY 2019 other procurement budget supports the replacement of obsolete NSY industrial plant equipment that is frequently broken and beyond its service life, with new and efficiency-enabling equipment. In addition, this program will support the procurement of required capital equipment needed at the shipyards to support new mission requirements, including VIRGINIA Class introduction at Norfolk NSY, and concurrent VIRGINIA Class availabilities at Portsmouth and Pearl Harbor NSYs, as well as recapitalization of significantly aged IPE, weight handling equipment, and nuclear support equipment infrastructure.

Ship Programs

The FY 2019 OPN 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 five total availabilities (three Hull, Mechanical & Electrical (HM&E) and two dual Combat Systems and HM&E) and procurement for three HM&E availabilities and two Combat System availabilities in FY 2019. Consolidated Afloat Networks and Enterprise Services (CANES) program will fund the procurement of 20 Afloat production units, 25 Afloat technical insertions units, three Ashore production unit, two Afloat First Article as well as all integration and associated costs for pre-installation design. Additionally, CANES FY 2019 funding will install 22 Afloat production units, one Ashore unit, 9 Afloat Technical Insertion units, and two Ashore Technical Insertions. Shipboard Information Warfare installations in FY 2019 include six Ship's Signal Exploitation Equipment (SSEE), and six Graywing. Shipboard Electronic Warfare procurements include 16 Surface Electronic Warfare Improvement Program (SEWIP) block 2, and 4 SEWIP block 3 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. The Department continues to invest in modernizing business IT systems for military personnel and pay, contract development, and ship depot maintenance, among others, to standardize processes and improve auditability.

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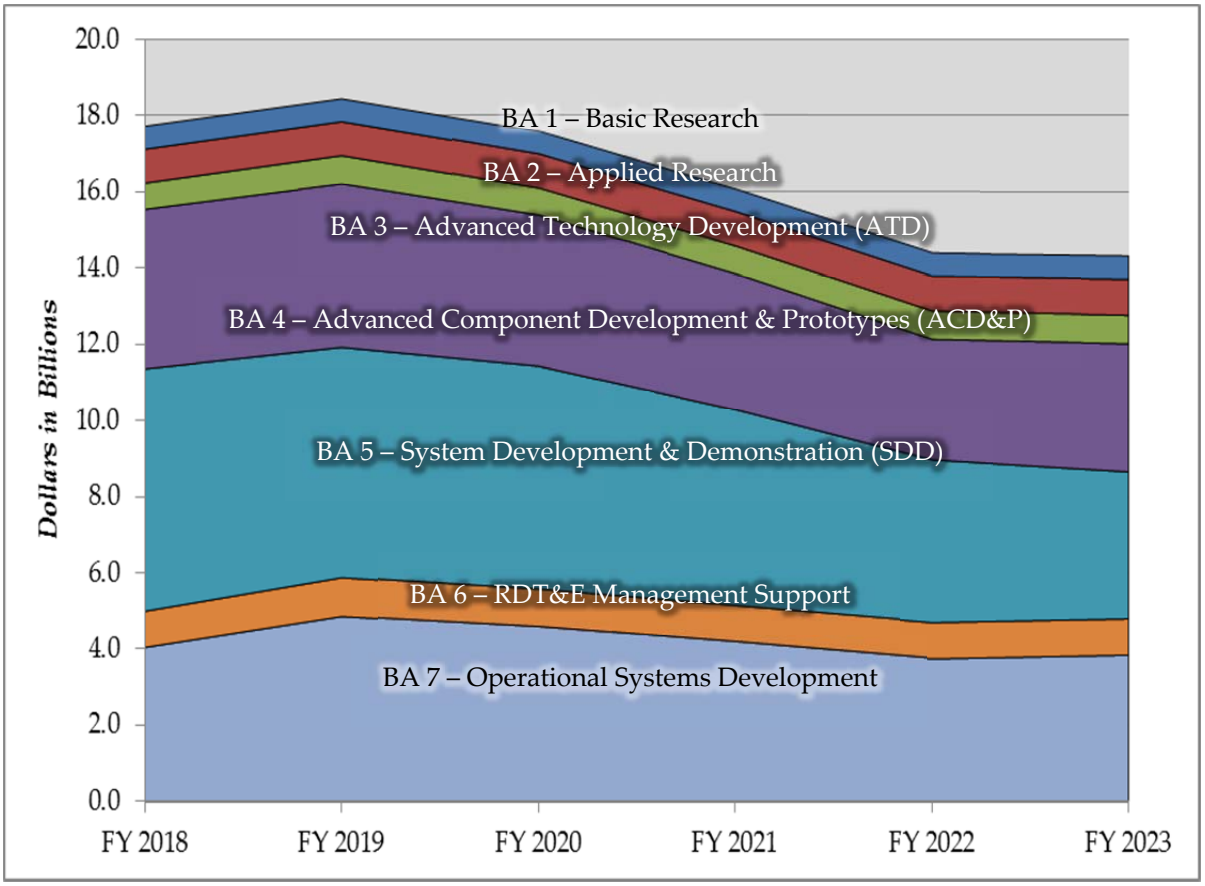
SECTION V – DEVELOPMENT

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 *Columbia* Class Program, *Virginia* Payload Module, FFG(X), 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 2019 budget requests $2.2 billion for the Navy's Science and Technology (S&T) programs and remains at 1.3% of DON TOA. The FY 2019 S&T budget request supports the Naval Research and Development Framework.

Ship Research and Development

***COLUMBIA* Class**

The Department of Navy has budgeted $705 million in FY 2019 for the *Columbia* class submarine program. FY 2019 research and development efforts will continue to focus on the propulsion plant, nuclear technology development, common missile compartment design/ prototyping, and platform development technologies like the propulsor, Strategic Weapons System, and maneuvering/ship control. FY 2019 R&D decreases from FY 2018 as Columbia moves from contract design to detail design.

***FORD* Class**

The budget requests $292 million in FY 2019 for integration efforts, test planning and support, and funds to continue testing, training, and logistics development on Advanced Arresting Gear (AAG) and 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, electronic support systems, and submarine multi-mission team trainer efforts. The FY 2019 budget includes $146 million which continues efforts to improve electronic systems and subsystems, development of improved silencing capability, and reduced Total Ownership Costs for Block V submarines.

Frigate (FFG (X))

The budget requests $135 million in FY 2019 for the Navy to reassess the capabilities required to ensure the multi-mission Frigate paces future threats. FY 2019 funding will support ship and warfare systems engineering, contract design efforts, and test and evaluation planning. The Navy desires to maximize the lethality and survivability of the future Guided Missile Frigate (FFX) in Surface Warfare, Air Warfare through a Local Area Defense capability, and Anti-Submarine Warfare while keeping the ship an effective and affordable part of Distributed Maritime Operations.

Unmanned Undersea Vehicles

FY 2019 increased funding for Unmanned Undersea Vehicle (UUV) will accelerate future capability and support steady growth of the fleet's Family of Systems (FOS) including $117.9M for Advanced Undersea Prototyping (AUP) development, fabrication and testing of the ORCA Extra Large Unmanned Undersea Vehicles (XLUUVs). In addition, $92.6M will support the advancement of Snakehead Large Diameter UUV (LDUUV) as well as associated UUV technologies including Knifefish UUV and UUV payloads.

Aviation Research and Development

With exception of JSF coming off follow on modernization and ramping up continuous capability development and delivery, aviation and weapons R&D has levelled off or drawn down as technologies have matured with the focus shifting to procurement and modernization. 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 1st Quarter FY 2016. Milestone C was complete in 2nd Quarter FY 2017. Low Rate Initial Production (LRIP) contract for the first 2 aircraft awarded during 4th Quarter FY 2017 with first delivery scheduled for 4th Quarter FY 2020.

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 2019 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. FY 2019 will produce Milestone C, delivery of one Electronic Development Model (EDM) aircraft, and 2 System Demonstration Test Articles. LRIP contract for

the first 6 aircraft is scheduled for award in FY 2019 with first delivery scheduled for FY 2021.

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. NGJ-Mid Band technology maturation and risk reduction effort continue. Milestone C is scheduled for FY 2020 with Initial Operational Capability (IOC) scheduled for FY 2022. EDM aircraft deliveries begin in FY 2019. FY 2019 also includes the contract award for 7 SDTA articles.

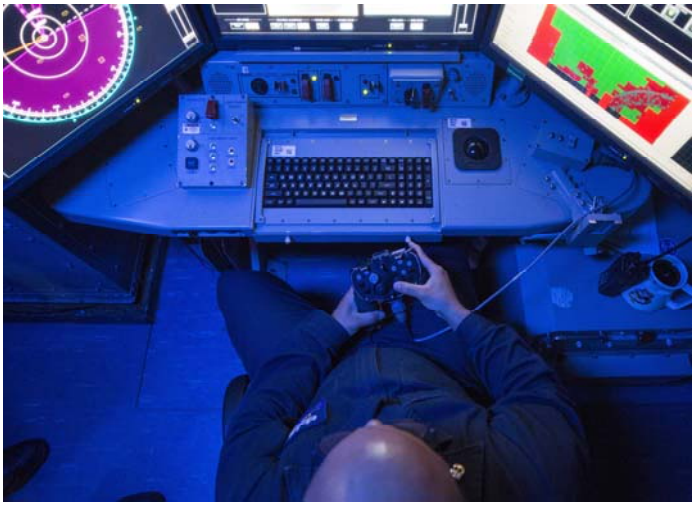
F/A-18E/F Advanced Infrared Search and Track (IRST) is a passive long-wave Infra-Red (IR) sensor which provides an alternate fire control system in a high Electronic Attack / Radio Detection and Ranging denied environment. Block II IRST upgrades the Infra-Red Receiver and processor to provide full Capabilities Development Document capability and 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 2019 funding supports both Block I and Block II efforts including the procurement of six IRST Block II retrofit kits for delivery beginning in FY 2021.

Unmanned Aerial Systems

The Unmanned Carrier-Launched Airborne Surveillance and Strike (UCLASS) program underwent a restructure with near term focus on the new Unmanned Carrier Aviation (UCA)/MQ-25 Stingray program and accelerating fielding timelines. The MQ-25 Stingray program rapidly develops an unmanned capability to embark on CVNs as part of the Carrier Air Wing (CVW) to conduct aerial refueling as a primary mission and provide some ISR capability as a secondary mission. MQ-25 Stingray extends CVW mission effectiveness range, partially mitigates the current Carrier Strike Group (CSG) organic ISR shortfall and fills the future CVW-tanker gap, mitigating Strike Fighter shortfall and preserving F/A-18E/F Fatigue Life. As the first carrier-based, group 5 Unmanned Aircraft System (UAS), MQ-25 Stingray will pioneer the integration of manned and unmanned operations, demonstrate mature complex sea-based C4I UAS technologies, and pave the way for future multifaceted multi-mission UAS to pace emergent threats. FY 2019 will leverage previous work completed under UCLASS, focusing on the three segment

areas: air, control system and connectivity, and carrier development. MQ-25 Stingray is expected to provide an IOC to the fleet in FY 2026.

Navy Laser Family of Systems (NLFoS)



The FY 2019 budget requests $299 million for the Navy Laser Family of Systems (NLFoS), which is designated a Rapid Prototyping, Experimentation and Demonstration (RPED) initiative to provide near term ship based laser weapon capabilities. The NLFoS efforts form the foundation of an incremental strategy for increased laser weapon capability as it is matured. NLFoS includes the following initiatives: 1) Surface Navy Laser Weapon System (SNLWS); 2) Optical Dazzling Interdictor, Navy (ODIN); 3) Solid State Laser Technology Maturation (SSL-TM); and 4) Ruggedized High Energy Laser (RHEL). SNLWS will develop a ship-mounted weapon system with the development of 4 units in FY 2019, which will include a High Energy Laser with an integrated low power laser dazzler. It will be used for counter-Unmanned Aerial Vehicle, counter-Fast Inshore Attack Craft, and counter-Intelligence, Surveillance, and Reconnaissance missions. ODIN will design and develop a near-term shipboard counter-ISR capability with installation of 2 units on DDGs in FY 2019. SSL-TM will develop an advanced 150kW laser weapon demonstrator that will support future laser development with installation on a LPD17 class ship for sea tests in FY 2019. RHEL will develop an alternative 150kW laser source employing different laser architecture for the incremental strategy for increased capability.

Rapid Prototyping and Development

The Department continues to support Rapid Prototyping, Experimentation, and Demonstration (RPED) initiatives focused on expeditious development, exploration and fielding of innovative combat system technologies and engineering prototypes to provide advanced warfighting capabilities across all Naval warfighting domains.

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 were 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 was in FY 2015.

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 2019 budget supports the continuation of Live Fire Test and Evaluation (LFT&E) activities and developmental testing for down-selected contractor and initiates development of ACV Increment 1.2. ACV Increment 1.2 will improve personnel carrier capabilities over Increment 1.1 and will deliver Command and Control (C2) and Recovery Mission Role Variants (MRVs). Funding increases in FY2019 allow design and development of the new command and control and recovery variants.

Ground Based Air Defense Future Weapon System/Counter Unmanned Aerial System

This effort continues product development and evaluation of a new family of Counter Unmanned Aerial Systems (Counter-UAS's), the Marine Air Defense Integrated System (MADIS). The MADIS will provide a networked detect, track, identify, and defeat capability through multiple engagement methods. It will be a modular system that can be scaled up or down depending on the employment environment and situation. Efforts in FY 2019 consists of the continued development and operational assessment of mobile solutions that will be integrated onto the Utility Task Vehicle (UTV), MRAP All-Terrain Vehicle (M-ATV), and Joint Light Tactical Vehicle (JLTV).

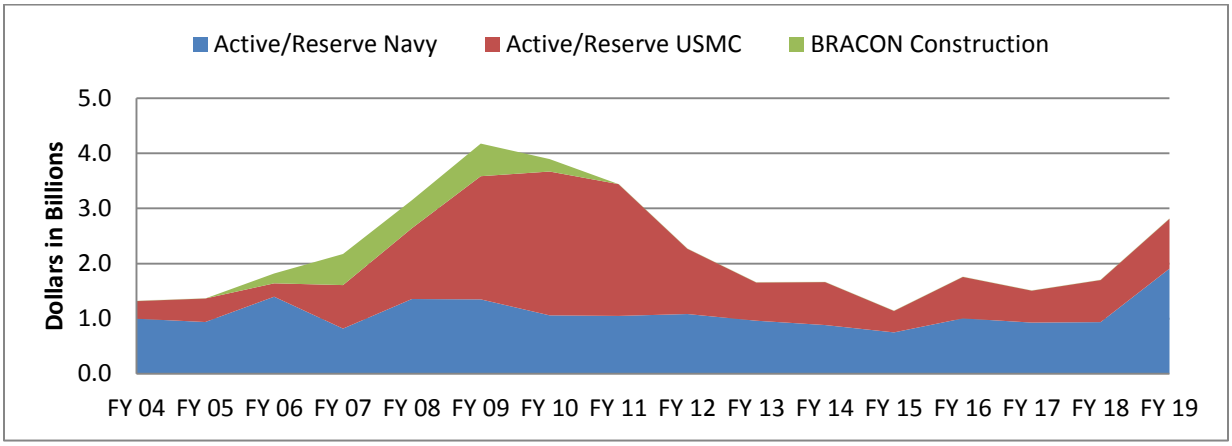
SECTION VI – INFRASTRUCTURE

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 2019 budget request supports the Department's critical goals, financing 49 military construction projects, including 44 baseline projects and five OCO projects. Of these, 32 are for the active Navy and 15 for the active Marine Corps, one for the Navy Reserve Component, and one 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 2019 funding for each:

- Shipyard Improvements
  - Ships Maintenance Facility, NSA Norfolk, VA ($26 million)
  - Dry Dock #1 Superflood Basin, NSS Portsmouth, ME ($110 million)
- Supporting New Systems
  - CMV-22B Airfield Improvements, Naval Base Coronado, CA ($78 million)
  - F-35 Vertical Landing Pads and Taxiway, MCAS Miramar, CA ($20 million)

- Warfighting Readiness
  - Causeway, Boat Channel & Turning Basin, WEPSTA Seal Beach, CA ($118 million)
  - Pier and Maintenance Facility, Naval Base Kitsap, WA ($89 million)
- Replacing Aging Infrastructure
  - Water Transmission Line, Pearl Harbor Hickam, HI ($78 million)
  - Harbor Drive Switching Station, Naval Base San Diego, CA ($48 million)
- Security, Safety, Environmental
  - Range Improvements & Modernization, MCRD Parris Island, SC ($35 million)
  - TBS Fire Station, MCB Quantico, VA ($22 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 2019 budget request includes $8 million for the construction of 96 units at Naval Support Activity Andersen, Guam. The Navy's budget also includes $280 million for the operation and maintenance of approximately 7,000 units located worldwide, and leasing of units. The level of funding translates to 93 percent of the government owned inventory meeting adequate standards, which is above the 90 percent DoD goal.

The Marine Corps' FY 2019 budget request includes $18 million for the improvement of 29 junior enlisted family housing units at Marine Corps Air Station, Iwakuni, Japan. The Marine Corps budget also includes $35 million for the operation, maintenance and leasing units located worldwide. The level of funding translates to 93 percent of the government owned inventory meeting adequate standards. The total number of units lease for the DON is nearly 1,800 units.

Figure 34 – Navy & Marine Corps Family Housing Units

	FY 2017	FY 2018	FY 2019
Privatized inventory (end of FY)	62,205	62,205	62,291
Government Owned inventory (average)	8,414	8,942	8,874
Leased inventory (average)	1,805	1,799	1,735
Total	72,424	72,946	72,900

BASE REALIGNMENT AND CLOSURE

The Base Realignment and Closure (BRAC) Budget in FY 2019 is $152 million. These funds will be used to continue environmental clean-up and monitoring at legacy locations.

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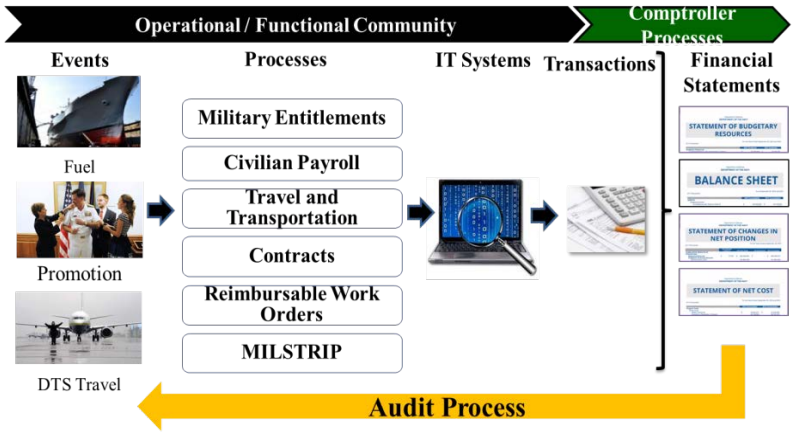
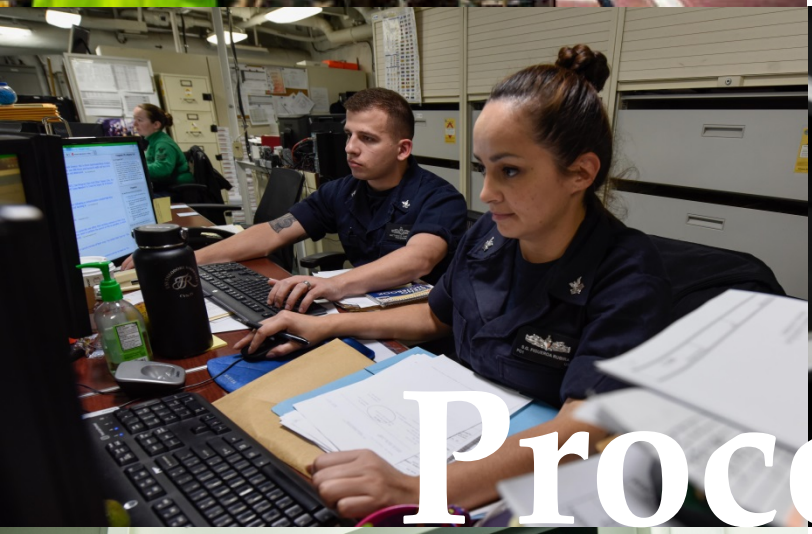
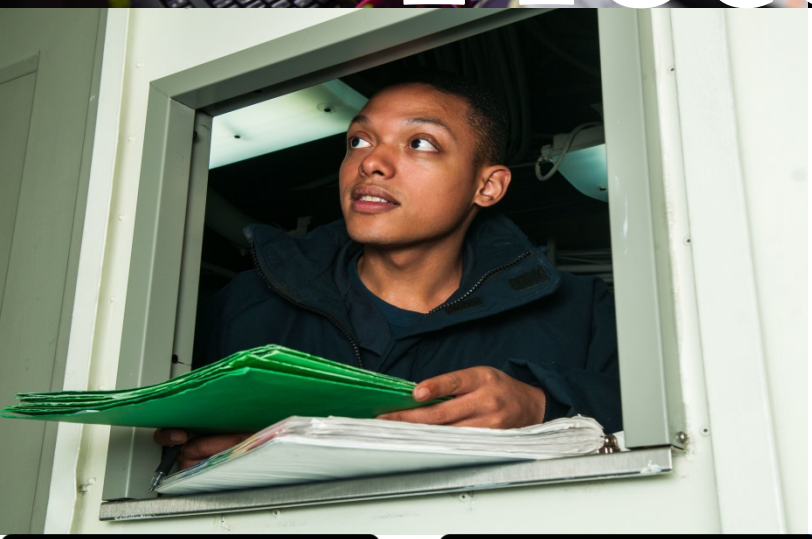
Mission Events = Financial Statements





Processes



Everyone Plays a Role in Audit

Everyone who executes a business process generates financial transactions. Examples:

PEOs oversee and manage longterm planning for Navy platforms and systems

Information warfare officers ensure our IT is available and complies with Security requirements

Logisticians provide material and supplies on a timely basis to meet mission requirements

Acquisitions officers generate & oversee contracts to procure goods and services

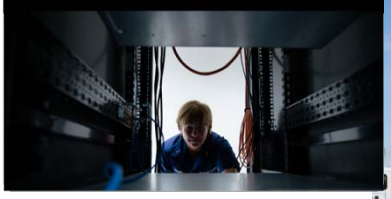
Engineers generate requirements to build and maintain Navy platforms

Operational Forces order supplies, perform receipt & acceptance, and use business systems

Representative listing--not meant to be comprehensive.

Strong Cyber Security

Increased Effectiveness



Compliance with Laws & Regulations

Reliable Systems & Accurate Data

SECTION VII – REVOLVING FUND

Navy Working Capital Fund Overview

The Navy Working Capital Fund (NWCF) is a revolving fund that finances the Department of the Navy (DON) activities which provide products and services on a reimbursable basis. Unlike for-profit commercial businesses, NWCF activities 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; fluctuations are recovered from customers in future years. The wide range of goods and services provided by NWCF activities are crucial to restoring readiness, improving lethality, and modernization.

The NWCF is comprised of five primary areas with 36 sites located across the country and over 120 detachments located globally. This includes a workforce of 86,983 civilian and 1,251 military personnel. The five primary areas are:

- Supply Management. Performs inventory oversight functions that result in the sale of aviation and shipboard components, ship's store stock, repairables, and consumables to a wide variety of customers.
- Depot Maintenance. Provides worldwide maintenance, engineering, and logistics support through mobilization, repair of aircraft, engines, components, and weapons systems, and manufacture of parts and assemblies.
- Transportation. Provides over-ocean movement of supplies and provisions to deployed forces, and maintains prepositioned equipment and supplies.
- Research and Development. Supports weapons systems and equipment for the air, land, sea, and space operating environments through development, engineering, acquisition, in-service support, and repair and maintenance. Provides the advanced scientific capabilities required to bolster our country's position of global naval leadership.
- Base Support. Ensures facilities and installations have reliable access to utilities services such as electricity, water, steam, and natural gas, vehicle and equipment services, facility support contracting oversight, and building/facilities sustainment and recapitalization services.

The FY 2019 NWCF budget request reflects the DON's continued focus on balancing demands to ensure the right blend of goods and services are provided at the right cost. The value of goods and services provided by NWCF activities in FY 2019 is

projected to be approximately $32.1 billion, as shown in Figure 35. The FY 2019 operating cost decreases $817 million from FY 2018. The decrease is primarily attributable to stabilizing Supply obligations from the peak in FY 2018, but remains historically higher as Supply continues to aggressively invest in improved depth and breadth of wholesale inventory. Additionally, Research and Development reflects sustained growth within the Naval Surface Warfare Centers.

Figure 35 – Summary of NWCF Costs

(Dollars in Millions)	**FY 2017**	**FY 2018**	**FY 2019**
Operating Costs			
Supply - Obligations	7,880.9	10,422.1	9,622.9
Depot Maintenance - Aircraft	2,233.4	2,347.7	2,290.7
Depot Maintenance - Marine Corps	365.2	384.5	390.2
Transportation	2,868.3	2,816.1	2,857.0
Research and Development	12,977.3	13,671.0	13,775.3
Base Support	3,022.2	3,254.1	3,143.1
Total	**29,347.3**	**32,895.6**	**32,079.1**

Cash Management

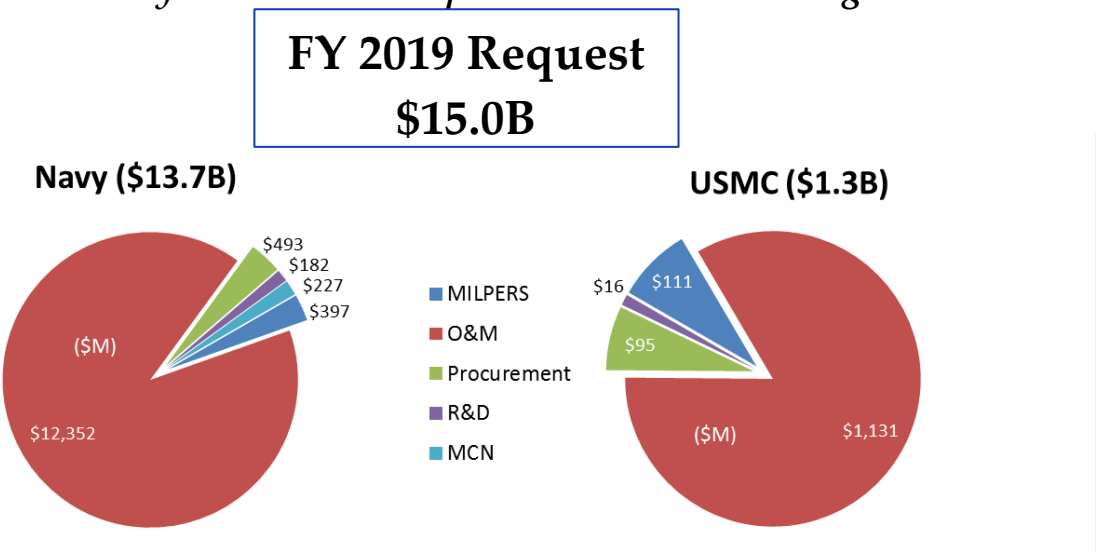
The DON's goal is to maintain the NWCF cash balance within the upper and lower operational range which is accomplished in the FY 2019 budget.

SECTION VIII - OVERSEAS CONTINGENCY OPERATIONS (OCO)

OVERVIEW

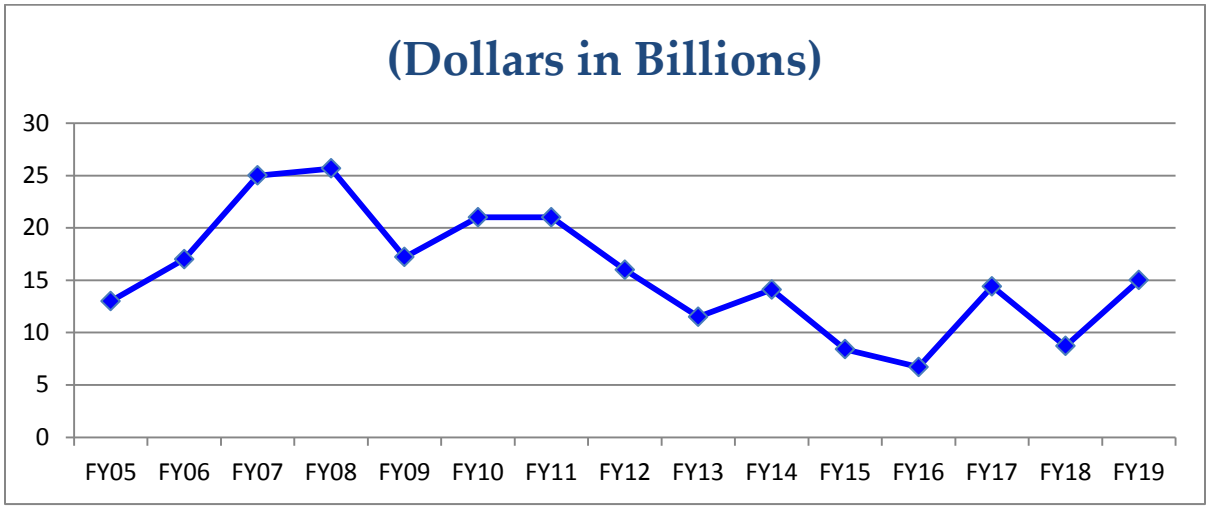
The Navy and Marine Corps overseas force posture is shaped by ongoing and projected operational commitments. FY 2019 continues funding to counter the Islamic State of Iraq and the Levant (ISIL) and for operations in Afghanistan, the Horn of Africa, and other locations in theater, as well as for the European Deterrence Initiative. The FY 2019 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 36 shows a breakout of Navy and Marine Corps funding by appropriation.

Figure 36 – Navy and Marine Corps FY 2019 OCO Funding



The level of funding requested in FY 2019 increases due to a Readiness Base to OCO shift, as shown in Figure 37, and reflects the current deployed forces for the Afghanistan plan. Today the Marine Corps has a force of ~3,000 Marines ashore in the U.S. Central Command (CENTCOM) and another ~1,000 Marine Reserve members suppporting CENTCOM.

Figure 37 – Historical OCO Funding, FY 2005 – FY 2019



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 38 provides the Overseas Contingency Operations funding profile.

Figure 38 – Department of the Navy OCO Funding

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
USN OCO			
Appropriation			
Military Personnel, Navy	372	378	385
Reserve Personnel , Navy	14	9	11
Operation and Maintenance, Navy	5,475	5,789	12,161
Operation and Maintenance, Navy Reserve	26	24	26
Aircraft Procurement, Navy	276	157	80
Weapons Procurement, Navy	5	152	14
Other Procurement, Navy	79	252	187
Procurement of Ammuniton, Navy/Marine Corps	105	222	212
Military Construction, Navy	2	19	227
Research, Development, Test, and Evaluation, Navy	146	168	182
Sub Total USN OCO	**6,501**	**7,169**	**13,486**
USMC OCO			
Appropriation			
Military Personnel, Marine Corps	103	104	109
Reserve Personnel , Marine Corps	4	2	2
Operation and Maintenance, Marine Corps	1633	1,141	1,128
Operation and Maintenance, Marine Corps Reserve	3	3	3
Procurement, Marine Corps	62	65	60
Procurement of Ammuniton, Navy/Marine Corps	4	15	35
Research, Development, Test, and Evaluation, Navy		-	16
Sub Total USMC OCO	**1,809**	**1,331**	**1,354**
US Coast Guard	**-**	**162**	**165**
Congressional Base to OCO Transfer	**1,600**	**-**	
DON Grand Total	**9,910**	**8,662**	**15,005**

NOTE: The FY 2017 column reflects cost of war (CoW) report data, submitted monthly.

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SECTION IX – FINANCIAL OPERATIONS

RESPONSIBLE MILITARY SPENDING- MAXIMIZING THE TOPLINE

The Office of Management and Budget (OMB) issued guidance on a "Comprehensive Plan for Reforming the Federal Government and Reducing the Federal Civilian Workforce." Reform efforts should focus on improving organizational effectiveness; eliminating, restructuring, or merging activities; and workforce management. In development of the FY 2019 President's Budget the DON reviewed internal processes and programs to achieve reform and funding savings over $5 billion across the FYDP. A summary of major savings is included in the chart below:

$M	FY 2019	FYDP
Improve Organizational Effectiveness	-$1,188	-$3,876
Program Eliminations/Duplicative Efforts	-$280	-$1,801
Workforce Management	-$4	-$98
Total $M	**-$1,472**	**-$5,775**

Improve Organizational Effectiveness

Our largest reform effort to improve organizational effectiveness was our "Process to Improve Expenditure Efficiency (PIEE)." Every year the DON has funds expire and cancel. "Expired" means they are no longer available for new obligations. DON can no longer use the funds except in limited cases. "Cancelled" means they are returned to the Treasury. Since FY 2013, DON has returned over $9 billion to the Treasury. The amount returned has increased year-over-year, from $1.8 billion to $2.8 billion in FY 2016. This represent a significant lost opportunity to use resources effectively. Continuously returning money to the Treasury does not represent effective stewardship in keeping with OMB directives, SECDEF guidance, and SECNAV priorities for effective processes. As part of PIEE, the DON managed an exercise requiring each budget submitting office to review any expired unobligated funds, deobligated funds, or unliquidated obligations from FYs 2007 – 2017 and provide reasons why they were not able to expend the funds efficiently. The DON is determined to identify the root causes for this underexecution performance and

develop corrective actions to improve our processes. The PIEE initiatives are business reforms aiming to remove impediments at various levels – the DON cannot solve this alone. For instance, Congressional support is required to eliminate barriers associated with the account availability for certain annual appropriations, modify reprogramming thresholds, initiate new starts, and improve contracting processes. Due to continuous continuing resolutions, the DON has insufficient time to properly execute funding for permanent change of station actions for military personnel or several operation and maintenance programs, as well as initiating new start programs earlier in a fiscal year, or the flexibility to reprogram internally. Additionally, contract closeout lags because industry does not always provide negotiated rates in a timely manner, which could improve with a legislative change. The contracting community is also hindered by congressionally mandated major headquarters reductions. Within DoD, implementation of the Defense Modernization Account (DMA) would allow the DON to realign expiring funding into the DMA, while still finding a DoD use for the funds. Internal to the DON, actions are being put in place to streamline the use of reimbursable work orders, improve cost estimates, and conduct more rigorous execution reviews.

Eliminate, Restructure, or Merge Activities

The DON has also reviewed duplicative programs or programs that are no longer mission essential. This has resulted in the divestiture of legacy F-18 Hornets with backfilling each squadron with F/A-18E/F aircraft with a lower operating cost; transitioning the HH-60H reserve squadron from legacy aircraft to newer MH-60S aircraft which has a lower cost per flying hour; and a review of Marine Corps training munitions which resulted in new less-expensive training munitions and elimination of duplicative munition requirement.

The Marine Corps developed an initiative to improve infrastructure lifecycle management to ensure infrastructure investments are aligned with installations that are capable, adaptive, and economically sustainable platforms from which to generate readiness and project combat power in a fiscally constrained environment. Implementation of this strategy consolidates and right-sizes infrastructure footprint within existing installations to improve operational readiness.

Workforce Management

The DON is reviewing personnel pays and systems to reduce costs. One Marine Corps initiative seeks to maximize the effectiveness and efficiency of the Special Duty Assignment Pay Program by selectively targeting incentives to entice qualified Marines to volunteer for hard-to-fill assignments. This approach aligns closer to a data-driven objective based method of selecting and targeting incentives to generate the behavior that is needed. This effort will more accurately target an incentive pay, freeing resources for other priorities. Another strategy realizes efficiencies in both manpower structure and personnel administrative systems. Modernization of administrative personnel systems will provide the ability to repurpose manpower. Modernization efforts will incorporate numerous systems, and automate and modernize legacy systems enabling personnel reductions within the administrative community. Efficiencies and modernization will assist in more streamlined processes creating savings and the restructuring of 105 Marine Corps Corrections personnel and 394 Administrative personnel to support Marine Corps Force 2025 initiatives without increased end strength.

AUDIT BUSINESS TRANSFORMATION

The Department will continue its drive for transformation of its business culture using financial statement auditability as its propellant. By complying with the standards which must be in place to receive a favorable audit opinion, business managers will become increasingly accountable stewards of public funds, reducing the risk of misusing taxpayer dollars. In addition, some efficiencies will result, driving down the cost of business operations.

Leaders at every echelon are taking responsibility for ensuring that strengthened internal controls over business processes and systems are in place. The primary spoke in this strategy is reforming the Department's business IT systems environment. Initiatives are underway to consolidate and reduce the number of accounting systems used; to expand the capabilities of the target finance, accounting, and logistics Enterprise Resource Planning system; to strengthen the key internal controls governing business IT systems, including security, access, and interface

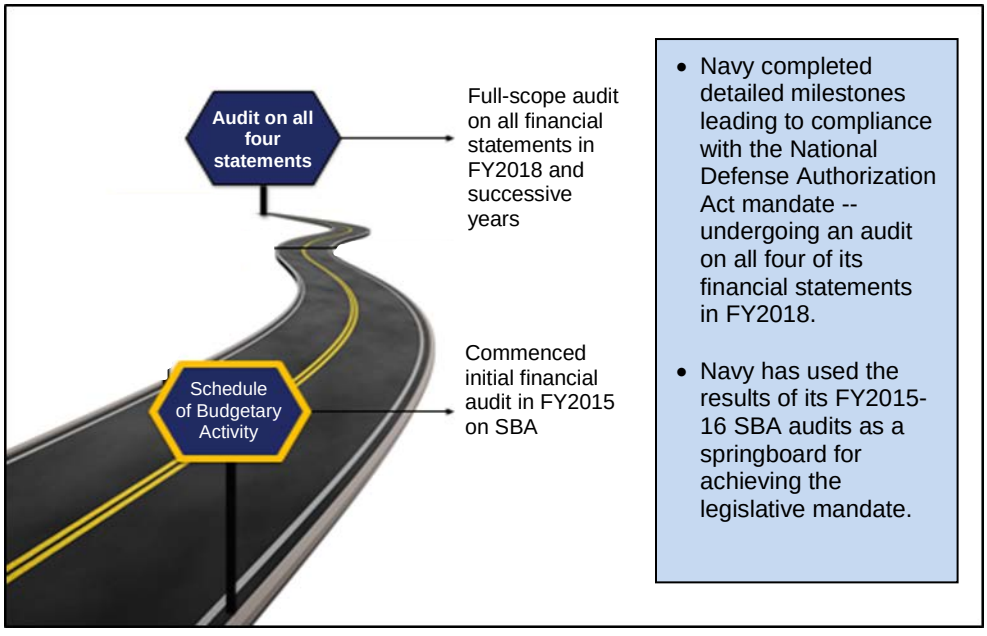
controls. The number of business systems feeding transactions to the accounting systems will also be reduced, eliminating redundancy.

These actions, in addition to business process improvements, will require an investment in resources to complete them. This investment will yield dividends – ultimately resulting in a favorable opinion on yearly financial statement audits – but the most beneficial pay-back will be greater accuracy and transparency when public funds are spent. This will boost confidence that taxpayers and Congress have in the Department as its managers spend dollars in support of warfighters.

AUDITABILITY

As stated, bringing the Department into compliance with accepted accounting standards is the key to a favorable audit opinion. This transformational effort will require comprehensive improvements to DON's business culture. However, the primary objective of the audit process is to drive strengthened internal controls over business processes and systems, and as a result to increase accountability for funds appropriated. In addition, these changes will lead to greater efficiencies, better capability to manage resources, and a business culture based on widened responsibility shared by all leaders, not just those in the financial management community.

Figure 39 – Department of the Navy Road to Financial Auditability



AUDITABILITY PROGRESS

The DON's plan to achieve compliance with financial audit standards is the Department's most comprehensive business transformation initiative to date. DON has reached a critical junction on its path by reaching the Congressionally-established goal of undergoing an audit on all four of its financial statements in FY 2018 as reflected in Figure 39.

The second annual full-scope financial statement audit will commence in FY 2019, when a private sector audit firm will again perform an audit of the Navy General Fund Financial Statements and DON Working Capital Fund Financial Statements. The Marine Corps will also undergo an audit on its General Fund Financial Statements, its third full-scope audit.

In addition to audit findings, other remaining internal control deficiencies have been identified, and milestones have been established for their remediation in FY 2019 and beyond. Some actions, such as compiling an accurate transaction universe for each financial statement, are being met centrally, while other remediation must be carried out locally at each major command. Accountability for major assets is a responsibility for each major command. As corrective actions progress throughout the Department, it is increasingly clear to Navy's workforce that auditability is an all-hands effort.

In addition to the primary challenge of reforming and strengthening the Department's complex business systems' landscape, the Navy continues to meet and mitigate the effects of other major challenges, including:

- Dependence on external service providers, primarily Defense Finance and Accounting Service, to comply with accounting standards when compiling DON financial statements and when authorizing and making payments with DON funds.
- The impact that resource constraints, such as Management Headquarters Activity reductions, may have to lengthen timelines in achieving a favorable audit opinion.
- The effect that a large number of unsubstantiated accounting adjustments has on the accuracy of financial statements; unsupported adjustments are being steadily reduced as internal controls have been strengthened.

The Navy-Marine Corps team is meeting these hurdles head-on with full awareness that financial audit readiness will not be a one-time achievement – rather, it will be

marked by a progressively changing business environment in which improvements will be incorporated into permanent work processes throughout FY 2019. The DON is committed to promoting a business culture in which all participants understand 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 for public funds, institutionalized by performing effective internal controls over business processes and systems, and by making business policies and procedures more prescriptive and compliant with accounting standards.

MILITARY PERSONNEL, NAVY

(Dollars in Millions)

	FY 2017	FY 2018*	FY 2019
Pay and Allowances of Officers	7,786	8,049	8,362
Pay and Allowances of Enlisted	17,852	18,507	19,674
Pay and Allowances of Midshipmen	81	82	84
Subsistence of Enlisted Personnel	1,146	1,210	1,232
Permanent Change of Station Travel	997	927	941
Other Military Personnel Costs	138	143	133
Sub Total: MPN	**27,999**	**28,918**	**30,426**
Overseas Contingency Operations	334	378	385
Total: MPN	**28,333**	**29,296**	**30,811**

MEDICARE-ELIGIBLE RETIREE HEALTH FUND CONTRIBUTION, NAVY

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Health Accrual	1,352	1,577	1,466
Total: DHAN	**1,352**	**1,577**	**1,466**

RESERVE PERSONNEL, NAVY

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Reserve Component Training and Support	1,924	2,000	2,068
Sub Total: RPN	**1,924**	**2,000**	**2,068**
Overseas Contingency Operations	12	9	11
Total: RPN	**1,936**	**2,009**	**2,079**

MEDICARE-ELIGIBLE RETIREE HEALTH FUND CONTRIBUTION, NAVY RESERVE

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Health Accrual	123	143	131
Total: DHANR	**123**	**143**	**131**

**FY 2018 reflects the FY 2018 PB request for all appropriations*

MILITARY PERSONNEL, MARINE CORPS

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Pay and Allowances of Officers	2,742	2,857	3,012
Pay and Allowances of Enlisted	8,691	9,012	9,529
Subsistence of Enlisted Personnel	792	852	841
Permanent Change of Station Travel	438	482	448
Other Military Personnel Costs	60	75	61
Sub Total: MPMC	**12,723**	**13,279**	**13,891**
Overseas Contingency Operations	103	104	109
Total: MPMC	**12,826**	**13,383**	**14,000**

MEDICARE-ELIGIBLE RETIREE HEALTH FUND CONTRIBUTION, MARINE CORPS

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Health Accrual	766	903	831
Total: DHAMC	**766**	**903**	**831**

RESERVE PERSONNEL, MARINE CORPS

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Reserve Component Training and Support	744	767	788
Sub Total: RPMC	**744**	**767**	**788**
Overseas Contingency Operations	4	2	2
Total: RPMC	**748**	**769**	**790**

MEDICARE-ELIGIBLE RETIREE HEALTH FUND , MARINE CORPS RESERVE

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Health Accrual	72	81	74
Total: DHAMCR	**72**	**81**	**74**

OPERATION AND MAINTENANCE, NAVY

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Operating Forces			
Air Operations	7,529	10,191	7,770
Ship Operations	10,428	15,084	11,585
Combat Operations/Support	3,268	4,633	4,761
Weapons Support	2,338	2,404	2,680
Base Support	6,677	7,416	7,377
Total - Operating Forces	**30,240**	**39,728**	**34,173**
Mobilization			
Ready Reserve and Prepositioning Forces	608	417	860
Activations/Inactivations	226	198	161
Mobilization Preparedness	64	89	144
Total - Mobilization	**897**	**705**	**1,166**
Training and Recruiting			
Accession Training	299	298	305
Basic Skills and Advanced Training	1101	1228	1287
Recruiting & Other Training and Education	471	406	403
Total - Training and Recruiting	**1,871**	**1,932**	**1,995**
Administration and Servicewide Support			
Servicewide Support	2,092	1,672	1,672
Logistics Operations and Technical Support	1,992	1,142	1,164
Investigations and Security Programs	1,109	1,202	1,264
Support of Other Nations	5	-	-
Cancelled Activities	6	-	-
Sprectrum/Telecommunications	8	-	-
Total - Administration and Servicewide Support	**5,213**	**4,016**	**4,101**
Sub Total: O&MN	**38,221**	**46,381**	**41,435**
Overseas Contingency Operations	9,701	5,951	12,326
Total: O&MN	**47,922**	**52,332**	**53,761**

OPERATION AND MAINTENANCE, NAVY RESERVE

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Operating Forces			
Air Operations	614	712	706
Ship Operations	1	1	1
Combat Operations/Support	119	135	139
Base Support	163	222	164
Total - Operating Forces	**896**	**1,069**	**1,009**
Administration and Servicewide Support			
Servicewide Support	18	15	15
Logistics Operations and Technical Support	3	3	3
Total - Administration and Servicewide Support	**21**	**18**	**18**
Sub Total: O&MNR	**918**	**1,087**	**1,027**
Overseas Contingency Operations	29	24	26
Total: O&MNR	**947**	**1,111**	**1,053**

OPERATION AND MAINTENANCE, MARINE CORPS

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Operating Forces			
Expeditionary Forces	1,733	2,320	2,275
USMC Prepositioning	91	86	98
Combatant Commander Direct Mission Support	-	182	184
Base Support	2,781	2,999	2,984
Total - Operating Forces	**4,605**	**5,586**	**5,541**
Training and Recruiting			
Accession Training	21	17	18
Basic Skills and Advanced Training	528	552	542
Recruiting & Other Training and Education	248	258	258
Total - Training and Recruiting	**796**	**827**	**818**
Administration and Servicewide Support			
Servicewide Support	462	460	467
Logistics OPS & Technical Support	76	78	0
Sprectrum/Telecommunications	2	-	-
Total - Administration and Servicewide Support	**540**	**538**	**467**
Sub Total: O&MMC	**5,941**	**6,951**	**6,826**
Overseas Contingency Operations	1,756	1,141	1,128
Total: O&MMC	**7,697**	**8,093**	**7,954**

OPERATION AND MAINTENANCE, MARINE CORPS RESERVE

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Operating Forces			
Expeditionary Forces	118	122	119
Base Support	134	144	142
Total - Operating Forces	**252**	**266**	**260**
Administration and Servicewide Support			
Servicewide Support	18	13	11
Total - Administration and Servicewide Support	**18**	**13**	**11**
Sub Total: O&MMCR	**270**	**279**	**272**
Overseas Contingency Operations	3	3	3
Total: O&MMCR	**273**	**282**	**275**

ENVIRONMENTAL RESTORATION, NAVY

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Environmental Restoration Activities	-	281	329
Total: ERN	**-**	**281**	**329**

NATIONAL DEFENSE SEALIFT FUND

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Strategic Sealift Acquisition	33	-	-
DoD Mobilization Assets	266	201	-
Research and Development	7	19	-
Ready Reserve Force	275	289	-
Total: NDSF	**581**	**509**	**-**

Note: NDSF realigned within OMN and RDTEN in FY 2017.

SHIPBUILDING AND CONVERSION, NAVY

(Dollars in Millions)

	FY 2017		FY 2018		FY 2019	
	QTY	$	QTY	$	QTY	$
New Construction						
Columbia class	-	773	-	843	-	3,005
CVN 78	-	2,627	1	4,442	-	1,598
SSN 774	2	5,040	2	5,226	2	7,170
DDG 51	2	3,615	2	3,589	3	5,645
DDG 1000	-	272	-	224	-	271
LCS	3	1,564	2	1,136	1	646
LPD 17	1	1,786	-	-	-	-
LHA(R)	1	1,618	-	1,711	-	-
LX(R)	-	-	-	-	-	-
Expeditionary Fast Transport	-	-	-	-	-	-
Expeditionary Sea Base	-	-	-	-	1	650
T-ATS	-	-	1	76	1	81
T-AO 205	-	73	1	541	2	1,052
Total New Construction	**9**	**17,367**	**9**	**17,788**	**10**	**20,118**
Other						
CVN RCOH	-	1,932	-	1,681	-	450
Moored Training Ship	1	625	-	-	-	-
LCU 1700	-	-	1	32	2	42
LCAC SLEP	3	82	-	-	1	23
Outfitting/Post Delivery	-	626	-	549	-	634
Ship to Shore Connector	2	128	3	213	5	325
Service Craft	-	65	-	24	-	72
YP Craft Maintenance/ROH/SLEP	-	21	-	-	-	-
Polar Icebreaker	-	150	-	-	-	-
Completion of PY Shipbuilding Programs	-	160	-	118	-	207
Total Other	**6**	**3,790**	**4**	**2,615**	**8**	**1,753**
Total: SCN	**15**	**21,157**	**13**	**20,404**	**18**	**21,871**

AIRCRAFT PROCUREMENT, NAVY

(Dollars in Millions)

	FY 2017		FY 2018		FY 2019	
	QTY	$	QTY	$	QTY	$
Combat Aircraft	101	10,626	82	9,272	107	11,729
Airlift Aircraft	2	207	-	-	2	206
Trainer Aircraft	-	6	-	-	-	-
Other Aircraft	9	757	5	785	11	1616
Modification of Aircraft	-	2,448	-	2,714	-	3,157
A/C Spares & Repair Parts	-	1,603	-	1,682	-	1,793
A/C Support Equip & Facilities	-	464	-	504	-	541
Sub Total: APN	**112**	**16,111**	**87**	**14,956**	**120**	**19,042**
Overseas Contingency Operations	7	723	0	157	0	80
Total: APN	**119**	**16,835**	**87**	**15,114**	**120**	**19,122**

NOTE: FY 2018 totals exclude 4 RQ-21A Blackjacks procured in PMC.

WEAPONS PROCUREMENT, NAVY

(Dollars in Millions)

	FY 2017		FY 2018		FY 2019	
	QTY	$	QTY	$	QTY	$
Ballistics and Other Missile						
TRIDENT II Mods	-	1,099	-	1,144	-	1,079
Evolved Sea Sparrow Missile (ESSM)	73	51	30	75	45	98
Tomahawk	100	213	34	134	-	99
AMRAAM	163	197	120	197	140	211
Sidewinder	147	71	185	80	191	78
JT Standoff Weapon (JSOW)	-	2	-	5	-	1
Standard Missile	125	491	117	511	125	616
Rolling Airframe Missile (RAM)	90	72	60	59	120	96
Aerial Targets	-	139	-	125	-	137
Joint Air Ground Missile (JAGM)	96	22	-	4	75	24
LRASM	15	54	25	75	25	81
Stand Off Precision Guided Munitions (SOPGM)	24	3	19	3	31	11
Small Diameter Bomb (SDB II)	-	-	90	21	750	91
LCS OTH Missile	-	-	-	-	8	18
Other	-	263	-	278	-	281
Torpedo and Related Equipment						
MK-48 Torpedo	18	43	17	45	45	93
MK-54 Torpedo Mods	-	97	-	104	-	106
MK-48 Torpedo ADCAP Mods	-	46	-	39	-	40
Torpedo Support Equipment	-	55	-	70	-	79
Other	-	20	-	32	-	32
Other Weapons						
Close-In Wpns Sys (CIWS) Mods	-	51	-	73	-	63
Gun Mount Mods	-	77	-	76	-	75
LCS Module Weapons	24	3	110	13	90	11
Other	-	162	-	148	-	145
Spares and Repair Parts	-	62	-	110	-	136
Sub Total: WPN	**875**	**3,293**	**807**	**3,420**	**1,645**	**3,702**
Overseas Contingency Operations	226	138	185	152	25	14
Total: WPN	**1,101**	**3,431**	**992**	**3,572**	**1,670**	**3,717**

**Quantities reflected in chart are appropriated.*

PROCUREMENT, MARINE CORPS

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Weapons and Combat Vehicles			
AAV7A1 PIP	70	108	156
Amphibious Combat Vehicle	-	162	167
LAV PIP	33	17	44
Modification Kits	18	18	23
155MM Ltwt Towed Howitzer	3	20	47
High Mobility Artillery Rocket System	31	60	134
Wpns & Cmbt Vehs under $5 million	10	20	41
Other	3	1	-
Guided Missiles and Equipment			
Javelin	1	41	3
Other	49	86	92
Communications and Electronic Equipment			
Repair and Test Equipment	14	33	46
Common Computer Resources	41	67	69
Command Post Systems	105	187	125
Radio Systems	42	34	280
Comm Switching & Control Systems	33	55	37
Comm & Elec Infrastructure Supt	25	44	84
Common Aviation Command and Control System (CAC2S)	52	45	35
RQ-21 UAS	78	78	-
Ground/Air Task Oriented Radar (G/ATOR)	123	139	225
Other	205	269	335
Support Vehicles			
Commercial Cargo Vehicles	93	67	25
Joint Light Tactical Vehicle	104	234	607
Other	16	34	20
Engineer and Other Equipment	136	211	237
Spares and Repair Parts	21	36	26
Sub Total: PMC	**1,307**	**2,065**	**2,858**
Overseas Contingency Operations	352	65	60
Total: PMC	**1,659**	**2,130**	**2,918**

PROCUREMENT OF AMMUNITION, NAVY AND MARINE CORPS

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Navy Ammunition	464	498	716
Marine Corps Ammunition	173	295	290
Sub Total: PANMC	**637**	**792**	**1,006**
Overseas Contingency Operations	168	236	247
Total: PANMC	**806**	**1,029**	**1,253**

OTHER PROCUREMENT, NAVY

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Ship Support Equipment	2,062	2,712	3,181
Communications and Electronics Equipment	2,047	2,570	3,176
Aviation Support Equipment	419	442	503
Ordnance Support Equipment	906	929	1048
Civil Engineering Support Equipment	79	100	112
Supply Support Equipment	318	510	605
Personnel and Command Support Equipment	370	387	463
Spares and Repair Parts	200	279	327
Sub Total: OPN	**6,401**	**7,929**	**9,414**
Overseas Contingency Operations	251	252	187
Total: OPN	**6,652**	**8,180**	**9,602**

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, NAVY

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Basic Research	549	596	597
Applied Research	955	886	891
Advanced Technology Development	811	686	751
Advanced Component Development	4,418	4,194	4,294
System Development and Demonstration	5,923	6,362	6,042
RDT&E Management Support	1,227	946	1,021
Operational Systems Development	3,642	4,040	4,854
Sub Total: RDT&E,N	**17,525**	**17,710**	**18,451**
Overseas Contingency Operations	327	168	198
Total: RDT&E,N	**17,852**	**17,878**	**18,649**
By Service			
Navy	16,776	16,781	17,593
Marine Corps	749	929	858

MILITARY CONSTRUCTION, NAVY AND MARINE CORPS
ACTIVE AND RESERVE

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Significant Programs			
Major Construction	1,226	1,560	2,329
Minor Construction	30	24	29
Planning and Design	88	234	186
Sub Total: Navy	**1,344**	**1,818**	**2,543**
Overseas Contingency Operations	127	19	227
Total: Navy	**1,470**	**1,837**	**2,771**
Naval Reserve			
Major Construction	35	59	35
Minor Construction	0	2	3
Planning and Design	4	4	5
Sub Total: Navy Reserve	**39**	**65**	**43**
Overseas Contingency Operations	5	-	**-**
Total: Naval Reserve	**43**	**65**	**43**
By Service			
Navy	922	1,138	1,907
Marine Corps	592	765	906

FAMILY HOUSING, NAVY AND MARINE CORPS

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Navy			
Construction (Incl P&D)	84	73	87
O&M	271	277	280
Total: Navy	**355**	**350**	**367**
Marine Corps			
Construction (Incl P&D)	12	10	18
O&M	34	52	35
Total: Marine Corps	**46**	**62**	**52**
Total: FH,N&MC	**401**	**412**	**419**

BASE REALIGNMENT AND CLOSURE ACCOUNTS

(Dollars in Millions)

	FY 2017	FY 2018	FY 2019
Base Realignment and Closure IV	1	-	-
Base Realignment and Closure V	4	-	-
Consolidated Prior BRAC	172	144	152
Total: BRAC	**176**	**144**	**152**

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LIST OF ACRONYMS

A

A2/AD *– Anti-Access/Area-Denial*
AABoD*- Accelerated Acquisition Board of Directors*
AARGM *- Advanced Anti-Radiation Guided Munition*
AC - Active Component
ACAT *– Acquisition Category*
ACV *– Amphibious Combat Vehicle*
AEA*- Airborne Electronic Attack*
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

CANES*- Consolidated Afloat Networks and Enterprise Services*
CBARS *– Carrier Based Aerial Refueling System*
CDD *– Capabilities Development Documentation*
CENTCOM *- US Central Command*
CG *- Cruiser*
CNO- *Chief of Naval Operations*
COCOMs - *Combatant Commanders*
COD *– Carrier Onboard Delivery*
CONOPS*- Concept of Operations*
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*
ECP*- Engineering Change Proposal*
EDM*- Electronic Development Model*
EMALS *– Electromagnetic Aircraft Launch System*
ESB *– Expeditionary Sea 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

F3R*- Form Fit, Function Refresh*
FEC *– Facilities Engineering Command*
FFRDC*- Federally Funded Research and Development Centers*
FHP – *Flying Hour Program*
FIAC*- Fast Inshore Attack Craft*
FOC *– Full Operational Capability*
FOS *– Full Operating Status*
FoV*-Family of Vehicles*
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*
GCS*- Guidance and Control Section*
GCV*- Ground Combat Vehicle*

H

HADR *– Humanitarian Assistance and Disaster Relief*
HARM *- High-Speed Anti-Radiation Missile*
HEL*- High Energy Laser*
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*
IPE- *Industrial Plant Equipment*
IPP *– Invoice Processing Platform*
IRAD*- Internal Research and Development*
IR*- Infra Red*
IRR *– Infrared Receiver*
IRST *– Infrared Search and Track*
ISIL *– Islamic State of Iraq and the Levant*
ISR *– Intelligence, Surveillance and Reconnaissance*
IT *– Information Technology*
ITV*- Internally Transportable Vehicle*

J

JAGM *– Joint Air-to-Ground Missile*
JHSV *- Joint High Speed Vessel*
JLTV *- Joint Light Tactical Vehicle*
JPATS *- Joint Primary Aircraft Training System*
JRB*- Joint Reserve Base*
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

MADS-K- *Man-Portable Anti-Drone Defeat System Kit*
MAGTF *- Marine Air-Ground Task Force*
MAW*- Marine Aircraft Wing*
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*
MML*- Missile-to-Missile Link*
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

NDAA- *National Defense Authorization Act*
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*
NOTM*- Networking on the Move*

***NR&DE**- Naval Research and Development Establishment*
***NSWC** – Naval Surface Warfare Center*
NSY- *Naval Shipyard*
***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
***OPTEMPO** - Operational Tempo*
***OPN** – Other Procurement, Navy*
***ORD** – Operational Requirements Document*
***OOR** – Out-of-Reporting*
***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*
PCS- Permanent Change of Station
***PMC** – Procurement, Marine Corps*
***PMRF** – Pacific Missile Range Facility*

Q

***QDR** – Quadrennial Defense Review*

R

RAA- *Request for Additional Appropriations*
***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*
***SDBII**- Small Diameter Bomb Increment II*
***SDD** – System Development and Demonstration*
***SEAL** – Sea Air Land Team*
***C41SFIM**- Strike Fighter Inventory Management*
***SLEP** – Service-Life Extension Program*
***SM** - Standard Missile*
***SNLWS**- Surface Navy Laser Weapon System*
***SOF** – Special Operations Force*
***SOPGM** – Stand-Off Precision Guided Munitions*
***SSBN** – Nuclear Ballistic Submarine*
***SSC** – Ship to Shore Connector*
***SSGN** – Guided Missile Submarine (Nuclear)*
***SSMM** – Surface-to-Surface Missile Module*
***SSN** - Nuclear Attack Submarine*
***S&T** - Science and Technology*
***STEM-** Science, Technology, Engineering, and Mathematics*
***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*

codT-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

UARC- *University Affiliated Research Centers*
UAS *- Unmanned Aerial System*
UCA*- Unmanned Carrier Aviation*
UAV *- Unmanned Aerial Vehicle*
UCLASS *– Unmanned Carrier Launched Airborne Surveillance and Strike*
USMC *– United States Marine Corps*
USN *– United States Navy*

V

VPM*- Virginia Payload Module*