DEPARTMENT OF THE NAVY
FISCAL YEAR (FY) 2019
BUDGET ESTIMATES

JUSTIFICATION OF ESTIMATES
FEBRUARY 2018

Navy Working Capital Fund (NWCF)

The estimated cost for this report for the Department of the Navy (DON) is $130,509.

The estimated total cost for supporting the DON budget justification material is approximately $1,643,653 for the 2018 fiscal year. This includes $79,753 in supplies and $1,563,900 in labor.

NAVY WORKING CAPITAL FUND (NWCF)

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, who's financial goal is to maximize profit, the NWCF activities' financial goal is to break even over the budget cycle. The NWCF provides stabilized pricing to customers and acts as a shock-absorber to fluctuations in market prices during the year of execution; 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 the 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.
- 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 these goods and services provided by NWCF activities in FY 2019 is projected to be approximately $32.1 billion, as shown in Figure 1. The FY 2019 budget request reflects a decrease of $816.5 million, or 2.5% from FY 2018. The cost decrease is primarily attributable to stabilizing Supply obligations from their peak in FY 2018, but

remains historically higher as Supply continues to aggressively invest in improved depth and breadth of wholesale inventory. Ensuring the right part is ready for issue when needed reduces the need for cross-decking of parts from non-deployed units to deployed and next to deploy units, and reduces delays at the depots, thereby improving overall readiness. Additionally, Research and Development reflects sustained growth within the Naval Surface Warfare Centers.

Figure 1 - 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**

Supply Management

Supply Management is the central element assuring afloat and ashore operating forces and their equipment have the necessary supplies, spare parts, and components to conduct military engagements, various types of training, and any potential contingency. Ensuring the right material is provided where it matters, when it matters, and at the right cost is vital to equipping and sustaining Navy and Marine Corps warfighting units. 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. Supply Management also provides strong sailor and family support through contracting, resale, transportation, food service, and other quality of life programs. Costs related to supplying material to customers are recouped through stabilized rate recovery processes.

Depot Maintenance

The Fleet Readiness Centers (FRCs) and Marine Corps Depots perform depot maintenance functions to ensure repair, overhaul, and timely upgrades of the right

types and quantities of aircraft, weapons systems, and support equipment in order to ensure our ability to rapidly respond to global crises. Work completed at the FRCs and Depots ensure deployed and next-to-deploy units have the battle-ready items they need to train, fight, and win today while supporting the force to win tomorrow. Forward-deployed individuals perform time-critical repair and upgrade functions in-theater, alongside the service members they support.

Since current demand for naval forces exceed supply, the FRCs are essential for mobilization; repair of aircraft, engines, and components; and the manufacture of associated parts and assemblies. Additionally, the FRCs overhaul and repair a wide range of equipment and components. They provide engineering services in the development of hardware design changes and furnish technical and other professional services on maintenance and logistics issues.

The Marine Corps Depots provide engineering, manufacturing, re-manufacturing, preservation, calibration, fabrication, technical evaluation, and other services required to maximize the readiness and sustainability of ground combat and combat support weapon systems, associated parts, assemblies, and subassemblies. Such quality products and responsive maintenance support services help maintain a core industrial base in support of Department of Defense (DoD) operating forces mobilization, surge, reset, and reconstitution requirements.

Transportation

Over-ocean movement of supplies and provisions to the deployed operating forces is a primary focus of this group; it also maintains prepositioned equipment and supplies as well as other special mission services. These combine to support the Navy and the Marine Corps in deterring potential threats and promptly responding to crises in the maritime crossroads.

Transportation is the responsibility of the Military Sealift Command (MSC) whose major clients include the Fleet Commanders for U.S. Pacific Fleet and U.S. Fleet Forces Command, and Naval Sea Systems Command. The five programs budgeted by MSC

through the NWCF are: 1) Combat Logistics Force which provides support using civilian mariner manned non-combatant ships for underway material support to Carrier Strike Groups, Expeditionary Strike Groups and idependently deployed units around the globe; 2) Service Support which provides civilian mariner manned non-combatant ships with towing, rescue and salvage, submarine support and cable laying and repair services, as well as a command and control platform and floating medical facilities; 3) Special Mission Ships which provide unique seagoing contract-operated platforms in the areas of oceanographic and hydrographic surveys, underwater surveillance, missile tracking, acoustic surveys, and submarine and special warfare support and contracted harbor tugs; 4) Afloat Prepositioning Force Navy which deploys advance material for strategic lift in support of the Marine Expeditionary Forces; and 5) Expeditionary Fast Transport which is a cooperative effort for a high-speed, shallow draft vessel intended for rapid intra-theater transport of medium sized cargo payloads.

Research and Development

Research and Development (R&D) includes the Warfare Centers and the Naval Research Laboratory. The R&D activities are intrinsically involved in the development, engineering, acquisition, and in-service support of weapons systems and equipment for the air, land, sea, and space operating environments. These efforts are key to the success of DON and DoD operations now and in the future. The R&D activities make major contributions in battle-space awareness, net-centric operations (connectivity and interoperability), cyber warfighting capability, and command and control. Their contributions are evident through research, engineering, and testing efforts in the fields of space, aerial, surface, and sub-surface sensors, communications systems, multi-media data fusion, and battle management systems. The R&D activities are continuously innovating and implementing improvements focused on delivering additional and more lethal capability.

The R&D activities also provide specialized support logistics through the repair and maintenance of select items of operating forces weapons and equipment. This unique capability is leveraged when work is limited in scope, irregular in schedule and/or very specialized and, therefore, insufficient to warrant fully dedicated depot facilities or commercial source interests. Continued success by our Warfare Centers and

Laboratories is vital to maintaining and improving upon the mission capabilities of the operating forces that sustain our global presence.

- Space and Naval Warfare System Center (SPAWAR) is the Navy acquisition command that develops, delivers and sustains communications and information warfare capabilities for warfighters, keeping them securely connected anytime, anywhere and rapidly delivers cyber warfighting capability from seabed to space.
- Naval Air Warfare Center (NAWC) provides R&D, engineering, test and evaluation of all Navy and Marine Corps aircraft, aircraft systems, weapons and weapon systems.
- Naval Surface Warfare Center (NSWC) cohesively and seamlessly operates the Navy's full spectrum research, development, test and evaluation, engineering, and fleet support centers for offensive and defensive systems associated with surface warfare and related areas of joint, homeland, and national defense systems from the sea.
- Naval Undersea Warfare Center (NUWC) operate the Navy's full-spectrum research, development, test and evaluation, engineering, and Fleet support center for submarines, autonomous underwater systems, and offensive and defensive weapon systems associated with USW and related areas of homeland security and national defense.
- Naval Research Laboratory (NRL) operates as the Navy's full-spectrum corporate laboratory, conducting a broadly based multidisciplinary program of scientific research and advanced technological development directed toward maritime applications of new and improved materials, techniques, equipment, systems and ocean, atmospheric, and space sciences and related technologies.

Base Support

The Base Support business area is comprised of the Facilities Engineering Commands (FECs) and the NWCF portion of Naval Facilities Engineering and Expeditionary Warfare Center (NAVFAC EXWC). The FECs provide a broad range of services by ensuring that DON and DoD facilities and installations have reliable access to utilities services such as electricity, water, steam, natural gas, vehicle and equipment services, facility support contracting oversight, and building/ facilities sustainment and recapitalization services. By utilizing network wide digital control and monitoring systems and increasing the use of alternative sources of energy (e.g. geothermal, ocean thermal, wind, solar, and wave), the FECs support achieving facility energy and utility distribution system efficiencies and reducing the DON's overall

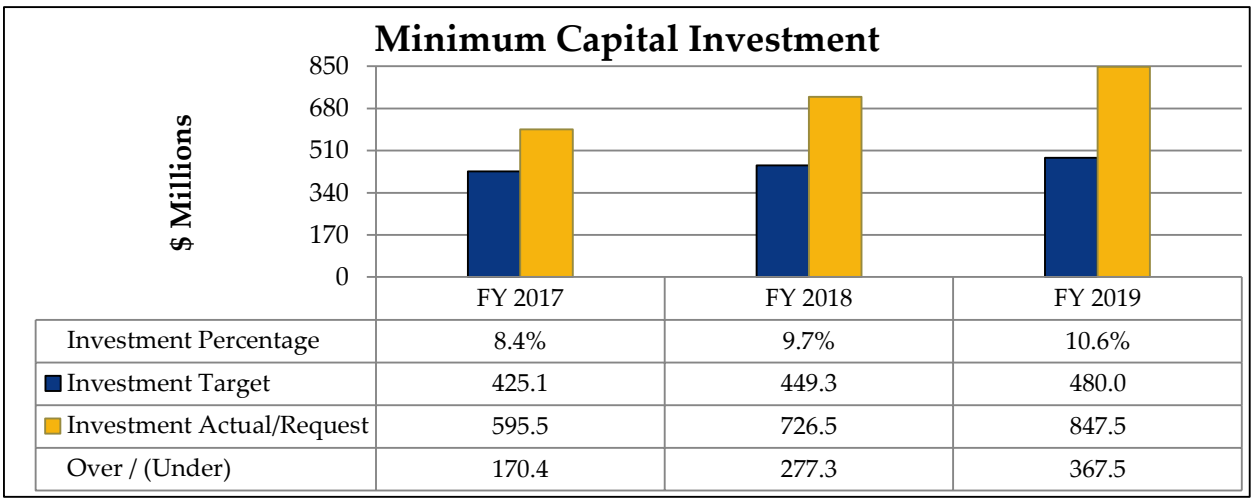
energy consumption levels. The FECs budget reflects continued investments in energy focused efficiency. The NWCF portion of NAVFAC EXWC supports combatant capabilities and sustainable facilities through specialized engineering and technology development. In addition, energy efficiency improvements in both buildings and support vehicles are being implemented by Base Support activities in order to conserve DON and DoD resources. Facility-related technology development and environmental testing is also performed by this group. These efforts are key toward improving operational energy efficiency and shore energy efficiency resulting in decreased risk to operational forces and reducing the impact of volatility in energy prices.

Depot Maintenance Six Percent Capital Investment Plan:

10 USC 2476 mandates that each fiscal year, DON invest in the depot capital budgets (facilities and equipment) a minimum of 6% of the average total combined maintenance, repair, and overhaul workload funded for the previous three fiscal years. The 6% percent threshold mandated by 10 USC 2476 is applicable at the DON level, to include both NWCF (Fleet Readiness Centers and USMC Depots) and appropriated fund (Shipyards) activities.

The FY 2019 request reflects the DON's continued commitment to sustain and recapitalize Depot Maintenance infrastructure and to maintain a relevant industrial base. The FY 2019 request exceeds the 6% requirement by $367.5 million as shipyards continue to make strategic investments in their infrastructure to better serve their customers. Figure 2 reflects the DON's capital investment in depots.

Figure 2 - Depot Capital Investment



	FY 2017	FY 2018	FY 2019
Investment Percentage	8.4%	9.7%	10.6%
Investment Target	425.1	449.3	480.0
Investment Actual/Request	595.5	726.5	847.5
Over / (Under)	170.4	277.3	367.5

Financial Summary Tables:

New Orders: New orders are based on workload estimates coordinated with customers and historical trend analysis.

(Dollars in Millions)	FY 2017	FY 2018	FY 2019
New Orders			
Supply - Navy	6,843.5	7,939.7	7,484.2
Supply - Marine Corps	186.2	69.5	87.2
Depot Maintenance - Aircraft	2,294.0	2,510.4	2,492.1
Depot Maintenance - Marine Corps	371.8	376.4	390.2
R&D - Air Warfare Center	4,789.9	4,624.2	4,607.2
R&D - Surface Warfare Center	4,363.0	4,398.4	4,477.7
R&D - Undersea Warfare Center	1,180.1	1,236.6	1,258.1
R&D - SPAWAR Systems Center	2,168.6	2,318.5	2,265.6
R&D - Naval Research Laboratory	937.1	884.1	894.3
Transportation - MSC	2,999.4	2,626.6	2,866.8
Base Support - FECs	2,948.0	2,980.4	2,927.5
Base Support - EXWC	78.9	77.8	76.7
Total	**29,160.5**	**30,042.6**	**29,827.4**

Revenue: Reflects the income generated from sale of goods or services, or any other use of capital or assets, associated with the main operations before any costs or expenses are deducted.

(Dollars in Millions)	FY 2017	FY 2018	FY 2019
Revenue			
Supply - Navy	7,078.9	7,927.9	7,851.4
Supply - Marine Corps	138.8	106.9	105.5
Depot Maintenance - Aircraft	2,207.7	2,385.8	2,543.2
Depot Maintenance - Marine Corps	382.2	388.2	377.3
R&D - Air Warfare Center	4,664.3	4,700.2	4,688.8
R&D - Surface Warfare Center	4,265.8	4,398.4	4,477.7
R&D - Undersea Warfare Center	1,142.9	1,229.4	1,255.0
R&D - SPAWAR Systems Center	2,181.3	2,343.9	2,326.3
R&D - Naval Research Laboratory	862.2	919.2	924.4
Transportation - MSC	3,053.5	2,626.6	2,866.8
Base Support - FECs	3,009.8	2,973.4	2,915.3
Base Support - EXWC	85.2	80.1	77.3
Total	**29,072.4**	**30,079.9**	**30,408.9**

Operating Costs: Total operating obligations for supply functions and cost of goods and services sold for industrial functions are as follows:

(Dollars in Millions)	FY 2017	FY 2018	FY 2019
Operating Costs			
Supply - Navy (Obligations)	7,797.8	10,324.9	9,532.7
Supply - Marine Corps (Obligations)	83.1	97.2	90.2
Depot Maintenance - Aircraft	2,233.4	2,347.7	2,290.7
Depot Maintenance - Marine Corps	365.2	384.5	390.2
R&D - Air Warfare Center	4,627.9	4,705.8	4,699.0
R&D - Surface Warfare Center	4,162.2	4,454.5	4,538.2
R&D - Undersea Warfare Center	1,136.1	1,239.9	1,259.8
R&D - SPAWAR Systems Center	2,184.0	2,342.1	2,333.7
R&D - Naval Research Laboratory	867.1	928.6	944.6
Transportation - MSC	2,868.3	2,816.1	2,857.0
Base Support - FECs	2,939.7	3,176.7	3,063.1
Base Support - EXWC	82.5	77.4	79.9
Total	**29,347.3**	**32,895.6**	**32,079.1**

Net Operating Results: Revenue, excluding surcharge collections and extraordinary expenses, less the cost of goods and services sold to customers is as follows:

(Dollars in Millions)	FY 2017	FY 2018	FY 2019
Net Operating Results			
Supply - Navy	194.1	234.3	(298.6)
Supply - Marine Corps	3.5	(0.2)	(3.8)
Depot Maintenance - Aircraft	(37.7)	38.1	252.5
Depot Maintenance - Marine Corps	17.6	3.7	(4.2)
R&D - Air Warfare Center	36.3	(5.6)	(10.3)
R&D - Surface Warfare Center	102.4	(56.1)	(60.5)
R&D - Undersea Warfare Center	7.0	(10.5)	(4.8)
R&D - SPAWAR Systems Center	(2.7)	(9.7)	(12.9)
R&D - Naval Research Laboratory	(5.6)	(9.5)	(20.2)
Transportation - MSC	185.2	(189.6)	9.8
Base Support - FECs	70.0	(203.3)	(156.0)
Base Support - EXWC	2.7	2.6	(2.6)
Total	**572.9**	**(205.8)**	**(311.7)**

Accumulated Operating Results: Reflects the cumulative summation of Net Operating Results carried from fiscal year to fiscal year, since inception, and is as follows:

(Dollars in Millions)	FY 2017	FY 2018	FY 2019
Accumulated Operating Results			
Supply - Navy	64.3	298.6	0.0
Supply - Marine Corps	4.0	3.8	0.0
Depot Maintenance - Aircraft	(290.6)	(252.5)	0.0
Depot Maintenance - Marine Corps	17.8	21.5	0.0
R&D - Air Warfare Center	15.9	10.3	0.0
R&D - Surface Warfare Center	116.6	60.5	0.0
R&D - Undersea Warfare Center	15.3	4.8	0.0
R&D - SPAWAR Systems Center	22.6	12.9	0.0
R&D - Naval Research Laboratory	29.7	20.2	0.0
Transportation - MSC	179.8	(9.8)	0.0
Base Support - FECs	359.3	156.0	0.0
Base Support - EXWC	(0.0)	2.6	0.0
Total	**534.7**	**328.9**	**0.0**

Workload: Projections for workload are consistent with Navy force structure, support levels, and customer funding. The table below displays year-to-year percentage changes. Changes are indicated by gross sales for supply, per diem (ship days) for transportation, program costs for base support, and direct labor hours for all others.

(Percent Change)	FY 2018	FY 2019
Workload		
Supply - Navy	10.8%	-1.0%
Supply - Marine Corps	-21.5%	-16.3%
Depot Maintenance - Aircraft	6.8%	-0.4%
Depot Maintenance - Marine Corps	-3.6%	-2.3%
R&D - Air Warfare Center	0.0%	-0.3%
R&D - Surface Warfare Center	-2.0%	0.0%
R&D - Undersea Warfare Center	-2.9%	0.0%
R&D - SPAWAR Systems Center	2.9%	-0.1%
R&D - Naval Research Laboratory	0.4%	0.4%
Transportation - MSC	2.8%	2.4%
Base Support - FECs	8.1%	-3.6%
Base Support - EXWC	-2.7%	0.7%
Total	**1.7%**	**0.3%**

NWCF Cash:

Definition of Cash: The Defense Working Capital Fund (DWCF) Fund Balance with Treasury, treasury account symbol 97X4930, is subdivided into five sub-numbered accounts. The Navy's account is 97X4930.002. The balance in this account is defined as cash balance which equals the amount at the beginning of the fiscal year plus the cumulative fiscal year-to-date amounts of collections, appropriations, and transfers-in minus the cumulative fiscal year-to-date amounts of disbursements, withdrawals, and transfers-out.

Anti-deficiency Act Applicability: The NWCF is required to maintain a positive cash balance to prevent an Anti-deficiency Act (ADA) violation under Title 31, United States Code, § 1517(a), *Prohibited obligations and expenditures*. The Anti-deficiency Act determination is applicable at the total DON NWCF level.

Cash Management Principles in Working Capital Funds: Unlike appropriated funds, the NWCF Fund Balance with Treasury is not equal to outstanding obligations. Cash on hand at Treasury must be sufficient to pay bills when due and should remain sufficient to support operational requirements, near term capital investment program disbursements, and any cost fluctuations and unplanned expenses due to customer demand changes. More specifically, the NWCF needs to have cash to:

- Support regular operational requirements including payments for supplies, labor, utilities, etc;
- Cover costs not covered by stabilized rates due to commodity market cost increase, unexpectedly increased inflation, or other factors;
- Increase inventory investments to respond to customer demand changes;
- Pay overhead and fixed costs when actual workload is less than budgeted workload as these costs are allocated to workload levels estimated in the budget;
- Cover cyclical or seasonal patterns in cash disbursements and collections, as cash levels of certain business activities will typically be lower at specific times of the year such as the holiday season when depots often operate on a reduced work schedules;
- Cover budgeted cash losses when returning prior year gains by providing goods or services below cost to customers;
- Ensure funds are available to cover increases in payables that occur when multiple bills arrive earlier than expected, or decreases in collections because of other cash flow issues such as a third pay date within a given month.

The cash balance is primarily affected by cash generated from operations, but is also impacted by appropriations, transfers, and withdrawals. Maintaining a proper cash balance is dependent on setting rates to recover full costs, including prior year gains and losses, and accurately projecting workload. Cost volatility and unexpected changes in customer orders are the prime concerns causing deviations from budget projections.

NWCF Cash Management: The DON's goal is to maintain the NWCF cash balance within the upper and lower operational range. The operational range is determined using the established DoD guidance for calculating cash requirements. Specifically, these are rate, range, risk mitigation, and reserves, commonly referred to as "The Four R's". The DON's NWCF cash requirement includes a forecast of collections and disbursements and considers cyclical timing of outlays. Cash requirements must also account for the greatest time between collections and disbursements to ensure auditability and accurate daily cash balances. Protecting customer programs by preserving their buying power in the year of execution to the levels of the original budget is a primary benefit of the NWCF. This benefit, however, can only be realized when sufficient cash balances are maintained throughout each cycle to absorb the impact of cost volatility and any unanticipated changes in customer workload. Both the increasing upper operational range and NWCF cash balance, as depicted below, are temporarily elevated to allow the DON to address the long lead nature of parts associated with fleet operations and aviation readiness recovery efforts.

(Dollars in Millions)	**FY 2017**	**FY 2018**	**FY 2019**
Treasury Cash			
Beginning Cash Balance	**1,419.8**	**2,270.7**	**2,857.9**
Collections	28,906.0	29,975.1	30,333.2
Disbursements	28,082.9	29,433.8	30,363.4
Consumable Item Transfer	27.9	45.8	6.0
Ending Cash Balance	**2,270.7**	**2,857.9**	**2,833.6**
Upper Operational Range	**2,200.0**	**2,900.0**	**2,900.0**
Lower Operational Range	**1,257.8**	**1,760.0**	**1,602.0**

Customer Rate Changes: Approved composite rate changes from FY 2016 to FY 2017 and from FY 2017 to FY 2018 are displayed below. Composite rate changes from FY 2018 to FY 2019, designed to achieve an Accumulated Operating Result of zero, are also displayed as follows:

(Percent Change)	FY 2017	FY 2018	FY 2019
Customer Rate Change			
Supply			
Navy - Aviation Consumables	3.9%	-0.4%	-11.7%
Navy - Shipboard Consumables	2.7%	-0.3%	1.1%
Navy - Aviation Repairables	5.6%	1.2%	-0.3%
Navy - Shipboard Repairables	2.7%	-0.3%	1.1%
MARCORPS Consumables/Repairables	-3.9%	-2.3%	-9.5%
Depot Maintenance - Aircraft	26.4%	-10.3%	7.4%
Depot Maintenance - Marine Corps	4.0%	-0.9%	8.1%
R&D - Air Warfare Center	3.2%	2.7%	0.9%
R&D - Surface Warfare Center	3.2%	1.4%	0.8%
R&D - Undersea Warfare Center	0.9%	3.8%	1.5%
R&D - SPAWAR Systems Center	1.0%	3.8%	1.3%
R&D - Naval Research Laboratory	0.5%	4.8%	0.1%
Transportation - MSC			
Combat Logistics Force	-3.4%	-4.0%	9.1%
Special Mission Ships	-4.3%	-3.8%	12.4%
Afloat Prepositioning Ships	77.4%	-44.9%	2.1%
Service Support Ships	-28.0%	-18.5%	11.0%
Expeditionary Fast Transport	-30.0%	N/A	N/A
Base Support - FECs			
East Coast Utilities	-0.4%	-7.2%	1.5%
East Coast - Other	5.1%	5.3%	-3.4%
West Coast Utilities	-11.3%	3.4%	-5.1%
West Coast - Other	-6.3%	4.8%	-0.7%
Base Support - EXWC	7.1%	-1.5%	-7.4%

Unit Cost: Unit Cost is the method established to authorize and control costs. Unit cost goals allow activities to respond to workload changes in execution by encouraging reduced costs when workload declines and allowing appropriate increases in costs when their customers request additional services.

	FY 2017	FY 2018	FY 2019
Unit Cost			
Supply - Navy (cost per unit of sales[1]):			
Wholesale	$1.129	$1.346	$1.246
Retail	$0.906	$1.001	$1.001
Supply - Marine Corps (cost per unit of sales[1]):			
Wholesale	$0.622	$0.915	$1.023
Retail	-$0.437	$0.999	$1.000
Depot Maintenance - Aircraft ($/Direct Labor Hour)	$205.98	$202.71	$198.54
Depot Maintenance - Marine Corps ($/Direct Labor Hour)	$128.47	$140.31	$145.69
R&D - Air Warfare Center ($/Direct Labor Hour[2])	$105.62	$112.38	$114.00
R&D - Surface Warfare Center ($/Direct Labor Hour[2])	$105.46	$108.89	$108.19
R&D - Undersea Warfare Center ($/Direct Labor Hour[2])	$101.41	$109.18	$106.89
R&D - SPAWAR Systems Center ($/Direct Labor Hour[2])	$111.87	$114.67	$115.41
R&D - Naval Research Laboratory ($/Direct Labor Hour[2])	$155.76	$162.60	$162.17
Transportation - MSC			
Combat Logistics Force ($/day)	$123,147	$124,165	$129,851
Special Mission Ships ($/day)	$48,920	$39,001	$39,660
Afloat Prepositioning Ships ($/day)	$61,343	$65,953	$63,900
Service Support Ships ($/day)	$94,654	$72,233	$70,815
Expeditionary Fast Transport	$57,394	N/A	N/A
Base Support - FECs Cost of Services	Various	Various	Various
Base Support - EXWC ($/direct Labor Hour[2])	$118.72	$116.18	$116.20

[1] *excludes inventory augmentation and war reserve material obligations*

[2] *includes direct labor plus overhead costs*

Staffing: Total civilian and military personnel employed at NWCF activities are displayed in the following tables.

(Strength in Whole Numbers)	**FY 2017**	**FY 2018**	**FY 2019**
Civilian End Strength			
Supply - Navy	6,929	7,104	7,197
Supply - Marine Corps	21	26	26
Depot Maintenance - Aircraft	10,106	10,187	10,211
Depot Maintenance - Marine Corps	1,362	1,365	1,365
R&D - Air Warfare Center	15,543	15,521	15,487
R&D - Surface Warfare Center	18,796	18,907	18,907
R&D - Undersea Warfare Center	5,430	5,413	5,413
R&D - SPAWAR Systems Center	8,532	8,694	8,694
R&D - Naval Research Laboratory	2,542	2,523	2,523
Transportation - MSC	6,773	6,676	6,675
Base Support - FECs	9,564	9,506	9,506
Base Support - EXWC	416	403	403
Total	**86,014**	**86,325**	**86,407**

(Workyears in Whole Numbers)	**FY 2017**	**FY 2018**	**FY 2019**
Civilian Workyears			
Supply - Navy	6,939	7,099	7,192
Supply - Marine Corps	21	22	22
Depot Maintenance - Aircraft	10,086	10,131	10,131
Depot Maintenance - Marine Corps	1,394	1,357	1,357
R&D - Air Warfare Center	15,177	15,245	15,222
R&D - Surface Warfare Center	18,225	18,256	18,256
R&D - Undersea Warfare Center	5,243	5,259	5,259
R&D - SPAWAR Systems Center	8,306	8,545	8,555
R&D - Naval Research Laboratory	2,467	2,478	2,478
Transportation - MSC	9,276	8,709	8,662
Base Support - FECs	9,474	9,449	9,451
Base Support - EXWC	402	398	398
Total	**87,010**	**86,948**	**86,983**

(Strength in Whole Numbers)	FY 2017	FY 2018	FY 2019
Military End Strength			
Supply - Navy	364	364	364
Supply - Marine Corps	0	0	0
Depot Maintenance - Aircraft	122	129	130
Depot Maintenance - Marine Corps	11	11	11
R&D - Air Warfare Center	192	191	187
R&D - Surface Warfare Center	203	190	168
R&D - Undersea Warfare Center	50	44	44
R&D - SPAWAR Systems Center	82	80	79
R&D - Naval Research Laboratory	59	58	60
Transportation - MSC	159	165	165
Base Support - FECs	80	78	78
Base Support - EXWC	3	3	3
Total	**1,325**	**1,313**	**1,289**

(Workyears in Whole Numbers)	FY 2017	FY 2018	FY 2019
Military Workyears			
Supply - Navy	364	364	364
Supply - Marine Corps	0	0	0
Depot Maintenance - Aircraft	122	129	130
Depot Maintenance - Marine Corps	11	11	11
R&D - Air Warfare Center	159	166	160
R&D - Surface Warfare Center	189	189	169
R&D - Undersea Warfare Center	24	32	32
R&D - SPAWAR Systems Center	74	80	79
R&D - Naval Research Laboratory	60	58	60
Transportation - MSC	158	165	165
Base Support - FECs	78	78	78
Base Support - EXWC	3	3	3
Total	**1,242**	**1,275**	**1,251**

Capital Investment Program (CIP): The Capital Investment Program (CIP) within the NWCF provides for the reinvestment in the infrastructure of NWCF business areas to improve product and service quality and timeliness, reduce costs, and foster state-of-the-art business operations. The CIP is used to purchase new or replace older, wornout or obsolete equipment, including: Automated Data Processing Equipment (ADPE); non-ADPE equipment; Automated Data Processing Software, whether internally or externally developed. In addition the CIP program provides funding for Minor Construction projects. The capital budget justifies the purchase of assets with a unit cost that is greater than or equal to $250,000 and have a useful life of two or more years.

The table below shows a summary of the NWCF CIP budget. Deferred CIP of $112.7 million shifted from FY 2017 to FY 2018, artificially inflating FY 2018. FY 2019 returns to levels aligned with historical averages.

(Dollars in Millions)	**FY 2017**	**FY 2018**	**FY 2019**	**Chg FY 18/19**
Capital Investment Program				
Supply - Navy	7.3	8.2	8.3	0.1
Supply - Marine Corps	0.0	0.0	0.0	0.0
Depot Maintenance - Aircraft	43.1	45.1	43.4	(1.7)
Depot Maintenance - Marine Corps	4.7	5.7	10.2	4.5
R&D - Air Warfare Center	50.0	52.9	48.4	(4.6)
R&D - Surface Warfare Center	34.4	61.8	42.7	(19.0)
R&D - Undersea Warfare Center	15.3	18.5	17.3	(1.2)
R&D - SPAWAR Systems Center	10.5	20.1	13.2	(6.9)
R&D - Naval Research Laboratory	13.5	37.4	27.7	(9.7)
Transportation - MSC	7.5	10.2	5.2	(5.0)
Base Support - FECs	12.0	18.7	23.2	4.6
Base Support - EXWC	0.0	0.0	1.4	1.4
Total	**198.4**	**278.7**	**241.1**	**(37.6)**

1. Fleet Readiness Centers

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NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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Mission Statement / Overview:

The Fleet Readiness Centers (FRCs) provide responsive worldwide maintenance, engineering, and logistics support to the Naval Aviation Enterprise (NAE). The FRCs ensure a core industrial resource base essential for mobilization, repair of aircraft, engines, and components, and manufacture of parts and assemblies. The FRCs provide engineering services in the development of hardware design changes, and furnish technical and professional services on maintenance and logistics problems. Work completed at the FRCs ensure deployed and next-to-deploy units have the battle-ready items they need to train, fight, and win today while supporting the force to win tomorrow.

Activity Group Composition:

Activities	Location
FRC, EAST	Cherry Point, NC
FRC, SOUTHEAST	Jacksonville, FL
FRC, SOUTHWEST	San Diego, CA

Significant Changes Since the FY 2018 President's Budget:

The budget estimate for FY 2019 reflects updates from the President's Budget submission to account for changes to the Net Operating Results (NOR) projections, and the latest customer workload demand. The changes are primarily a result of additional costs related to work on prior year aircraft. Additionally, component workload standards have been updated in this submission to more accurately reflect the increased cost required to perform depot maintenance events. Included in FY 2019 is a Wage Grade increase at FRC Southwest to bring the pay scale for certain critical positions more in line with industry and local standards.

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Financial Profile:

Orders/Revenue/Expense/Operating Results ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Orders	$2,294.0	$2,510.4	$2,492.1
Revenue	$2,207.7	$2,385.8	$2,543.2
Expense	$2,233.4	$2,347.7	$2,290.7
Operating Results	($25.8)	$38.1	$252.5
Capital Surcharge	($11.9)	$0.0	$0.0
Net Operating Results (NOR)	($37.7)	$38.1	$252.5
Prior Year AOR	($253.0)	($290.6)	($252.5)
Accumulated Operating Results (AOR)	($290.6)	($252.5)	($0.0)

Some totals may not add due to rounding.

Orders, Revenue, Expense and NOR:
In order to achieve the goal of zero AOR in FY 2019, estimates have been updated from the FY 2018 President's Budget to reflect all known pricing and workload assumptions.

Orders - New reimbursable orders increase in FY 2018 due to changes in workload standards for components and increased orders in Airframes (FA-18, H-1, H-60, V-22, and ISR), Navy Stock Fund (NSF) Components, and Product Support. FY 2019 reflects the impact of the prior year AOR recoupment and changes in Airframes (FA-18, H-1, H-60 and V-22) and Components.

Revenue - Revenue for FY 2017, FY 2018, and FY 2019 is consistent with updated estimates of new Reimbursable Orders and Direct Labor Hour projections.

Expense (Cost of Goods & Services Sold) - Cost of Goods and Services Sold for FY 2017, FY 2018, and FY 2019 includes expenses related to additional workyears required for customer demand.

NOR - FY 2017 NOR has a negative variance to plan due to additional costs related to work on prior year aircraft. FY 2018 and FY 2019 NOR is set to recoup prior year losses and to achieve zero AOR.

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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Collections/Disbursements/Outlays ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Collections	$2,194.4	$2,360.8	$2,528.6
Disbursements	$2,178.8	$2,328.5	$2,271.8
Outlays	($15.6)	($32.3)	($256.8)

Some totals may not add due to rounding.

Negative Cash balances in FY 2017 and FY 2018 are a result of incurring operating losses on prior year aircraft and component workload. Current Net Outlay projections reflect workload changes and updated operating estimates to achieve a positive Cash balance in FY 2019. Increased Revenue in FY 2019 to recoup prior year losses and achieve zero AOR will bring the estimated end of fiscal year Cash balance to $116.3M.

Workload:

Direct Labor Hours (000):	**FY 2017**	**FY 2018**	**FY 2019**
Current Estimate	10,843	11,582	11,538

Direct Labor Hours:
Direct labor hours increase in FY 2018, consistent with anticipated new orders and remain relatively flat in FY 2019. Both FY 2017 and FY 2018 reflect an increase in Direct Labor Hours from the FY 2018 President's Budget.

Performance Indicators:
The primary performance indicator is Unit Cost, which represents the average cost of delivering goods and services to our customers.

Unit Cost:	**FY 2017**	**FY 2018**	**FY 2019**
Total Stabilized Cost ($Millions)	$2,233.4	$2,347.7	$2,290.7
Workload (DLHs) (000)	10,843	11,582	11,538
Unit cost (per DLH)	$205.98	$202.71	$198.54

Unit Cost is the method established to authorize and control costs. Unit cost goals allow activities to respond to workload changes in execution by encouraging reduced costs when workload declines and allowing appropriate increases in costs when customers request additional services. The Unit Cost reflects the level of personnel costs required to meet throughput.

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Stabilized / Composite Rates:	**FY 2017**	**FY 2018**	**FY 2019**
Stabilized Rate (Composite)	$236.55	$212.20	$227.83
Change from Prior Year		($24.35)	$15.63
Composite Rate Change		-10.29%	7.37%

Stabilized Rates consist of direct and indirect labor and applied overhead. Unique direct non-labor costs are billed on a reimbursable basis to the customer. The composite revenue rate charged to customers incorporates both the stabilized costs and the reimbursable costs. The FY 2019 composite hourly rate reflects an increase of $15.63 from FY 2018. The increase is primarily attributable to prior year AOR recoupment related to unplanned costs associated with repair of prior year aircraft and components, and the FRC Southwest Wage Grade increase.

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Summary of Workload Indicators: (Inducted Units)	**FY 2017**	**FY 2018**	**FY 2019**
AIRFRAMES	**386**	**441**	**451**
O&M,N	346	390	407
O&M,NR	14	23	18
RDT&E	8	10	8
Other	18	18	18
ENGINES	**1,438**	**1,583**	**1,478**
O&M,N	1,355	1,498	1,391
O&M,NR	23	16	14
RDT&E	9	9	13
Other	51	60	60
COMPONENTS			
Working Capital Fund (NSF)	37,904	38,170	38,170

Performance Indicators:	**FY 2017**	**FY 2018**	**FY 2019**
Aircraft Completed	425	453	419
Aircraft Completed on Time	383	408	377
% Scheduled Work Completed on Time	90.0%	90.0%	90.0%
Engines Completed	1,560	1,609	1,557
Engines Completed on Time	1,404	1,448	1,401
% Scheduled Work Completed on Time	90.0%	90.0%	90.0%
Components Completed	25,212	32,444	32,444
Components Completed on Time	23,951	30,822	30,822
% Scheduled Work Completed on Time	95.0%	95.0%	95.0%
Inventory Turnover Ratio	2.6%	2.7%	2.6%

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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Staffing:

Civilian/Military ES & Workyears:	**FY 2017**	**FY 2018**	**FY 2019**
Civilian End Strength	10,106	10,187	10,211
Civilian Workyears (straight time)	10,086	10,131	10,131
Military End Strength	122	129	130
Military Workyears	122	129	130

Civilian Personnel:
Civilian personnel staffing is sized to meet anticipated workload from customers.

Military Personnel:
The military personnel profile increases from FY 2017 to FY 2018 due to increased sailor integration into depot level maintenance for enhanced skill level exposure and training.

Capital Investment Program (CIP):
The Capital Investment Program assists the FRCs in achieving their mission by reinvesting in plant equipment and facilities. Included in the capital budget are the following types of assets: automated data processing equipment (ADPE); non-ADPE equipment; automated data processing software, internally or externally developed; and minor construction. Due to the age and current state of FRC facilities and equipment, the FRCs will need to exceed the Department of the Navy's minimum 6% Depot Capital Investment target in the future.

CIP Authority ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Equipment, Non-ADP / Telecom	$30.1	$26.5	$33.3
Equipment, ADPE / Telecom	$9.4	$11.8	$9.1
Software Development	$0.0	$0.0	$0.0
Minor Construction	$3.5	$6.3	$1.1
Total	$43.1	$44.6	$43.4

Some totals may not add due to rounding.

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Depot Maintenance Carryover:

Carryover Compliance: (Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Net Carry-In	$903.2	$989.6	$1,114.2
Allowable Carryover	$903.9	$1,004.3	$1,029.9
Calculated Actual Carryover	$863.5	$981.7	$932.8
Delta (Actual-Allowable): Above Ceiling (+)/Below Ceiling (-)	($40.4)	($22.7)	($97.1)

Some totals may not add due to rounding.

FY 2017 Carryover was under the allowable ceiling. FY 2018 and FY 2019 Carryover is also projected to be under the allowable ceiling.

Carryover growth is primarily due to F/A-18 and Components workload. Carryover growth for Components workload reflects changes driven mainly by an increase to the Component Unit Price, and unavailability of material required to complete the repair. On average, approximately 800 components are delayed over 365 days due to material delay, with an average value of approximately $25M. These components have an overall repair time of greater than 24 months. Carryover growth related to F/A-18 is primarily due to ongoing life extensions to meet Fleet TacAir inventory requirements. Turn Around Time (TAT) for FA-18 events is driven by numerous factors, including significant variability in material condition from one aircraft to the next, which directly relates to Over & Above findings that must be analyzed and repaired. This additional analysis and repair increases TAT. The average TAT for a Planned Maintenance Interval 1 (PMI1) event is 623 days, and the average TAT for a high flight hour (HFH)/PMI1 event is 717 days. These event durations include scheduled depot work, HFH inspections/repairs, and required modifications. Due to the material delays for components and the extended duration of FA-18 events, intended carryover at the Fleet Readiness Centers is required to complete this critical workload.

REVENUE AND EXPENSES
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Revenue:			
Gross Sales			
Operations	2,163.4	2,347.6	2,499.6
Capital Surcharges	11.9	0.0	0.0
Capital Investment Recovery	32.4	38.2	43.6
Other Income			
Total Income	2,207.7	2,385.8	2,543.2
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	10.6	10.9	11.4
Civilian Personnel Compensation & Benefits	995.8	1,001.3	1,026.6
Travel and Transportation of Personnel	16.6	21.0	17.5
Material & Supplies (Internal Operations)	537.7	604.0	583.5
Equipment	273.0	302.5	303.7
Other Purchases from NWCF	17.7	18.9	16.3
Transportation of Things	3.7	3.8	2.7
Capital Investment Recovery	32.4	38.2	43.6
Printing and Reproduction	1.1	1.3	1.4
Advisory and Assistance Services	0.3	0.0	0.0
Rent, Communication, Utilities & Misc Charges	44.7	43.8	38.2
Other Purchased Services	302.0	303.1	247.7
Total Expenses	2,235.5	2,348.8	2,292.5
Work in Process Adjustment	-2.0	-1.2	-1.8
Comp Work for Activity Retention Adjustment	-0.1	0.0	0.0
Cost of Goods Sold	2,233.4	2,347.7	2,290.7
Operating Result	-25.8	38.1	252.5
Adjustments Affecting NOR	-11.9	0.0	0.0
Capital Surcharges	-11.9	0.0	0.0
Extraordinary Expenses Unmatched	0.0	0.0	0.0
Other Changes Affecting NOR (All Others)	0.0	0.0	0.0
Net Operating Result	-37.7	38.1	252.5
PY AOR	-253.0	-290.6	-252.5
TOTAL AOR	-290.6	-252.5	0.0
Non-Recoverable Adjustments impacting AOR	0.0	0.0	0.0
AOR for budget purposes	-290.6	-252.5	0.0

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
1. New Orders	2,294.0	2,510.4	2,492.1
a. Orders from DoD Components:	1,557.6	1,688.6	1,647.0
Department of the Navy	1,462.4	1,600.4	1,555.7
O & M, Navy	1,122.1	1,212.3	1,158.3
O & M, Marine Corps	3.9	4.4	4.6
O & M, Navy Reserve	29.1	31.4	40.4
O & M, Marine Corp Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	259.5	307.6	312.3
Weapons Procurement, Navy	0.0	0.0	0.0
Ammunition Procurement, Navy/MC	1.4	1.0	1.1
Shipbuilding & Conversion, Navy	6.3	1.2	2.8
Other Procurement, Navy	5.1	6.3	8.1
Procurement, Marine Corps	0.4	0.3	0.0
Family Housing, Navy/MC	0.0	0.0	0.0
Research, Dev., Test, & Eval., Navy	34.7	36.1	28.2
Military Construction, Navy	0.0	0.0	0.0
National Defense Sealift Fund	0.0	0.0	0.0
Other Navy Appropriations	0.0	0.0	0.0
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	5.2	2.4	2.5
Army Operation & Maintenance	2.1	1.0	1.0
Army Res, Dev, Test, Eval	0.0	0.0	0.0
Army Procurement	3.2	1.4	1.6
Army Other	0.0	0.0	0.0
Department of the Air Force	86.0	84.7	87.5
Air Force Operation & Maintenance	79.0	80.2	83.0
Air Force Res, Dev, Test, Eval	0.8	0.1	0.1
Air Force Procurement	6.3	4.3	4.4
Air Force Other	0.0	0.0	0.0
DOD Appropriation Accounts	4.0	1.2	1.3
Base Closure & Realignment	0.0	0.0	0.0
Operation & Maintenance Accounts	3.6	0.1	0.1
Res, Dev, Test & Eval Accounts	0.1	0.0	0.0
Procurement Accounts	0.3	1.1	1.1
Defense Emergency Relief Fund	0.0	0.0	0.0
DOD Other	0.0	0.0	0.0
b. Orders from other Fund Activity Groups	598.6	682.6	726.9
c. Total DoD	2,156.1	2,371.2	2,373.9
d. Other Orders:	137.9	139.2	118.1
Other Federal Agencies	8.0	4.7	5.2
Foreign Military Sales	39.5	33.4	32.3
Non Federal Agencies	90.4	101.1	80.7
2. Carry-In Orders	902.2	988.6	1,113.2
3. Total Gross Orders	3,196.3	3,499.0	3,605.3
a. Funded Carry-Over before Exclusions	988.6	1,113.2	1,062.1
4. Revenue(-)	2,207.7	2,385.8	2,543.2
5. End of Year Work-In-Process (-)	29.8	30.0	31.8
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	96.2	102.6	98.5
7. Funded Carryover	863.5	981.7	932.8

Note: Line 5 (End of Year Work-In-Process) is adjusted for Non-DOD BRAC, FMS, and Institutional MRTFB

CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	Costs
FY 2017 Actuals	**2,233.4**
FY 2018 President's Budget:	**2,280.6**
Estimated Impact in FY 2018 of Actual FY 2017 Experience:	**0.0**
Pricing Adjustments:	**-1.1**
General Purchase Inflation	-1.1
Program Changes:	**70.7**
Airframes work *(FA-18, Trainer, H-60, H-1 & V-22)*	42.0
Engines work	-11.0
Components work *(NSF)*	20.3
Other Support work	7.5
Modification work	-19.1
Product Support work *(FA-18, E-2, C-2 & P-8A)*	30.9
Other Changes:	**-2.6**
Capital Investment Recovery	0.5
Facilities Sustainment, Restoration & Modernization	-5.5
General Materials & Supplies	3.2
General Equipment Maintenance	-2.2
General Training	1.5
FY 2018 Current Estimate:	**2,347.7**

CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	Costs
FY 2018 Current Estimate:	**2,347.7**
Pricing Adjustments:	**9.0**
Annualization of Prior Year Pay Raises	**6.0**
Civilian Personnel	6.0
Military Personnel	0.1
FY 2019 Pay Raise	**0.2**
Civilian Personnel	0.0
Military Personnel	0.2
Fuel Price Changes	0.0
General Purchase Inflation	2.9
Productivity Initiatives and Other Efficiencies:	**0.0**
Program Changes:	**-58.3**
Airframes work *(FA-18, Trainer, H-60, V-22 & AV-8)*	4.7
Engines work *(F402 & F414)*	-10.1
Components work *(NSF)*	-52.7
Other Support work	-3.7
Modification work	3.1
Product Support work	0.4
Other Changes:	**-7.7**
Capital Investment Recovery	5.4
Facilities Sustainment, Restoration & Modernization	-7.5
General Materials & Supplies	-3.0
General Equipment Maintenance	-1.7
General Training	-1.0
FY 2019 Estimate:	**2,290.7**

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CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

		FY 2017		FY 2018		FY 2019	
Line #	Description	Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	**Non-ADPE and Telecom Equipment >= $.250M**	**25**	**$30.102**	**23**	**$26.501**	**16**	**$33.250**
	- Vehicles	0	$0.000	0	$0.000	0	$0.000
	- Material Handling	0	$0.000	0	$0.000	0	$0.000
	- Installation Security	0	$0.000	0	$0.000	0	$0.000
	- Quality Control/Testing	5	$4.784	7	$3.982	2	$4.500
	- Medical Equipment	0	$0.000	0	$0.000	0	$0.000
	- Machinery	11	$13.378	6	$13.496	2	$5.800
	- Support Equipment	9	$11.940	10	$9.023	12	$22.950
2	**ADPE and Telecom Equipment >= $.250M**	**7**	**$9.430**	**14**	**$11.791**	**5**	**$9.080**
	- Computer Hardware (Production)	2	$0.969	5	$1.606	3	$5.805
	- Computer Hardware (Network)	4	$6.961	7	$8.625	2	$3.275
	- Computer Software (Operating)	0	$0.000	1	$0.970	0	$0.000
	- Telecommunications	1	$1.500	1	$0.590	0	$0.000
	- Other Support Equipment	0	$0.000	0	$0.000	0	$0.000
3	**Software Development >= $.250M**	**0**	**$0.000**	**0**	**$0.000**	**0**	**$0.000**
	- Internally Developed	0	$0.000	0	$0.000	0	$0.000
	- Externally Developed	0	$0.000	0	$0.000	0	$0.000
4	**Minor Construction (>= $.250M and <= $1.000M)**	**10**	**$3.526**	**12**	**$6.296**	**2**	**$1.100**
	- Replacement Capability	9	$3.327	11	$5.296	2	$1.100
	- New Construction	1	$0.199	1	$1.000	0	$0.000
	- Environmental Capability	0	$0.000	0	$0.000	0	$0.000
	Grand Total	**42**	**$43.058**	**49**	**$44.588**	**23**	**$43.430**
	Total Capital Outlays		**$36.523**		**$39.443**		**$40.500**
	Total Capital Investment Recovery Expense		**$32.357**		**$38.190**		**$43.582**

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
#001 - Non-ADPE	#001 - Non-ADPE						Fleet Readiness Centers		
	FY 2017			FY 2018			FY 2019		
Non-ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	0	-	$0	0	-	$0	0	-	$0
Material Handling	0	-	$0	0	-	$0	0	-	$0
Installation Security	0	-	$0	0	-	$0	0	-	$0
Quality Control/ Testing	5	957	$4,784	7	569	$3,982	2	2,250	$4,500
Medical Equipment	0	-	$0	0	-	$0	0	-	$0
Machinery	11	1,216	$13,378	6	2,249	$13,496	2	2,900	$5,800
Support Equipment	9	1,327	$11,940	10	902	$9,023	12	1,913	$22,950
Total	25	1,204	$30,102	23	1,152	$26,501	16	2,078	$33,250

Justification:

As the Department of the Navy's provider of depot level maintenance, repair, overhaul, & upgrades for aircraft, the Fleet Readiness Centers (FRCs) depend heavily on the acquisition of capital assets through the Capital Investment Program (CIP) to accomplish its mission. CIP satisfies long range planning, programming objectives, and documented needs for capability to perform operational functions that cannot be performed as effectively or economically by the use of existing infrastructure, equipment, and/or facilities essential to accomplish mission requirements.

The acquisition of capital assets efficiently and effectively accomplishes the objective for which it is justified which are improved efficiency or effectiveness of operations; replacement of potentially unsafe, beyond economical repair, or inoperative and unusable assets; and environmental, hazardous waste reduction, or regulatory agency (state, local, or Federal) mandated requirements. Alternatives were considered for each project, but procurement is the most cost effective for the government.

Examples of Quality Control/Testing purchases includes inspection equipment, test stands, and a test cell:

Non-Destructive Testing (NDT) - 176 Automated Eddy Current System
This project will replace the NDT-176 Automated Eddy Current Systems, EIN 65923078177 and EIN 65923035274. The existing equipment is over 18 years old and is used to detect discontinuities and defects in critical components such as rotating engine parts. Current platforms are T-64, T-58, and F-402 engines. Examples of specific components include T-64 disks, spaces, rear air seals and cooling plates, and T-58 disks and seals. Axis controllers, tooling and operating software are obsolete. Component repairs are no longer supported by third party repair facilities. The existing facilities will be used

Replace Rotor Blade X-Ray
This project will replace the existing X-ray Radiography Inspection equipment in Shop 93668, Nondestructive Test & Inspection Shop, in Building 4275. The current X-Ray system became operational in 2004 and has exceeded its useful life. This equipment will allow the artisans to detect inconsistent cracks and irregularities that lie beneath the visible surface of parts with greater accuracy. A new real–time imaging system will allow for faster image processing and automatic control of the inspection gantry for similar components. Images can be stored using less space and can be electronically transmitted to others. The "Teach-In" control interface will allow for consistent and faster inspections due to

programmable contour integration. The stored process can be repeated such that component inspection is consistent regardless of which operator is using the system. It would be too costly and logistically inefficient to send this workload to another location. If this equipment is not replaced, the existing equipment will fail, and the FRC will not be able to process main and tail rotor blades for H-1, V-22, H-53 and H-60 platforms.

Examples of Machinery purchases include mills, lathes, presses, and Computer Numerical Control (CNC):

Replace Lathe-Grinders
The purpose of this project is to replace (3) aging vertical lathe-grinding machines with (2) new units. The new machines will modernize the shop to accommodate more complicated aircraft engine parts and will include current OSHA guarding. The existing machines are becoming less reliable and are unable to machine parts to the required tolerances. Part processing time has increased as the operator corrects for the increasing machine wear. The proposed units will be able to machine and measure parts to the required tolerances. They will also simplify fixturing, thus reducing set-up time. The existing machines will be 18 years old when the new machines are slated for replacement, while the useful life of the existing machines is 10 years. If not replaced, operator compensations for machine wear will continue to increase, and parts will begin to be scrapped. Although alternatives have been contemplated, the best course of action has been determined to be replacement.

Fluid Press
This project will replace the Fluid Press Machine located in Shop 93533, Component Manufacture, Weld, and Repair Shop, in Building 137. This machine currently supports sheet metal forming workload from aircraft platforms such as the AV-8, H-53, H-46, H-1 and V-22. This machine has exceeded its useful life by 7 years and needs to be replaced. This machine goes down frequently and stays down for long periods of time. The new machine will provide technological improvements, have less frequent maintenance requirements, and will use embedded computer hardware/software that will increase speed and accuracy for storage and retrieval of part programs. If this machine is not procured, the production shop will be unable to meet current and future sheet metal forming workload requirements for all aircraft platforms. Alternatives have been considered including forwarding workload to Warner Robins Air Force Base and other FRCs, but due to turnaround time and limited capability, it is not economically advantageous. Replacement of this machine is the most cost effective solution for the government.

Examples of Support Equipment purchases include test stands and booths:

Heat Treat Process
This project is to replace the existing Drop Bottom Furnace located in Building 472 with a system that meets the latest environmental regulations, decreases energy costs, reduces process and ancillary costs as well as decreases the need to re-produce parts. The new furnace will support the Aluminum process for the LM2500, FA-18, E2-C2, and components. The deficiency addressed by the project is the elimination of manual hoisting of materials from the Salt Bath process (922 Fahrenheit) to the quench tank (filled with cold water). This process creates distorted parts and is dangerous to the artisan due to the high temperatures and existing equipment in place. There is the potential for a fire within the system, increase in delays and timetables, and an increase in the amount of work to be contracted out. The performance improvements will be a decrease in distorted and warped parts, provide ceramic insulation, and a decrease in the quenching time through an automated loading and quenching system. It will meet the BAC5621, BAC5602, GAMPS5108, AMS2750 AND AMS2770 J Class II Furnace regulations. Impact if not replaced is the heightened chance of personnel injury and increased part distortion. Alternatives have been considered, but replacement is the most cost effective for the government.

FA-18 Alignment Fixture
This project will procure an alignment fixture for re-assembly and repair of FA-18 E/F/G aircraft. The deficiency addressed by the project is that there are not enough fixtures to support the program. There is only one fixture to support the FA-18 E/F/G. The impact if not provided is an increase in delivery times due to excessive processing time caused by obsolete methods, resulting in increased turn around time. As a result, aircraft will have to wait on repairs until the only fixture is available for use. The improvements are that the fixture is custom designed to fit the FA-18 E/F/G. Existing fixtures for the FA-18 do not conform with the E/F/G design, body, or weight of the aircraft. Alternatives have been considered, but procurement is the most cost effective for the government.

Test Stand, A-6, SRA, FA-18 E/F

The purpose of this project is to procure a new Test Bench to replace the existing antiquated unit used to conduct testing of A-6 subcomponents to the Generator Converter Unit (GCU) for the FA-18 platform. The FRC has the only modified/customized test stand with this capability in the fleet. The new test stand would meet the fleet demand, reduce process and ancillary costs for the program. The current test stand is beyond it's useful life, even though maintenance performs regular preventive maintenance and is building new cables to ensure the test stand remains operational. The technology, wiring, and overall hardware is rapidly becoming non-operational. Impact if not procured include backorders that will continue to increase within the fleet, cause additional delays to other departments, work stoppages, and put the FA-18 E/F aircraft in jeopardy. Alternatives have been considered, but procurement is the most cost effective for the government.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
#002 - ADPE	#002 - ADPE						Fleet Readiness Centers		
	FY 2017			FY 2018			FY 2019		
ADPE and Telecom Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	2	485	$969	5	321	$1,606	3	1,935	$5,805
Computer Hardware (Network)	4	1,740	$6,961	7	1,232	$8,625	2	1,638	$3,275
Computer Software (Operating)	0	-	$0	1	970	$970	0	-	$0
Telecommunications	1	1,500	$1,500	1	590	$590	0	-	$0
Other Support Equipment	0	-	$0	0	-	$0	0	-	$0
Total	7	1,347	$9,430	14	842	$11,791	5	1,816	$9,080

Justification:

As the Department of the Navy's provider of depot level maintenance, repair, overhaul, & upgrades for aircraft, the Fleet Readiness Centers (FRCs) depend heavily on the acquisition of capital assets through Capital Investment Program to accomplish its mission. CIP satisfies long range planning, programming objectives, and documented needs for capability to perform operational functions that cannot be performed as effectively or economically by the use of existing infrastructure, equipment, and/or facilities essential to accomplish mission requirements.

The acquisition of the capital assets efficiently and effectively accomplishes the objective for which it is justified which are; improved efficiency or effectiveness of operations, beyond economical repair, or inoperative and unusable assets, or regulatory agency (state, local, or Federal) mandated requirements. Requested computer hardware, software, and networks will update and connect current systems to ensure IA (Information Assurance) compliance. For each project alternatives were considered, but the procurement is the most cost effective for the government.

An example of Computer Hardware (Network) includes the Industrial Connectivity project.

Industrial Connectivity
This project will provide RDT&E Network Connectivity to various areas throughout the facilities. These areas include but are not limited to: Engine Test Cells, Hydraulics Test Cells, Components Test Cells, Auxiliary Power Unit Test Cells, Gearbox Test Cells, Autoclave Controllers, Non Destructive Inspection and Vibration Equipment, Composite Shop and various legacy aircraft platforms. These areas are currently operating with non-IA (Information Assurance) compliant standalone and legacy computers which cannot be replenished/kept up to date and cannot communicate with those that need data from them. These areas will continue to operate in a non-IA compliant environment which is inefficient and cannot be updated with new hardware and software. By providing a network, it will bring them into IA compliance, upgrade their hardware and software, and increase efficiencies. Alternatives have been considered, but procurement is the most cost effective for the government.

An example of Telecommunications includes the Main Telephone Switch project.

Main Telephone Switch
This project will replace the main telecommunications switch, ancillary switches at 4470 and East Plaza and respective voicemail capability. The current system was procured in the 1990's and was upgraded in 2006 and 2007. The current voicemail system is no longer Joint Interoperability Test Command (JITC) approved and must be replaced. New parts are no longer available and replacement parts must be remanufactured or refurbished. Since these systems support all of the FRC, immediate replacement is required to bring the switches, including hardware and software, into JITC compliance. Impact if not provided is a lack of telephone service for the command once the current equipment experiences critical failure. Alternatives have been considered, but replacement is the only option.

An example of Computer Hardware (Production) includes the Machine Health Monitoring project.

Machine Health Monitoring (MHM)
The MHM project will provide prognostic capability for industrial equipment across each FRC. This new capability will enable equipment functional prognostics to assess and report equipment condition, including component wear and failure prediction, to allow additional preventative maintenance. This capability will result in optimized equipment productivity and will increase equipment performance efficiency and product quality. The MHM project will address the existing ineffective and costly methodology of operating equipment until component wear or failure. Currently, component failure is usually determined by failure to meet product quality requirements. Corrective action is delayed until maintenance is programmed or until the equipment fails creating excessive down time and lack of availability of asset. When this occurs, it often results in excessive product delivery turn-around-time and cost increases. MHM will allow more equipment maintenance to be scheduled during normal down times.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
#004 - Minor Construction	#004 - Minor Construction						Fleet Readiness Centers		
	FY 2017			FY 2018			FY 2019		
Minor Construction	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement Capability	9	370	$3,327	11	481	$5,296	2	550	$1,100
New Construction	1	199	$199	1	1,000	$1,000	0	-	$0
Environmental Capability	0	-	$0	0	-	$0	0	-	$0
Total	10	353	$3,526	12	525	$6,296	2	550	$1,100

Justification:

As the Department of the Navy's provider of depot level maintenance, repair, overhaul, & upgrades for aircraft, the Fleet Readiness Centers (FRCs) depend heavily on the acquisition of capital assets through Capital Investment Program to accomplish its mission. CIP satisfies long range planning, programming objectives, and documented needs for capability to perform operational functions that cannot be performed as effectively or economically by the use of existing infrastructure and/or facilities essential to accomplish mission requirements. None of the projects in this budget exceed current MILCON thresholds.

Budgeted projects are for construction, expansion, or improvement of a complete and useable building, structure, or other real property.

Replacement Project Examples:

B101 FA-18 Wing Shop Storage
This project will provide FA-18 Wing Shop storage. This project will remove the inefficient and unsuitable storage area on the East side of Bldg 101 and replace it with a new, useful storage area. The current structures are in disrepair due to age and deterioration. The shop is now performing workload that was previously done in the FA-18 Aircraft Line Wing Shop, and that workload will increase with the Command's current FA-18 aircraft requirement. In order for the FA-18 Wing Shop to handle the influx of wings from the line, additional work cells need to be made. This project will open up space on the shop floor for more production cells by providing additional storage for fixtures, wings in queue/delay, and fixture details. The new storage space will double the storage capacity of the shop. If this project is not implemented, the shop will not be able to meet the scheduled delivery of wings due to a lack of work space.

B873 Engine Test Facility
This project will restore the Jet Engine Test Facility to its original operating loads and extend the usable life. Built in 1978, this building will be 40 years old near the time of renovation. It includes restoration of the exhaust (section/system), repair of concrete, monorails, and exterior stairs; replacement of deflector plates, roof, thrust bed hydraulics, and hoists. The supported workload of this facility was originally for testing of F414, J52, and TF34 engines with the original operating loads of 70,000 lbs horizontal thrust, 58,000 lbs vertical dead load, and 21,000 lbs vertical live load. Due to various circumstances, the test cell has since been de-rated to 35,000 lbs. of horizontal thrust. If not renovated, there will be an eventual loss of testing capability for F414 and TF34 programs, which will result in a single point of failure. As and additional benefit, FRC would maintain continued compliance with Title V of the Clean Air Act. Although alternatives have been considered, the best course of action has been determined to be this renovation.

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CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	**1**	**Non ADP**		**$41.002**	**$30.102**	**($10.900)**	
			Quality Control/Testing	$5.375	$4.784	($0.591)	2 new, 1 increase, 3 deferred
			Machinery	$22.319	$13.378	($8.941)	6 new, 2 increase, 2 decrease, 7 deferred, 3 cancelled
			Support Equipment	$13.308	$11.940	($1.368)	2 new, 2 increase, 1 deferred
	2	**ADP**		**$1.500**	**$9.430**	**$7.930**	
			Computer Hardware (Production)	$0.000	$0.969	$0.969	2 new
			Computer Hardware (Network)	$0.000	$6.961	$6.961	4 new
			Telecommunications	$1.500	$1.500	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
	4	**Minor Construction**		**$5.180**	**$3.526**	**($1.654)**	
			Replacement	$5.180	$3.327	($1.853)	5 new, 4 increase, 8 deferred, 1 cancelled
			New Construction	$0.000	$0.199	$0.199	1 new
TOTAL FY 2017 CIP Program				**$47.682**	**$43.058**	**($4.624)**	

FY	Line Item	Category	Capability/Project	Initial	Current Proj Cost	Approved Change	Explanation
2018	**1**	**Non ADP**		**$21.225**	**$26.501**	**$5.276**	
			Material Handling	$0.287	$0.000	($0.287)	1 cancelled
			Quality Control/Testing	$0.370	$3.982	$3.612	3 new, 2 increase
			Machinery	$14.569	$13.496	($1.073)	1 deferred
			Support Equipment	$5.999	$9.023	$3.024	5 new, 1 cancelled
	2	**ADP**		**$9.882**	**$11.791**	**$1.909**	
			Computer Hardware (Production)	$0.870	$1.606	$0.736	2 new, 1 decrease
			Computer Hardware (Network)	$7.452	$8.625	$1.173	2 new, 1 increase
			Computer Software (Operating)	$0.970	$0.970	$0.000	
			Telecommunications	$0.590	$0.590	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
	4	**Minor Construction**		**$6.600**	**$6.296**	**($0.304)**	
			Replacement	$5.600	$5.296	($0.304)	2 new, 1 cancelled
			New Construction	$1.000	$1.000	$0.000	1 new
TOTAL FY 2018 CIP Program				**$37.707**	**$44.588**	**$6.881**	

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2019	**1**	**Non ADP**		**$33.250**	**$33.250**	**$0.000**	
			Quality Control/Testing	$4.500	$4.500	$0.000	
			Machinery	$5.800	$5.800	$0.000	
			Support Equipment	$22.950	$22.950	$0.000	
	2	**ADP**		**$9.080**	**$9.080**	**$0.000**	
			Computer Hardware (Production)	$5.805	$5.805	$0.000	
			Computer Hardware (Network)	$3.275	$3.275	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
	4	**Minor Construction**		**$1.100**	**$1.100**	**$0.000**	
			Replacement	$1.100	$1.100	$0.000	
TOTAL FY 2019 CIP Program				**$43.430**	**$43.430**	**$0.000**	

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Part 1			
1. Net Carry-In	903.2	989.6	1,114.2
2. Revenue	2,207.7	2,385.8	2,543.2
3. New Orders	2,294.0	2,510.4	2,492.1
4. Exclusions:			
Foreign Military Sales	39.5	33.4	32.3
Base Realignment and Closure	0.0	0.0	0.0
Other Federal Department and Agencies	8.0	4.7	5.2
Non-Federal and Others	90.4	101.1	80.7
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
5. Orders for Carryover Calculation	2,156.1	2,371.2	2,373.9
6. Weighted Average Outlay Rate	63.8%	63.6%	63.5%
7. Carryover Rate	36.2%	36.4%	36.5%
8. Allowable Carryover	904.0	1,004.3	1,029.9
Allowable Carryover(First Year)	780.5	863.1	866.5
Allowable Carryover (Second Year Procurement-funded Orders)	123.4	141.2	163.4
Part II			
9. Balance of Customer Order at Year End	989.6	1,114.2	1,063.1
10. Work-in-progress	29.8	30.0	31.8
11. Exclusions:			
Foreign Military Sales	45.5	40.6	30.4
Base Realignment and Closure	0.0	0.0	0.0
Other Federal Department and Agencies	17.0	13.5	16.5
Non-Federal and Others	33.8	48.5	51.6
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
12. Calculated Actuals Carryover	863.5	981.7	932.8

Some totals may not add due to rounding.
EXWC,NSWC,NUWC,NAWCDIV,SPAWAR,NRL use RDTEN rates.

MATERIAL INVENTORY DATA
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

FY 2017

	Total	Mobilization	Peacetime: Operating	Peacetime: Other
Material Inventory BOP	$ 23.8	$ -	$ 23.8	$ -
Purchases				
A. Purchases to Support Customer Orders	$ 810.7	$ -	$ 810.7	$ -
B. Purchase of long lead items in advance of customer orders	-	-	-	-
C. Other Purchases (List)	-	-	-	-
D. Total Purchases	$ 810.7	$ -	$ 810.7	$ -
Material Inventory Adjustments				
A. Material Used in Maintenance	$ 820.4	$ -	$ 820.4	$ -
B. Disposals, theft, losses due to damages	-	-	-	-
C. Other reductions (List)	-	-	-	-
D. Total inventory adjustments	$ 820.4	$ -	$ 820.4	$ -
Material Inventory EOP	$ 14.1	$ -	$ 14.1	$ -

MATERIAL INVENTORY DATA
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

FY 2018

	Total	Mobilization	----- Peacetime ----- Operating	Other
Material Inventory BOP	$ 14.1	$ -	$ 14.1	$ -
Purchases				
A. Purchases to Support Customer Orders	$ 906.5	$ -	$ 906.5	$ -
B. Purchase of long lead items in advance of customer orders	-	-	-	-
C. Other Purchases	-	-	-	-
D. Total Purchases	$ 906.5	$ -	$ 906.5	$ -
Material Inventory Adjustments				
A. Material Used in Maintenance	$ 894.8	$ -	$ 894.8	$ -
B. Disposals, theft, losses due to damages	-	-	-	-
C. Other reductions	-	-	-	-
D. Total inventory adjustments	$ 894.8	$ -	$ 894.8	$ -
Material Inventory EOP	$ 25.8	$ -	$ 25.8	$ -

MATERIAL INVENTORY DATA
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

FY 2019

	Total	Mobilization	----- Peacetime ----- Operating	Other
Material Inventory BOP	$ 25.8	$ -	$ 25.8	$ -
Purchases				
A. Purchases to Support Customer Orders	$ 887.2	$ -	$ 887.2	$ -
B. Purchase of long lead items in advance of customer orders	-	-		-
C. Other Purchases	-	-	-	-
D. Total Purchases	$ 887.2	$ -	$ 887.2	$ -
Material Inventory Adjustments				
A. Material Used in Maintenance	$ 884.8	$ -	$ 884.8	$ -
B. Disposals, theft, losses due to damages	-	-	-	-
C. Other reductions	-	-	-	-
D. Total inventory adjustments	$ 884.8	$ -	$ 884.8	$ -
Material Inventory EOP	$ 28.2	$ -	$ 28.2	$ -

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DEPOT MAINTENANCE SIX PERCENT CAPITAL INVESTMENT PLAN
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	REVENUE (Maintenance, Repair, Overhaul) 3 year average			BUDGETED CAPITAL (Modernization, Efficiency)		
	FY 14-16	FY 15-17	FY 16-18	FY 2017	FY 2018	FY 2019
	1,938.4	1,913.9	2,023.7			
	1,913.9	2,023.7	2,207.7			
	2,023.7	2,207.7	2,385.8			
Revenue (Avg)	1,958.7	2,048.4	2,205.7			
Working Capital Fund (Avg)	1,958.7	2,048.4	2,205.7			
Appropriations (Avg)	0.0	0.0	0.0			
Total Revenue (Avg)	1,958.7	2,048.4	2,205.7			
WCF Depot Maintenance Capital Investment						
Facilities/ Work Environment				45.2	43.4	34.8
Equipment				39.5	38.3	42.3
Equipment (Non-Capital Investment Program)				11.2	11.1	10.4
Processes				0.0	0.6	0.6
Total WCF Investment				95.9	93.3	88.1
Appropriated Funding - List by Appropriation						
MILCON				2.9	15.7	0.0
Procurement				7.1	34.9	43.3
Operation & Maintenance				5.4	5.4	5.4
Total Appropriated Funding				15.4	56.0	48.7
Component Total				111.4	149.3	136.7
Minimum 6% Investment				117.5	122.9	132.3
Investment Over/Under Requirement				(6.2)	26.4	4.4
				5.7%	7.3%	6.2%

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2. Marine Corps Depots

Back of Tab

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - DEPOT MAINTENANCE ACTIVITY GROUP
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Mission Statement / Overview:

The Marine Corps Depot Maintenance Activity Group (MC DMAG) provides innovative, worldwide, depot level and related maintenance, rebuild, modification, and repairs, on Department of the Navy (DON), federal and non-federal customers' war fighting weapon systems. MC DMAG also provides engineering, manufacturing, remanufacturing, preservation, calibration, fabrication, technical evaluation, and other services required to maximize the readiness and sustainability of ground combat and combat support weapon systems, associated parts, assemblies, and subassemblies.

MC DMAG provides quality products and responsive maintenance support services that maintain a core industrial base in support of DoD operating forces mobilization, surge, reset, and reconstitution requirements. MC DMAG enables equipment readiness and operational availability by refurbishing equipment to a like new condition before returning it to the warfighter.

Activity Group Composition:

Activities	Location
Marine Depot Maintenance Command	Albany, GA
Marine Depot Maintenance Command	Barstow, CA

Significant Changes Since the FY 2018 President's Budget:
MC DMAG's FY 2019 budget request reflects a significant increase in the Stabilized Rates for FY 2019. The rate increased by 8.07% from FY 2018 to FY 2019 due to the following reasons:

Defense Logistics Agency (DLA) cost increased in FY 2018 and FY 2019 for a total of $13.2 million in the budget years. The increased DLA cost is due to a new rate based billing methodology. The Military Services that transition under the Base Realignment Commission (BRAC) Law, Storage and Distribution (S&D), were not charged for the issues/receipts and storage of assets held at DLA storage sites. These charges are now being transferred to the Military Services, thus impacting the DMAG billing rates. This resulted in an increase to the FY 2019 stabilized rate.

Additionally, the Capital Investment Budget increased in FY 2018 and FY 2019 for a total of $8.6 million in order to implement some of the state of the art capabilities to assist the Depot into the 21st Century. This resulted in a request for a Capital Investment Program (CIP) Surcharge in this submission. This incorporates Marine Corps Logistics Command (MARCORLOGCOM) initiatives to advance current depot operations to the Depot of the 21st Century. These initiatives plan to address some of the findings and

recommendations from several studies of MARCORLOGCOM processes, information systems, and infrastructures. The studies were conducted by the Marine Corps Depot Front End Assessment (FEA) Team, Internal Controls & Audit Readiness Team (ICART), the Inspector General of the Marine Corps (IGMC), and Penn State University. The CIP surcharge is the result of the MC DMAG required capital investments exceeding the depreciation budget; increasing the FY 2019 stabilized rate.

Financial Profile:

Orders/Revenue/Expense/Operating Results ($Ms):

	FY 2017	FY 2018	FY 2019
Orders	$371.8	$376.4	$390.2
Revenue	$382.2	$388.2	$377.3
Expense	$365.2	$384.5	$390.2
Operating Results	$17.0	$3.7	-$12.9
Capital Surcharge	0.0	$0.0	-$8.6
Net Operating Results (NOR)	$17.0	$3.7	-$21.5
Prior Year AOR	$0.2	$17.8	$21.5
Other Changes Affecting AOR	$0.6	$0.0	$0.0
Accumulated Operating Results (AOR)	$17.8	$21.5	$0.0

Some totals may not add due to rounding.

Orders, Revenue, Expense and NOR:

Orders – New orders were $371.8 million in FY 2017, $376.4 million in FY 2018, and $390.2 million planned in FY 2019. Budgeting for workload from non-organic sources was based upon letters of intent from customers. This planned fluctuation in orders is due to anticipated reductions in workload from other services as well as significant decreases in Reset workload, which has accounted for a large percentage of throughputs since FY 2012.

Revenue – Total revenue for FY 2017 was $382.2 million, $388.2 million in FY 2018, and $377.3 million for FY 2019. MC DMAG typically utilizes contracted workforce to support surges in workload. Due to the FY 2018 workload revisions and subsequent adjustments to carryover projections, MC DMAG is budgeting for more contractors in the FY 2019 budget.

Expenses - Total expenses is $365.2 million in FY 2017, $384.5 million in FY 2018, and $390.2 million in FY 2019.

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - DEPOT MAINTENANCE ACTIVITY GROUP
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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NOR - NOR was $17 million for FY 2017, $3.7 million for FY 2018, and -$21.5 million for FY 2019.

Collections/Disbursements/Outlays ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Collections	$357.3	$387.7	$384.4
Disbursements	$389.0	$381.0	$397.4
Outlays	$31.7	($6.7)	$13.0

Some totals may not add due to rounding.

The FY 2017 cash balance was $49.3 million. The FY 2018 cash balance is expected to increase to a total of $56.0 million and a slight decrease to $42.9 million in FY 2019. In FY 2018 and FY 2019, the cash balance fluctuation across the budget is primarily due to the increase in the DLA bill and inclusion of the one-time CIP surcharge in FY 2019.

Workload:

FY 2017 workload increased due to MRAP workload from Department of the Navy and Air Force as well as additional workload from the Coast Guard and Sierra Army Depot. FY 2018 and FY 2019 new orders increase to $376.4 million and $390.2 million respectively.

Direct Labor Hours (DLHs) (000):	**FY 2017**	**FY 2018**	**FY 2019**
Current Estimate	2,842	2,741	2,678

Direct Labor Hours:
Lack of planned direct personnel caused a slight decrease in direct labor hours in FY 2017 compared to what was executed in FY 2016. An increase in direct contractors is planned in FY 2018 and remains stable in FY 2019.

Performance Indicators:
The primary performance indicator is unit cost, which represents the average cost of delivering goods and services to customers.

Unit Cost:	**FY 2017**	**FY 2018**	**FY 2019**
Total Stabilized Cost ($Millions)	$365.2	$384.5	$390.2
Workload (DLHs) (000)	2,842	2,741	2,678
Unit cost (per DLH)	$128.47	$140.31	$145.69

Some totals may not add due to rounding.

NARRATIVE
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In FY 2017, MC DMAG executed a decreased workload and direct labor hours compared to the FY 2018 President's Budget which contributed to a higher unit cost per DLH. In FY 2018 and FY 2019, MC DMAG is projected to execute less direct labor hours. The decrease in DLH and increase in cost will result in a higher unit cost per direct labor hour in FY 2018 and FY 2019.

Stabilized / Composite Rates:	**FY 2017**	**FY 2018**	**FY 2019**
Stabilized Rate	$132.66	$131.53	$142.15
Change from Prior Year		-$1.13	$10.62
Composite Rate Change		-0.85%	8.07%

Summary of Workload Indicators:

Performance Indicators:	**FY 2017**	**FY 2018**	**FY 2019**
Schedule Conformance	99.80%	99.80%	99.80%
Quality Deficiency Reports	0.1%	0.1%	0.1%
Inventory Turnover Ratio	5.4:1	5.3:1	5.1:1

It is MC DMAG's goal to always provide customers with affordable services that meet expected schedules.

Staffing:

Civilian/Military ES & Workyears:	**FY 2017**	**FY 2018**	**FY 2019**
Civilian End Strength	1,362	1,365	1,365
Civilian Workyears (straight time)	1,394	1,357	1,357
Military End Strength	11	11	11
Military Workyears	11	11	11

Civilian Personnel: MC DMAG's civilian personnel budget reflects workforce levels necessary to accommodate planned workload without excessive use of overtime hours. MC DMAG utilizes contract artisans to supplement current workforce levels and to meet demand fluctuations in workload.

Military Personnel: Military end-strength is expected to remain consistent at 11 throughout the budget and future years.

NARRATIVE
DEPARTMENT OF THE NAVY
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Capital Investment Program (CIP):
The Capital Investment Program allows the NWCF to achieve its mission by reinvesting in plant equipment and facilities. Included in the capital budget are the following types of assets: automated data processing equipment (ADPE); non-ADPE equipment; automated data processing software, internally or externally developed; and minor construction.

CIP Authority ($Millions):	**FY 2017**	**FY2018**	**FY 2019**
Equipment, Non-ADP/Telecom	$1.7	$6.5	$10.2
Equipment, ADPE/Telecom	$0.0	$3.2	$0.0
Software Development	$0.0	$0.0	$0.0
Minor Construction	$3.0	$0.0	$0.0
Total	**$4.7**	**$9.8**	**$10.2**

Some totals may not add due to rounding.

MC DMAG is requesting additional authority in FY2018 to support Depot 21st Century initiatives and is projecting the need to include a capital surcharge in FY 2019.

Carryover Compliance ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Net Carry In	$154.9	$144.6	$132.7
Allowable Carryover	$147.9	$153.8	$158.9
Calculated Actual Carryover	$142.7	$131.8	$144.7
Delta (Actual Allowable): Above Ceiling (+)/Below Ceiling (-)	($5.2)	($22.0)	($14.2)

Some totals may not add due to rounding.

In FY 2017, MC DMAG was under the allowable carryover ceiling and plans to be under the projected allowable carryover ceilings in both FY 2018 and FY 2019.

REVENUE AND EXPENSES
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - DEPOT MAINTENANCE ACTIVITY GROUP
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Revenue:			
Gross Sales			
Operations	376.4	382.7	380.1
Capital Surcharges	0.0	0.0	-8.6
Capital Investment Recovery	5.8	5.5	5.9
Other Income			
Total Income	382.2	388.2	377.3
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	0.8	0.9	0.9
Civilian Personnel Compensation & Benefits	133.3	140.2	137.7
Travel and Transportation of Personnel	2.9	2.5	2.4
Material & Supplies (Internal Operations)	122.9	122.4	119.8
Equipment	13.3	14.0	13.9
Other Purchases from NWCF	1.7	2.4	2.4
Transportation of Things	0.0	0.0	0.0
Capital Investment Recovery	5.8	5.5	5.9
Printing and Reproduction	0.2	0.2	0.2
Advisory and Assistance Services	0.0	0.0	0.0
Rent, Communication, Utilities & Misc Charges	7.6	8.9	6.4
Other Purchased Services	75.7	87.4	100.6
Total Expenses	364.2	384.5	390.2
Work in Process Adjustment	1.0	0.0	0.0
Comp Work for Activity Retention Adjustment	0.0	0.0	0.0
Cost of Goods Sold	365.2	384.5	390.2
Operating Result	17.0	3.7	-12.9
Adjustments Affecting NOR	0.6	0.0	8.6
Capital Surcharges	0.0	0.0	8.6
Extraordinary Expenses Unmatched	0.0	0.0	0.0
Other Changes Affecting NOR (All Others)	0.6	0.0	0.0
Net Operating Result	17.0	3.7	-4.2
PY AOR	0.2	17.8	21.5
TOTAL AOR	17.8	21.5	17.2
Non-Recoverable Adjustments impacting AOR	0.0	0.0	-17.2
AOR for budget purposes	17.8	21.5	0.0

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - DEPOT MAINTENANCE ACTIVITY GROUP
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
1. New Orders	371.8	376.4	390.2
a. Orders from DoD Components:	354.5	353.3	371.4
Department of the Navy	292.9	289.2	296.4
O & M, Navy	6.7	4.2	4.2
O & M, Marine Corps	266.8	259.5	265.0
O & M, Navy Reserve	0.0	0.0	0.0
O & M, Marine Corp Reserve	10.7	14.2	16.2
Aircraft Procurement, Navy	0.9	0.0	0.0
Weapons Procurement, Navy	0.0	0.0	0.0
Ammunition Procurement, Navy/MC	0.0	0.0	0.0
Shipbuilding & Conversion, Navy	0.0	0.0	0.0
Other Procurement, Navy	0.0	0.0	0.0
Procurement, Marine Corps	7.4	6.8	6.5
Family Housing, Navy/MC	0.0	0.0	0.0
Research, Dev., Test, & Eval., Navy	0.5	0.0	0.0
Military Construction, Navy	0.0	0.0	0.0
National Defense Sealift Fund	0.0	0.0	0.0
Other Navy Appropriations	0.0	4.6	4.6
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	16.6	31.6	31.6
Army Operation & Maintenance	16.4	31.6	31.6
Army Res, Dev, Test, Eval	0.0	0.0	0.0
Army Procurement	0.2	0.0	0.0
Army Other	0.1	0.0	0.0
Department of the Air Force	44.8	32.4	43.4
Air Force Operation & Maintenance	44.8	32.4	43.4
Air Force Res, Dev, Test, Eval	0.0	0.0	0.0
Air Force Procurement	0.0	0.0	0.0
Air Force Other	0.0	0.0	0.0
DOD Appropriation Accounts	0.1	0.0	0.0
Base Closure & Realignment	0.1	0.0	0.0
Operation & Maintenance Accounts	0.0	0.0	0.0
Res, Dev, Test & Eval Accounts	0.1	0.0	0.0
Procurement Accounts	0.1	0.0	0.0
Defense Emergency Relief Fund	0.0	0.0	0.0
DOD Other	0.0	0.0	0.0
b. Orders from other Fund Activity Groups	15.7	22.5	18.2
c. Total DoD	370.2	375.8	389.6
d. Other Orders:	1.6	0.6	0.6
Other Federal Agencies	0.0	0.0	0.0
Foreign Military Sales	1.1	0.6	0.6
Non Federal Agencies	0.5	0.0	0.0
2. Carry-In Orders	154.9	144.6	132.7
3. Total Gross Orders	526.7	521.0	522.9
a. Funded Carry-Over before Exclusions	144.6	132.7	145.6
4. Revenue(-)	382.2	388.2	377.3
5. End of Year Work-In-Process (-)	1.0	1.0	1.0
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	0.8	0.0	0.0
7. Funded Carryover	142.7	131.8	144.7

Note: Line 5 (End of Year Work-In-Process) is adjusted for Non-DOD BRAC, FMS, and Institutional MRTFB

CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2019 PRESIDENT'S BUDGET SUBMISSION
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	Costs
FY 2017 Estimated Actuals	**364.2**
FY 2018 President's Budget:	**312.1**
Estimated Impact in FY 2018 of Actual FY 2017 Experience:	**0.0**
List	
Pricing Adjustments:	**-0.1**
Civilian Personnel	-1.6
Fuel Price	1.5
Productivity Initiatives	
Marine Depot Maintenance Command Consolidation	**-1.6**
Program Changes:	**69.3**
Direct Labor	-7.8
Direct Material and Supplies	57.8
Direct Contract Services	18.4
Direct Other Purchases	0.9
Other Changes:	**4.8**
Capital Investment Recovery	0.0
Facilities Sustainment, Restoration & Modernization	2.1
Depreciation	-0.2
Indirect Labor	-2.1
Indirect Material	3.1
Indirect Contract Services	2.0
Vera/Vsip	-0.1
FY 2018 Current Estimate:	**384.5**

CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2019 PRESIDENT'S BUDGET SUBMISSION
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	Costs
FY 2018 Current Estimate:	**384.5**
Pricing Adjustments:	**5.6**
Annualization of Prior Year Pay Raises	**0.7**
Civilian Personnel	0.7
Military Personnel	0.0
FY 2019 Pay Raise	**1.9**
Civilian Personnel	1.9
Military Personnel	0.0
Fuel Price Changes	0.0
General Purchase Inflation	**3.0**
Other Price Changes (list)	**0.0**
List	0.0
List	0.0
Productivity Initiatives and Other Efficiencies:	**-1.3**
Marine Depot Maintenace Command (MDMC) Consolidation	-1.3
Program Changes:	**-7.4**
Direct Labor	3.0
Direct Material and Supplies	-6.3
Direct Contract Services	-4.0
Direct Other Purchases	-0.1
Other Changes:	**8.8**
Capital Investment Recovery	0.0
Facilities Sustainment, Restoration & Modernization	4.0
Depreciation	0.2
Indirect Labor	0.0
Indirect Material	-2.7
Indirect Contract Services	7.3
Vera/Vsip	0.0
FY 2019 Estimate:	**390.2**

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CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

		FY 2017		FY 2018		FY 2019	
Line #	Description	Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	**Non-ADPE and Telecom Equipment >= $.250M**	**3**	**$1.676**	**5**	**$6.580**	**7**	**$10.200**
	- Vehicles	0	$0.000	0	$0.000	0	$0.000
	- Material Handling	0	$0.000	0	$0.000	0	$0.000
	- Installation Security	0	$0.000	0	$0.000	0	$0.000
	- Quality Control/Testing	0	$0.000	0	$0.000	0	$0.000
	- Medical Equipment	0	$0.000	0	$0.000	0	$0.000
	- Machinery	2	$1.016	0	$0.000	0	$0.000
	- Support Equipment	1	$0.660	5	$6.580	7	$10.200
2	**ADPE and Telecom Equipment >= $.250M**	**0**	**$0.000**	**2**	**$3.200**	**0**	**$0.000**
	- Computer Hardware (Production)	0	$0.000	0	$0.000	0	$0.000
	- Computer Hardware (Network)	0	$0.000	1	$2.500	0	$0.000
	- Computer Software (Operating)	0	$0.000	1	$0.700	0	$0.000
	- Telecommunications	0	$0.000	0	$0.000	0	$0.000
	- Other Support Equipment	0	$0.000	0	$0.000	0	$0.000
3	**Software Development >= $.250M**	**0**	**$0.000**	**0**	**$0.000**	**0**	**$0.000**
	- Internally Developed	0	$0.000	0	$0.000	0	$0.000
	- Externally Developed	0	$0.000	0	$0.000	0	$0.000
4	**Minor Construction (>= $.250M and <= $1.000M)**	**4**	**$2.978**	**0**	**$0.000**	**0**	**$0.000**
	- Replacement Capability	0	$0.000	0	$0.000	0	$0.000
	- New Construction	4	$2.978	0	$0.000	0	$0.000
	- Environmental Capability	0	$0.000	0	$0.000	0	$0.000
	Grand Total	**7**	**$4.654**	**7**	**$9.780**	**7**	**$10.200**
	Total Capital Outlays		**$6.228**		**$7.121**		**$7.818**
	Total Capital Investment Recovery		**$5.798**		**$5.489**		**$5.877**

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
#001 - Non-ADPE	#001 - Non-ADPE						Marine Corps Depots		
	FY 2017			FY 2018			FY 2019		
Non-ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	0	-	$0	0	-	$0	0	-	$0
Material Handling	0	-	$0	0	-	$0	0	-	$0
Installation Security	0	-	$0	0	-	$0	0	-	$0
Quality Control/ Testing	0	-	$0	0	-	$0	0	-	$0
Medical Equipment	0	-	$0	0	-	$0	0	-	$0
Machinery	2	508	$1,016	0	0	$0	0	-	$0
Support Equipment	1	660	$660	5	1,316	$6,580	7	1,457	$10,200
Total	3	559	$1,676	5	1,316	$6,580	7	1,457	$10,200

Justification:

Machinery

2017

Large CNC Lathe - Production Plant Albany (PPA) - $358K. The existing large lathe has exceeded its life expectancy. Both downtime and maintenance costs are increasing for this machine which adversely affects the machine shop operation and their ability to meet production schedules. The working envelope of the new CNC Lathe will enable machining of large parts for the AAV, LAV, and MRAP vehicles. The new lathe will also be equipped with the latest technology for improved safety and efficiency.

Lathe Machining Cell - Production Plant Barstow (PPB) - $658K. The existing lathes have exceeded their life expectancy. Both downtime and maintenance costs are increasing for these machines which adversely affects the machine shop operation and their ability to meet production schedules. The working envelope of the new lathe machining cell will enable machining of large parts for the AAV, LAV, and MRAP vehicles, as well as other Principle End Items. The new lathes will also be equipped with the latest technology for improved safety and efficiency.

Support Equipment

2017

Tool Retrieval System - Production Plant Barstow (PPB) - $660K. The current process of storing, issuing & inventorying of tooling is all manual; which is inefficient and labor intensive. Cabinets and shelving currently being utilized are poorly configured to accommodate the various sizes and types of tooling in our inventory. This requires excessive floor space that is always at a premium. Footprint would be greatly reduced with an automated system that would custom fit all material and is also completely reconfigurable when mission requirements change. Current Tool Room facility requires personnel to be exposed to constant bending, reaching, squatting or climbing to retrieve tooling that would not be necessary with an automated system. Tools would be automatically delivered to an ergonomically positioned access window.

Justification:

Support Equipment

2018

Oven Expansion Project - Production Plant Barstow (PPB) - $1,100K. The existing paint curing ovens and single rail conveyor / monorail systems are not sufficient to keep up with production demands. Paint curing time is a bottleneck in the painting process, which adversely affects the paint shop's daily operation and their ability to meet production schedules. The new monorail / conveyor system expansion would enable the paint shop to increase throughput of components for AAV's, LAV's, LVSR's, MATV's, and MRAP vehicles along with other principle end items.

B2203 Transmission Dyno - Production Plant Albany (PPA) - $1,250K. The proposed dynamometer will replace an older unit that is beyond its useful service life. Maintenance costs on the existing unit continue to increase and the antiquated control system is becoming more difficult to maintain due to obsolete parts.

Inline/Crossdrive Transmission Dyno Upgrade - (PPB) - $1,500K. Production Plant Barstow (PPB)'s current and projected workloads for transmission dynamometer testing requires replacement of the Transmission Dynamometer Test Cell. Transmission Dynamometers that we currently have are from 11 to 15 years old, thereby outliving their peak efficiency years. PPB is experiencing numerous breakdowns and that significantly affects our throughput and schedule.

50cal Function Fire Range - (PPA) - $980K. PPA currently utilizes a single lane, 100 meter tube that is 5 feet in diameter for all accuracy and function fire testing of small arms up to and including the 50cal M2A1 machine gun. Due to current and future projected workload PPA requires a separate range to perform function fire testing to prevent delays in production and reduce repair cycle time (RCT). The single range not only causes delays in production but is also not ideal for function fire testing of weapons. Function fire testing requires many more rounds than accuracy testing and additional steps must be taken to ensure safe operation at the current range. The current range works well for accuracy testing but is not suited for function fire testing. Function fire testing at the current range causes premature wear to the bullet trap and the ventilation system. Occasionally, endurance tests are required for some weapons which involves several thousand rounds to be fired. This not only causes delays in other weapon testing but prematurely wears equipment in the range. Production delays are also incurred due to the many weapon mount changeovers that must be done with only one firing lane available. The proposed new range will consist of two firing lanes which will not only increase efficiency but provide a much safer method of function firing weapons.

Cold Spray Equipment - (PPA & PPB) - $1,750K. This technology will allow Marine Depot Maintenance Command (MDMC) to repair multiple parts that are typically thrown away and replaced with new. This technology has the ability to reduce lost production time incurred while waiting on part deliveries. Also, material costs can be reduced by repairing many parts to like new condition rather than discarding them and purchasing new parts through normal acquisition means.

Justification:

Support Equipment

2019

Hull Blast System - (PPA & PPB) - $4,000K. The existing vehicle hull blasting operations are accomplished by towing the hulls into the blast booths on trailers. Blast personnel manually blast the entire hull with a 1-inch blast hose via high pressure air and abrasive grit passing through a nozzle at the end of the hose. Due to safety and ergonomic concerns some hulls have to be removed and re-positioned throughout the process. The proposed system will utilize specialized transport equipment to bring hulls into the booth and provide 360 degree rotation of the hull while an automated system blasts the hulls down to bare metal. The hull will then move to a touch-up area where operators will inspect and do any final blasting that is required. The new blast system will reduce processing time for each hull, exponentially. This will be a significant reduction in non-value added labor costs for material handling, and a reduction in required man-hours for our blasting operations.

Additive Manufacturing Equipment - (PPA & PPB) - $2,000K MDMC intends to procure and install metal 3D printing technology at Production Plant Albany and Production Plant Barstow. This technology has the ability to reduce lost production time incurred while waiting on part deliveries. Material costs can also be reduced as we will be able to print many parts rather than purchasing through normal acquisition means. While the scale of this technology is increasing every day, MDMC intends to acquire a small, proven version of this capability. The intent is to print some of the smaller parts that typically have long lead times and/or high costs. Having this technology at hand will enhance research & development capability and the ability to produce intricate parts that are impossible to fabricate with conventional machining methods.

Component Blast Equipment - (PPA) - $1,250K. The existing blasting operations consist of palletized components loaded into the blast bays where personnel clean/blast each piece manually. Several blast cabinets are also utilized throughout the production plant which require personnel to manually load and process one part at a time. The proposed system will allow for multiple parts to be fed and blasted simultaneously; therefore, reducing non-value added labor costs for material handling and reducing required man-hours in our blasting operations.

Equipment /Material Storage System (PPB) - $650K. To support workload requirements PPB requires the procurement of an automated material/equipment storage and retrieval system to support production. The vertical carousel is designed with shelves or drawers that rotate up or down via the shortest path; automatically delivering stored items to an operator at an ergonomically positioned pick up window. Each unit is compatible with an entire suite of software and controls, and can also be used as a standalone solution.

Upgrade Steam Generator (PPB) - $600K. To replace aging steam cleaning equipment and increase steam capacity at the Marine Depot Maintenance Command (MDMC) Product Plant Barstow (PPB) steam cleaning facility S575 and B573 Transmission cleaning bay.

Justification:

Support Equipment

2019

Renovate Blast Booth B565 (PPB) - $1,000K Presently, MDMC Production Plant Barstow's B565 Blast Booth facility; East and West Bay, are PPBs largest vehicle blast booth and are a critical part of the depot repair process for the Marine Corp's largest combat vehicles. Safety and health hazards exist in this facility that could expose PPB to unnecessary liabilities. Environmental hazards must be addressed to prevent leakage of blast media in the system. The Blast Booth has experienced extensive mechanical failure causing long delays and work stoppages which negatively impact our ability to meet scheduled requirements. The floor grates and augers are inadequate, and many are damaged. They should be replaced with heavy duty industrial grade grates and augers. The elevator, blast pots, and dust collectors need to be repaired or replaced. Air Compressors, plenums, and dryers need to be overhauled to maintain optimum performance. Blast booth structure have been seriously degraded from heavy usage and are in need of repair. Lighting in work areas is poor and should be upgraded to improve work efficiencies and provide safer working conditions. This upgrade to our B565 Blast Booth facility will increase the efficiency and the service life of the equipment. Even more importantly, it will remedy the associated safety, environmental, and productivity issues.

Renovate Blast Booth B569 (PPB) - $700K Presently, MDMC Barstow's Vehicle Blast facility located in Building 569 is in dire need of renovation. Safety and health hazards exist in this facility that could expose PPB to unnecessary liabilities such as OSHA and EPA fines. The current blast facility is a single vehicle blast booth with an equipment room and is the oldest blast booth in the PPB inventory. The blast booth is a pre-fabricated steel building with two sliding doors, three single personnel door in the main blast area, a single personnel door and a rollup door are located in the equipment room. Blast Booth equipment consist of a media floor recovery with dust collector, an elevator system, two media blast pot, an air compressor and air dryer, and breathable air system. Due to the age of and design, the blast booth is ineffective in containing blast media. This presents an environmental hazard that must be addressed.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
#002 - ADPE	#002 - ADPE						Marine Corps Depots		
	FY 2017			FY 2018			FY 2019		
ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	0	-	$0	0	-	$0	0	-	$0
Computer Hardware (Network)	0	-	$0	1	2,500	$2,500	0	-	$0
Computer Software (Operating System)	0	-	$0	1	700	$700	0	-	$0
Telecommunications	0	-	$0	0	-	$0	0	-	$0
Other Support Equipment	0	-	$0	0	-	$0	0	-	$0
Total	0	-	$0	2	1,600	$3,200	0	-	$0

Justification:

Computer Hardware (Network)

2018
Wireless Network - (PPA & PPB) - $2,500K Presently, Marine Depot Maintenance Command (MDMC) production plants are on a wired local area network. There are only specific areas where the network can be accessed, typically in an administrative area some distance away from production activities. Daily tasks are impacted greatly by the lack of a wireless network. Current operations require many non-value added steps to the repair process such as the manual actions taken, forms needed, person to person communication, locating computers, and individuals/departments involved, which are needed to repair an item. A robust wireless network will eliminate the need for finding computers on the network, decrease the notification time between tasks, automate the manually completed forms, allow for instant communication updates, and improve traceability. All of these actions result in an overall reduction of direct labor hours and a decreased return cycle time.

Computer Software (Operating System)

2018
MRO Software - (PPA & PPB) - $700K Marine Depot Maintenance Command (MDMC) has instituted best business practices to improve production scheduling, quality, and repair cycle time. MDMC's current shop floor control tool is JDA's Networks Make-To-Order (Networks MTO). Networks MTO was designed for manufacturing environment versus repair/overhaul environment. Therefore, there are a lot of functionality in Networks MTO not utilized. JDA's Maintenance, Repair and Overhaul (MRO) better aligns with how business is conducted at MDMC because the application is a smaller subset of modules. Networks MTO does not have true multi-plant functionality, whereas, MRO does. MRO multi-plant functionality would provide the Program Management Department (PMD) and Material Management Department (MMD) the flexibility to create processes that can be shared between both production plants.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
#004 - Minor Construction	#004 - Minor Construction						Marine Corps Depots		
	FY 2017			FY 2018			FY 2019		
Non-ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement	0	-	$0	0	-	$0	0	-	$0
New Construction	4	745	$2,978	0	-	$0	0	-	$0
Enviromental Capability	0	-	$0	0	-	$0	0	-	$0
Total	4	745	$2,978	0	-	$0	0	-	$0

Justification:
New Construction

2017
Network "B" Stormwater Additions - (PPA) - $937K. Per the Code of Federal Regulations, Part 1910_Occupational Safety and Health Standards, section 1910.22, Marine Depot Maintenance Command will provide safe work areas for employees by maintaining proper housekeeping including but not limited to, providing dry work surfaces. Currently within the Production Plant Albany (PPA) complex there are areas where storm water runoff sheets through work areas and also accumulates in some work areas and traffic lanes. PPA is committed to safety and proposes to make improvements to the storm water collection system to alleviate the possible safety hazards that currently exist.

The Logistics Vehicle System Replacement (LVSR) Clear Span - (PPB) - $838K. The LVSR is one of the newest armored additions to the platforms worked at PPB. If permitted and installed, the proposed clear span will provide adequate covered space and utilities to complete the workload. Currently, the covered area is not large enough to meet production demands and the old sun shades require constant maintenance to prevent them from becoming a safety hazard since they are exposed to the elements. The proposed clear span will be constructed with pre-engineered steel framing and reinforced concrete support column footers. The clear span will be equipped with high-bay LED lighting, fire suppression, and utilities and provide approximately 10,000 square feet of coverage.

B2222 Paint Pit Alteration - (PPA) - $317K. The existing paint booth pits located in building 2222 at Marine Depot Maintenance Command (MDMC), PPA are no longer ideal for the types of combat vehicles repaired there. Due to the increase in vehicle types, as well as weight increases due to armor kits, the pits require some structural alterations. The current layout requires precise vehicle placement depending on wheel base and consists of metal grating that must be removed and replaced continuously by production personnel to access the pit. Minor injuries have occurred when handling these. This project is being proposed to eliminate injuries and mitigate all potential hazards regarding this operation. An engineering study and design will be performed through Naval Facilities Engineering Command (NAVFAC). The new configuration of the vehicle paint booth pits will accommodate the wheelbases and weights of all necessary vehicles and provide a safe means of entrance and egress for operators.

U80 Hardstand Expansion - (PPB) - $886K. The concrete expansion will eliminate safety hazards by providing a cordoned off area away from vehicular traffic inside a fenced area. It will provide ample space allocation for designated Incoming, Outgoing and Non-Conforming areas that can be permanently marked and utilized for daily use without having to reconfigure staging areas due to influx of workload. It will allow WIP to safely load and unload mule trains and will provide a safe, traffic free area for mules to connect/disconnect mule train loads which will significantly reduce delays in production moves and equipment breakdown while lowering the cost of maintaining the area.

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CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	**1**	**Non ADP**		**$3.400**	**$1.676**	**($1.724)**	
			Machinery	$1.650	$1.016	($0.634)	Funding for CNC Lathes and Press Brake to support current operating temp and future requirements.
			Support Equipment	$1.750	$0.660	($1.090)	Funding for Tool Room Equipment Upgrades.
	2	**ADP**		**$0.000**	**$0.000**	**$0.000**	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
	4	**Minor Construction**		**$1.750**	**$2.978**	**$1.228**	
			New Construction	$1.750	$2.978	$1.228	Funding for B2222 Paint Pit Alteration, Hardstand Expansion, Stormwater Additions, and LVSR Clearspan.
			Environmental Capability	$0.000	$0.000	$0.000	
TOTAL FY 2017 CIP Program				**$5.150**	**$4.654**	**($0.496)**	

FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2018	**1**	**Non ADP**		**$4.730**	**$6.580**	**$1.850**	
			Machinery	$0.880	$0.000	($0.880)	Replacement of the Intermediate Lathe and Crankshaft Grinder with more urgent projects; Oven Expansion and function of Fire Range
			Support Equipment	$3.850	$6.580	$2.730	Addition of equipment in support of the Depotof the 21st Century Initiative
	2	**ADP**		**$0.000**	**$3.200**	**$3.200**	
			Computer Hardware (Network)	$0.000	$2.500	$2.500	Supports the addition of a wireless network and MRO Software in support of the Depot 21st Century Initiative
			Computer Software (Operating)	$0.000	$0.700	$0.700	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
	4	**Minor Construction**		**$0.990**	**$0.000**	**($0.990)**	
			New Construction	$0.990	$0.000	($0.990)	The cost estimate is the above threshold for the removal of the fiberglass repair facility
TOTAL FY 2018 CIP Program				**$5.720**	**$9.780**	**$4.060**	

FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2019	**1**	**Non ADP**		**$10.200**	**$10.200**	**$0.000**	
			Support Equipment	$10.200	$10.200	$0.000	Provides upgrades to existing equipment and the purchase of new equipment technology to support the Depot 21st Century Initative
	2	**ADP**		**$0.000**	**$0.000**	**$0.000**	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
	4	**Minor Construction**		**$0.000**	**$0.000**	**$0.000**	
TOTAL FY 2019 CIP Program				**$10.200**	**$10.200**	**$0.000**	

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - DEPOT MAINTENANCE ACTIVITY GROUP
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Part 1			
1. Net Carry-In	154.9	144.6	132.7
2. Revenue	382.2	388.2	377.3
3. New Orders	371.8	376.4	390.2
4. Exclusions:			
Foreign Military Sales	1.1	0.6	0.6
Base Realignment and Closure	-0.1	0.0	0.0
Other Federal Department and Agencies	0.0	0.0	0.0
Non-Federal and Others	0.5	0.0	0.0
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
5. Orders for Carryover Calculation	370.3	375.8	389.6
6. Weighted Average Outlay Rate	59.8%	60.1%	60.0%
7. Carryover Rate	40.2%	39.9%	40.0%
8. Allowable Carryover	147.9	153.8	158.9
Allowable Carryover(First Year)	148.8	149.9	155.8
Allowable Carryover (Second Year Procurement-funded Orders)	-1.0	3.8	3.1
Part II			
9. Balance of Customer Order at Year End	144.6	132.7	145.6
10. Work-in-progress	1.0	1.0	1.0
11. Exclusions:			
Foreign Military Sales	1.0	0.2	0.2
Base Realignment and Closure	0.0	0.0	0.0
Other Federal Department and Agencies	0.0	0.0	0.0
Non-Federal and Others	-0.2	-0.2	-0.2
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
12. Calculated Actuals Carryover	142.7	131.8	144.7

Some totals may not add due to rounding.
EXWC,NSWC,NUWC,NAWCDIV,SPAWAR,NRL use RDTEN rates.

MATERIAL INVENTORY DATA
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

FY 2017

	Total	Mobilization	Peacetime: Operating	Peacetime: Other
Material Inventory BOP	$ 65.7	$ -	$ 65.7	$ -
Purchases				
A. Purchases to Support Customer Orders	$ 116.0	$ -	$ 116.0	$ -
B. Purchase of long lead items in advance of customer orders	-	-	-	-
C. Other Purchases (List)	-	-	-	-
D. Total Purchases	$ 116.0	$ -	$ 116.0	$ -
Material Inventory Adjustments				
A. Material Used in Maintenance	$ 117.2	$ -	$ 117.2	$ -
B. Disposals, theft, losses due to damages	-	-	-	-
C. Other reductions (List)	-	-	-	-
D. Total inventory adjustments	$ 117.2	$ -	$ 117.2	$ -
Material Inventory EOP	$ 64.5	$ -	$ 64.5	$ -

MATERIAL INVENTORY DATA
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

FY 2018

	Total	Mobilization	----- Peacetime ----- Operating	Other
Material Inventory BOP	$ 64.5	$ -	$ 64.5	$ -
Purchases				
A. Purchases to Support Customer Orders	$ 128.8	$ -	$ 128.8	$ -
B. Purchase of long lead items in advance of customer orders	-	-	-	-
C. Other Purchases	-	-	-	-
D. Total Purchases	$ 128.8	$ -	$ 128.8	$ -
Material Inventory Adjustments				
A. Material Used in Maintenance	$ 123.5	$ -	$ 123.5	$ -
B. Disposals, theft, losses due to damages	-	-	-	-
C. Other reductions	-	-	-	-
D. Total inventory adjustments	$ 123.5	$ -	$ 123.5	$ -
Material Inventory EOP	$ 69.8	$ -	$ 69.8	$ -

MATERIAL INVENTORY DATA
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

FY 2019

	Total	Mobilization	----- Peacetime ----- Operating	Other
Material Inventory BOP	$ 69.8	$ -	$ 69.8	$ -
Purchases				
A. Purchases to Support Customer Orders	$ 120.6	$ -	$ 120.6	$ -
B. Purchase of long lead items in advance of customer orders	-	-		-
C. Other Purchases	-	-	-	-
D. Total Purchases	$ 120.6	$ -	$ 120.6	$ -
Material Inventory Adjustments				
A. Material Used in Maintenance	$ 122.1	$ -	$ 122.1	$ -
B. Disposals, theft, losses due to damages	-	-	-	-
C. Other reductions	-	-	-	-
D. Total inventory adjustments	$ 122.1	$ -	$ 122.1	$ -
Material Inventory EOP	$ 68.3	$ -	$ 68.3	$ -

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DEPOT MAINTENANCE SIX PERCENT CAPITAL INVESTMENT PLAN
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	REVENUE (Maintenance, Repair, Overhaul) 3 year average			BUDGETED CAPITAL (Modernization, Efficiency)		
	FY 14-16	FY 15-17	FY 16-18	FY 2017	FY 2018	FY 2019
	491.3	572.5	469.1			
	572.5	469.1	382.2			
	469.1	382.2	388.2			
Revenue (Avg)	511.0	474.6	413.2			
Working Capital Fund (Avg)	0.0	0.0	0.0			
Appropriations (Avg)	0.0	0.0	0.0			
Total Revenue (Avg)	0.0	0.0	0.0			
WCF Depot Maintenance Capital Investment						
Facilities/ Work Environment				3.4	8.8	15.1
Equipment				4.7	9.8	10.2
Equipment (Non-Capital Investment Program)				0.0	0.0	0.0
Processes				0.0	0.0	0.0
Total WCF Investment				8.1	18.6	25.3
Appropriated Funding - List by Appropriation						
MILCON				0.0	36.5	0.0
Procurement				0.0	0.0	0.0
Operation & Maintenance				10.3	0.0	0.0
Total Appropriated Funding				10.3	36.5	0.0
Component Total				18.4	55.1	25.3
Minimum 6% Investment				30.7	28.5	24.8
Investment Over/Under Requirement				-12.3	26.6	0.5
				3.6%	11.6%	6.1%

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3. Naval Air Warfare Center

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NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Mission Statement / Overview:
The Naval Air Warfare Center (NAWC) budget submission includes the Aircraft Division (AD) and the Weapons Division (WD). The NAWC mission is to provide the Navy with full spectrum Research, Development, Test, and Evaluation (RDT&E); in-service engineering; aircraft weapons integration; assigned airborne electronic warfare systems; naval aircraft engines; avionics; aircraft support systems; weapons systems associated with air warfare; missiles and missile subsystems; RDT&E, acquisition and life cycle support of training systems; and to maintain and operate the air, land, and sea test ranges complex. Major Range Test Facility Base (MRTFB) funding (RDT&E,N appropriation) is received by the NAWC to maintain and support designated range facilities.

Activity Group Composition:
The NAWC is comprised of two business units, the Aircraft Division (AD), with the primary location at Patuxent River, MD, and the Weapons Division (WD), with the primary location at China Lake, CA.

Significant Changes Since the FY 2018 President's Budget:
The Naval Air Warfare Center budgets are constructed based on customer workload demand. The NAWC budget reflects minor increases to Orders, Direct Labor Hours (DLHs), End Strength (ES) and Full Time Equivalents with minor decreases to Revenue and Expenses necessary to sustain and support customer requirements. The PB 2019 submission reflects increased customer demand in programs such as F/A-18 (Series E-G), F-35, MRTFB, EA-6, Aircraft Launch and Recovery, and FMS. Additionally, the NAWC submission shows a steady reduction to Carryover levels from FY 2017 through FY 2019.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Financial Profile:

Orders/Revenue/Expense/Operating Results ($Millions):

	FY 2017	FY 2018	FY 2019
Orders	$4,789.9	$4,624.2	$4,607.2
Revenue	$4,664.3	$4,700.2	$4,688.8
Expense	$4,627.9	$4,705.8	$4,699.1
Operating Results	$36.4	($5.6)	($10.3)
Capital Surcharge	$0.0	$0.0	$0.0
Net Operating Results (NOR)	$36.4	($5.6)	($10.3)
Prior Year AOR	($20.5)	$15.9	$10.3
Other Changes Affecting AOR	$0.0	$0.0	$0.0
Accumulating Operating Result (AOR)	$15.9	$10.3	$0.0

Some totals may not add due to rounding.

Orders, Revenue and Expense: The trend in orders, revenue and expense across the budget years reflects updated estimates for workload and pricing adjustments.

Collections/Disbursements/Outlays ($Millions):

	FY 2017	FY 2018	FY 2019
Collections	$4,626.6	$4,695.9	$4,684.5
Disbursements	$4,622.9	$4,712.1	$4,705.3
Net Outlays	($3.7)	$16.2	$20.8

Some totals may not add due to rounding.

Budgeted collections and disbursements are based on revenue, cost, and Capital Investment Program (CIP) outlay estimates.

Workload:

Direct Labor Hours (000):	FY 2017	FY 2018	FY 2019
Current Estimate	20,027.9	20,019.9	19,968.3

Direct Labor Hours – Direct Labor Hours remain relatively constant across the budget years and are driven by customer workload demand.

Performance Indicators: Unit cost serves as a primary performance indicator and represents the average cost of delivering goods and services to our customers.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Unit Cost:	**FY 2017**	**FY 2018**	**FY 2019**
Total Stabilized Cost ($Millions)	$1,820.73	$1,915.20	$1,883.38
Workload (DLHs) (000)	17,238	17,041	16,521
Unit cost (per DLH)	$105.62	$112.38	$114.00

Unit Cost is the method established to authorize and control costs. Unit cost goals allow activities to respond to workload changes in execution by encouraging reduced costs when workload declines and allowing appropriate increases in costs when customers request additional services.

Stabilized / Composite Rates:	**FY 2017**	**FY 2018**	**FY 2019**
Stabilized Rate	$109.85	$113.93	$113.36
Change from Prior Year		3.71%	-0.50%
Composite Rate Change		2.67%	0.89%

Rates are based on DLHs required for anticipated workload. The Stabilized Rate consists of direct labor and applied overhead. Unique direct non-labor costs are billed on a reimbursable basis to the customer. The composite rate change incorporates both the stabilized costs and the reimbursable costs. The composite rate change in FY 2019 reflects adjustments to direct workload and pricing changes.

Staffing:

Civilian/Military ES & Workyears:	**FY 2017**	**FY 2018**	**FY 2019**
Civilian End Strength	15,543	15,521	15,487
Civilian Workyears (straight time)	15,177	15,245	15,222
Military End Strength	192	191	187
Military Workyears	159	166	160

Civilian Personnel: The civilian resource estimates are a baseline projection of civilian resources necessary to fulfill programming objectives in coordination with customers. Civilian resource estimates reflect a balanced program of civilian resources to funded workload.

Military Personnel: The Military resource estimates are a baseline projection of military personnel necessary to fulfill programming objectives in coordination with customers. Military resource estimates have been adjusted to reflect a balanced program of military resources to funded workload.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Capital Investment Program (CIP):

CIP Authority ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Equipment, Non-ADP / Telecom	$20.1	$32.3	$28.5
Equipment, ADPE / Telecom	$6.3	$6.8	$9.4
Software Development	$2.5	$3.5	$0.7
Minor Construction	$21.1	$10.3	$9.7
Total	$50.0	$52.9	$48.4

Some totals may not add due to rounding.

The NAWC's modest investment in capital assets will acquire affordable and technically efficient capabilities to support customer requirements. Minor construction includes projects meeting the criteria of the Defense Laboratory Revitalization Program. The projects will replace aging temporary buildings and upgrade and expand lab capability to accommodate workload growth and increase efficiency. CIP authority budgeted in accordance with capital investment recovery guidelines.

Carryover Compliance: ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Net Carry-In	$2,332.8	$2,458.4	$2,382.5
Allowable Carryover	$2,390.2	$2,444.4	$2,457.7
Calculated Actual Carryover	$2,062.7	$1,923.5	$1,846.2
Delta (Actual-Allowable): Above Ceiling (+)/Below Ceiling (-)	($327.5)	($520.9)	($611.5)

Some totals may not add due to rounding.

Carryover for each year is within the allowable carryover ceiling based on appropriation outlay rates.

REVENUE AND EXPENSES
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Revenue:			
Gross Sales			
Operations	4,635.1	4,652.6	4,640.4
Capital Surcharges	0.0	0.0	0.0
Capital Investment Recovery	29.2	47.6	48.4
Other Income			
Total Income	4,664.3	4,700.2	4,688.8
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	15.9	13.9	13.9
Civilian Personnel Compensation & Benefits	2,149.4	2,189.0	2,205.3
Travel and Transportation of Personnel	85.9	75.5	75.0
Material & Supplies (Internal Operations)	403.7	494.0	520.4
Equipment	169.6	45.3	45.6
Other Purchases from NWCF	94.2	107.4	105.4
Transportation of Things	7.0	7.2	7.3
Capital Investment Recovery	29.2	47.6	48.4
Printing and Reproduction	0.1	0.9	0.9
Advisory and Assistance Services	0.1	0.2	0.2
Rent, Communication, Utilities & Misc Charges	49.9	69.5	67.9
Other Purchased Services	1,623.0	1,655.3	1,608.9
Total Expenses	4,627.9	4,705.8	4,699.0
Work in Process Adjustment	0.0	0.0	0.0
Comp Work for Activity Retention Adjustment	0.0	0.0	0.0
Cost of Goods Sold	4,627.9	4,705.8	4,699.0
Operating Result	36.4	-5.6	-10.3
Adjustments Affecting NOR	-0.1	0.0	0.0
Capital Surcharges	0.0	0.0	0.0
Extraordinary Expenses Unmatched	0.0	0.0	0.0
Other Changes Affecting NOR (All Others)	-0.1	0.0	0.0
Net Operating Result	36.4	-5.6	-10.3
PY AOR	-20.4	15.9	10.3
TOTAL AOR	15.9	10.3	0.0
Non-Recoverable Adjustments impacting AOR	0.0	0.0	0.0
AOR for budget purposes	15.9	10.3	0.0

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
1. New Orders	4,789.9	4,624.2	4,607.2
a. Orders from DoD Components:	4,365.8	4,408.4	4,528.8
Department of the Navy	3,874.9	4,214.8	4,446.2
O & M, Navy	714.2	667.5	695.9
O & M, Marine Corps	25.2	15.2	17.4
O & M, Navy Reserve	2.1	0.5	0.5
O & M, Marine Corp Reserve	0.1	0.0	0.0
Aircraft Procurement, Navy	887.0	953.7	1,082.6
Weapons Procurement, Navy	65.3	75.1	77.9
Ammunition Procurement, Navy/MC	42.1	21.6	21.7
Shipbuilding & Conversion, Navy	151.4	65.2	66.5
Other Procurement, Navy	244.8	187.0	228.0
Procurement, Marine Corps	31.0	10.3	7.1
Family Housing, Navy/MC	0.0	0.1	0.1
Research, Dev., Test, & Eval., Navy	1,710.7	2,218.1	2,248.0
Military Construction, Navy	0.0	0.5	0.5
National Defense Sealift Fund	1.2	0.0	0.0
Other Navy Appropriations	0.0	0.0	0.0
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	71.2	19.9	16.8
Army Operation & Maintenance	22.8	10.4	8.1
Army Res, Dev, Test, Eval	24.2	5.7	5.0
Army Procurement	24.2	3.8	3.6
Army Other	0.0	0.0	0.0
Department of the Air Force	185.3	65.3	34.1
Air Force Operation & Maintenance	41.6	13.7	10.7
Air Force Res, Dev, Test, Eval	85.7	25.4	13.3
Air Force Procurement	58.1	26.2	10.1
Air Force Other	0.0	0.0	0.0
DOD Appropriation Accounts	234.3	108.4	31.8
Base Closure & Realignment	0.0	0.0	0.0
Operation & Maintenance Accounts	70.1	37.1	9.7
Res, Dev, Test & Eval Accounts	108.4	39.0	13.0
Procurement Accounts	48.5	30.3	8.3
Defense Emergency Relief Fund	0.0	0.0	0.0
DOD Other	7.3	2.0	0.8
b. Orders from other Fund Activity Groups	93.7	51.0	24.8
c. Total DoD	4,459.5	4,459.4	4,553.6
d. Other Orders:	330.4	164.8	53.6
Other Federal Agencies	59.6	32.2	9.4
Foreign Military Sales	248.5	124.1	37.5
Non Federal Agencies	22.3	8.5	6.7
2. Carry-In Orders	2,332.8	2,458.4	2,382.5
3. Total Gross Orders	7,122.7	7,082.7	6,989.7
a. Funded Carry-Over before Exclusions	2,458.4	2,382.5	2,300.9
4. Revenue(-)	4,664.3	4,700.2	4,688.8
5. End of Year Work-In-Process (-)	0.0	0.0	0.0
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	395.7	459.0	454.8
7. Funded Carryover	2,062.7	1,923.5	1,846.2

Note: Line 5 (End of Year Work-In-Process) is adjusted for Non-DOD BRAC, FMS, and Institutional MRTFB

CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	Costs
FY 2017 Actuals	**4,627.9**
FY 2018 President's Budget:	**4,714.9**
Estimated Impact in FY 2018 of Actual FY 2017 Experience:	**10.2**
Impact of prior year NOR/AOR adjustments	10.2
Pricing Adjustments:	**-12.7**
Civilian Personnel	0.0
Fuel Price	3.3
General Inflation	-16.0
Program Changes:	**-8.6**
Precision Strike Weapons Program (PMA 201)	-8.7
C-2/E-2 Program (PMA 231)	-7.0
Heavy Lift Helicopter (PMA 261)	-6.0
Support/Commercial Derivative Aircraft Program (PMA 207)	-4.2
Multi-Mission Helicopters Program (PMA 299)	-0.6
Navy Aerial Target and Decoy Systems (PMA 208)	-0.2
F-18	6.4
EA-18G	1.5
JSF	9.5
AV-8	-0.7
JSOW	-2.3
Aircraft Support Equipment	1.7
Tomohawk	2.3
AMRAAM	-0.3
Sidewinder	0.0
E-2D	0.2
Other Changes:	**1.9**
FECA	-0.2
NAWCAD Saftey Unfunded	2.1
FY 2018 Current Estimate:	**4,705.8**

CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	Costs
FY 2018 Current Estimate:	**4,705.8**
Pricing Adjustments:	**26.9**
Annualization of Prior Year Pay Raises	**12.0**
Civilian Personnel	11.9
Military Personnel	0.1
FY 2019 Pay Raise	**0.2**
Civilian Personnel	0.0
Military Personnel	0.2
Fuel Price Changes	-0.4
General Purchase Inflation	15.1
Other Price Changes (list)	**0.0**
Productivity Initiatives and Other Efficiencies:	**0.0**
Program Changes:	**11.6**
F-18	2.1
EA-18G	0.4
JSF	1.2
AV-8	0.6
Adv Tactical Unmanned Aircraft Systems	3.2
Air Systems Support	3.2
AMRAAM	0.1
HARM	0.3
Electronic Warfare Development	0.5
JAGM	0.1
Other Changes:	**-45.3**
DFAS	0.0
FECA	0.2
SRM to 75%	-2.1
FEC Rate Change	-5.1
Other- Depreciation	0.8
Other - Fuel (Program Growth)	3.0
Other - Contract Adjustments	-34.0
Other - Re-baseline Rate Setting Year	-8.0
FY 2019 Estimate:	**4,699.1**

CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

		FY 2017		FY 2018		FY 2019	
Line #	Description	Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	**Non-ADPE and Telecom Equipment >= $.250M**	**35**	**$20.120**	**29**	**$32.348**	**32**	**$28.517**
	- Quality Control/Testing	18	$9.562	14	$17.558	17	$16.907
	- Machinery	0	$0.000	0	$0.000	2	$1.320
	- Support Equipment	17	$10.558	15	$14.790	13	$10.290
2	**ADPE and Telecom Equipment >= $.250M**	**13**	**$6.304**	**7**	**$6.795**	**10**	**$9.432**
	- Computer Hardware (Production)	6	$2.315	2	$1.724	2	$1.369
	- Computer Hardware (Network)	5	$3.091	4	$4.471	6	$6.063
	- Computer Software (Operating)	1	$0.491	1	$0.600	2	$2.000
	- Other Support Equipment	1	$0.407	0	$0.000	0	$0.000
3	**Software Development >= $.250M**	**7**	**$2.531**	**4**	**$3.465**	**2**	**$0.675**
	- Externally Developed	7	$2.531	4	$3.465	2	$0.675
4	**Minor Construction (>= $.250M and <= $1.000M)**	**13**	**$21.055**	**4**	**$10.329**	**4**	**$9.726**
	- New Construction	13	$21.055	4	$10.329	4	$9.726
	Grand Total	**68**	**$50.010**	**44**	**$52.937**	**48**	**$48.350**
	Total Capital Outlays		**$38.525**		**$40.585**		**$42.525**
	Total Capital Investment Recovery		**$29.188**		**$47.550**		**$48.350**

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
Department of the Navy/ Research and Development	#001 - Non-ADPE						Naval Air Warfare Center		
	FY 2017			FY 2018			FY 2019		
Non-ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	0	-	$0	0	-	$0	0	-	$0
Material Handling	0	-	$0	0	-	$0	0	-	$0
Installation Security	0	-	$0	0	-	$0	0	-	$0
Quality Control/ Testing	18	531	$9,562	14	1,254	$17,558	17	995	$16,907
Medical Equipment	0	-	$0	0	-	$0	0	-	$0
Machinery	0	-	$0	0	-	$0	2	660	$1,320
Support Equipment	17	621	$10,558	15	986	$14,790	13	792	$10,290
Total	35	575	$20,120	29	1,115	$32,348	32	891	$28,517

Justification:

PROJECTS ABOVE $1M:

FY 2017

MK7 Arresting Gear (A/G) Upgrade
NAWCAD maintains a jet car track capability to perform RDT&E of aircraft landing and recovery equipment. This CIP project will upgrade the engine, that is used to control the arresting gear on the track, to the current FLEET MK7 configuration. Alternatives have been considered, however this project is the most cost effective solution for the government.

Advanced Recovery Control (ARC) Simulator
This project supports the Aircraft Launch and Recovery Equipment (ALRE) test site mission at Lakehurst. This CIP project will procure simulation equipment replicating the Mark 7 Advanced Recovery Control system, helping NAWCAD provide fleet support for the ARC system used on aircraft carriers. Alternatives have been considered, however this project is the most cost effective solution for the government.

NANOENERGETICS SYNTHESIS, FORMULATION & CHARCTERIZATION
This investment seeks to bridge the gap between the study and application or use of nanoenergetic materials and strengthen our ability to synthesize, formulate and manufacture energetic materials and components by adopting additive manufacturing technologies. This will provide NAWCWD China Lake with an unparalleled ability to produce formulations with nanoenergetics while utilizing additive manufacturing techniques to formulate explosives, pyrotechnics and propellants with a level of precision and accuracy that is currently not possible.

FOTS_ARL-WARHEAD
The existing China Lake fiber optic cable plant (FOTS) is 30 years of age and is at its end of life. The age of NAWCWD's cable plant leads to brittle glass making repairs very difficult/impossible and costly. The location and placement of the existing cable plant when installed 30 years ago leads to troublesome access for repair equipment due to current environmental concerns. Multiple catastrophic breaks through the years, in addition to antiquated splicing techniques, have degraded the available bandwidth of the fibers. 4 out of 10 network spans are at 100% saturation point, 2 more spans are over 50% saturated leading to virtually no available capacity on many areas. This project would replace a portion of the original FOTS system in a key area of the base utilizing current technology and a divergent cable path.

FY 2018

Wind Tunnel Force and Moment Balance Upgrade
This project supports the Advanced Aeromechanics Lab at NAWCAD. This CIP project will procure a new piece of equipment (six component external balances) that will support the wind test capability used for RDT&E of aircraft. Alternatives have been considered, however this project is the most cost effective solution for the government.

Computed Tomography (CT) X-Ray Non Destructive Inspection (NDI)
This project will procure a new piece of equipment that will provides a new tool for materials engineering to conduct failure analysis versus the legacy method of destructive investigation of parts. The machine will also provide a unique capability to accurately qualify high value parts with complex topologies produced by advanced manufacturing methods. Alternatives have been considered, however this project is the most cost effective solution for the government.

Fluid Actuation Controls Technology (FACT)
This project supports the Power and Propulsion Lab at NAWCAD. This CIP will procure equipment that will support fuel test capabilities used for RDT&E of aircraft. Alternatives have been considered, however this project is the most cost effective solution for the government.

Aircraft Surveillance Radar (ASR)
NAWCAD operates a ASR-8 radar that provides critical air hazard impact operations involving air and surface participants and/or weapon engagements, UAS surveillance coverage and track data needed for airspace management and range clearance for safe conduct of range operations in the Special Use Airspace (SUA) as required for their respective missions. This is critical for low altitude flight test operations/missions conducted in the eastern areas of Patuxent River OPAREAS (PXOA). This project will upgrade the outdated analog system on the radar to the existing standard digital system. Alternatives have been considered, however this project is the most cost effective solution for the government.

DISTRIBUTED EW CAPABILITY
This project is to procure reliable Radio Frequency (RF) equipment baseline for RF Targets. The Weapons Division North range is the Navy's principal instrumented Test & Evaluation (T&E) range with RF radiating targets for live ordnance delivery and missile technology advancements. Advanced signal fidelity and remote control capability is required to meet the demand for testing the next generation of weapons. This project includes procuring emerging technologies in transmitters, waveguide, antennas, cables, controllers, pedestals, and test equipment. This project concurs with WD objective to "Improve customer engagement and satisfaction with a focus on NAWCWD program" and directly supports our next generation Electronic Warfare (EW)capability.

FOTS_BLDG 33 TO CLPL
The existing China Lake fiber optic cable plant (FOTS) is 30 years of age and is at its end of life. The age of NAWCWD's cable plant leads to brittle glass making repairs very difficult/impossible and costly. The location and placement of the existing cable plant when installed 30 years ago leads to troublesome access for repair equipment due to current environmental concerns. Multiple catastrophic breaks through the years, in addition to antiquated splicing techniques, have degraded the available bandwidth of the fibers.

RDT&E HIGH SPEED CORE NETWORK
This project proposal is #1 of 3 separate but synergistic CIP proposals being submitted this year to implement a fundamental Weapons Division (WD) core Research Development Test & Evaluation (RDT&E) communications infrastructure upgrade at primary locations to meet current and future Integrated Warfare Capability /Live Virtual Construct (IWC/LVC) and Speed to Fleet communications requirements. This first of three proposals is for a high speed core network necessary to fundamentally increase the network bandwidth and re-configuration capabilities of the unclassified and classified RDT&E networks.

FY 2019

FARM GPS Anti-Jam Testing
The NAWCAD Radar and Antenna Systems Division conducts measurements of the characteristics of antenna systems and avionics systems installed on partial to full-size airframes. These measurements are conducted from outdoor ranges at the Facilities for Antenna and RCS Measurements (FARM). A GPS simulator is used for the RDT&E mission. The existing simulator is obsolete. This project will procure an upgraded GPS simulator which will address new testing capability needs which are driven by DoD mandates. Alternatives have been considered, however this project is the most cost effective solution for the government.

Webster Field Outside Fiber Plant Upgrade
The NAWCAD RDT&E Enterprise Network supports all current test programs and laboratories /test facilities, by providing the single, protected data environment for processing and evaluating weapons system test performance on a variety of engineering platforms. The current Webster Field Outside Plant (OSP) distribution system is an aged, damaged, and inadequate direct buried multi-mode fiber system. The cabling was installed over 16 years ago, direct buried with-out tracer cables, thereby exposing the cable to many excavation cuts and requiring splice repairs. The installations also exceeded regulatory distance requirements necessary to support network throughput, seriously crippling mission capabilities. This project will build out network capability at Webster Field by installing new duct-banks, fiber and equipment to existing test site facilities drastically improving mission network capabilities across the base. Alternatives have been considered, however this project is the most cost effective solution for the government.

Horizonal Accelerator Braking Sled
The NAWCAD Human Services Division operates a horizontal accelerator facility which is used to perform RDT&E by simulating a crash environment. The existing horizontal accelerator is over 30 years old and is in need of replacement. This project will provide a new horizontal accelerator for the Navy's sole crash test lab. Alternatives have been considered, however this project is the most cost effective solution for the government.

X-Ray Photoelectron Spectroscopy
The NAWCAD Corrosion and Wear Laboratory provide capabilities for corrosion control and prevention research, fundamental materials degradation investigations, and fundamental electrochemical research. This project will provide a high-throughput X-ray photoelectron spectrometer that will assist in chemical surface analysis and characterization of current and emerging materials, including additive manufacturing (AM), batteries, and corrosion prevention materials. Alternatives have been considered, however this project is the most cost effective solution for the government.

Advanced Deck Handling Technology Evaluation Center
The NAWCAD Robotics and Intelligence Systems Engineering Lab works to develop and mature ALRE/SE S&T solutions in robotics and intelligent systems with the goal of reducing manning requirements / workload and increasing safety / productivity for fleet personnel. This project will provide Robotic Emulation equipment for use with Deck Handling Technologies (DHT) to enable a New Capability for testing of current and future generation DHT with relevant sized systems, in relative environment conditions / parameters, and interaction scenarios. Alternatives have been considered, however this project is the most cost effective solution for the government.

DISTRIBUTED EW CAPABILITY
This project is to procure reliable Radio Frequency (RF) equipment baseline for RF Targets. The Weapons Division North range is the Navy's principal instrumented Test & Evaluation (T&E) range with RF radiating targets for live ordnance delivery and missile technology advancements. Advanced signal fidelity and remote control capability is required to meet the demand for testing the next generation of weapons.

RDT&E HIGH SPEED CORE NETWORK
This project proposal is #1 of 3 separate but synergistic CIP proposals being submitted this year to implement a fundamental Weapons Division (WD) core Research Development Test & Evaluation (RDT&E) communications infrastructure upgrade at primary locations to meet current and future Integrated Warfare Capability /Live Virtual Construct (IWC/LVC) and Speed to Fleet communications requirements.

FY19 ADVANCED PROPULSION & COMBUSTION RESEARCH LAB
The purpose of the Advanced Propulsion and Combustion Research Lab is to diversify our applied propulsion and combustion R&D capabilities to support future technology development programs such as the solid fueled ramjet. This includes renovation to the flow facility at 01371 to allow direct-connect and free-jet testing of advanced propulsion systems including cruise missile gas turbines, ramjets and scramjets.

CHEMICAL PILOT PLANT MODERNIZATION
This effort will modernize the Chemical Pilot Plant at the Energetics Materials Research and Processing Branch, Code 477100D. The purpose is to update our chemical synthesis and scale up capabilities, expanding the types and modalities of chemical processes that can be performed on a pilot scale.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
Department of the Navy/ Research and Development	#002 - ADPE						Naval Air Warfare Center		
	FY 2017			FY 2018			FY 2019		
ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	6	386	$2,315	2	862	$1,724	2	685	$1,369
Computer Hardware (Network)	5	618	$3,091	4	1,118	$4,471	6	1,011	$6,063
Computer Software (Operating System)	1	491	$491	1	600	$600	2	1,000	$2,000
Telecommunications	0	-	$0	0	-	$0	0	-	$0
Other Support Equipment	1	407	$407	0	-	$0	0	-	$0

Justification:

PROJECTS ABOVE $1M:

FY 2017

Intelligence Network Upgrade

NAWCAD manages a secure network that supports all East Coast NAWCAD Intelligence needs. This project will upgrade the network bandwidth from 1GB to 10GB. Alternatives have been considered, however this project is the most cost effective solution for the government.

FY 2018

RDT&E Network Data Environment
The NAWCAD RDT&E Enterprise Network supports all current test programs and laboratories /test facilities, by providing the single, protected data environment for processing and evaluating weapons system test performance on a variety of engineering platforms. This CIP project will provide a system to securely manage storage assets for maximum capacity utilization across multiple platform collaborative data environments. Alternatives have been considered, however this project is the most cost effective solution for the government.

UPGRADES TO SCE LAB
The purpose is to create a facility laboratory environment that will have the capability to support Advance, Innovative Technology and research. This will include developing the SCE technology to fill in numerous technology gaps in Electronic Warfare (EW), CYBER, Radar, Communications, and Weapons. This project will afford the ability to obtain the equipment that augment capabilities that exist today in order for Weapons Division (WD) to capitalize on new capabilities and opportunities and to be a recognized leader in SCE technology. This project has the potential to develop customer relationships with OSD efforts, joint advanced technology project with Lawrence Livermore, USMC, and IC organizations.

FY 2019

RDT&E Network Backup Solution
The NAWCAD RDT&E Enterprise Network supports all current test programs and laboratories /test facilities, by providing the single, protected data environment for processing and evaluating weapons system test performance on a variety of engineering platforms. This CIP project will provide a centralized backup/restore services for lab/customer assets and their stored data. Alternatives have been considered, however this project is the most cost effective solution for the government.

RDT&E Security Incident Event Management (SIEM)
The NAWCAD RDT&E Enterprise Network supports all current test programs and laboratories /test facilities, by providing the single, protected data environment for processing and evaluating weapons system test performance on a variety of engineering platforms. Network infrastructure must meet DoD/DoN mandated logging and continuous monitoring requirements for IA Risk Management Framework (RMF) with a distributed / scalable / cohesive platform to perform continuous monitoring.
Current capabilities operate independently but no centralized reporting/searching capabilities. This CIP project will provide a distributed Security Incident and Event Management (SIEM) tool capable of independent operation, and enterprise searching across all RDT&E devices from an operations center. Alternatives have been considered, however this project is the most cost effective solution for the government.

EW UAV SIMULATION
Unmanned Aircraft Systems (UASs) provide support to a wide range of military operations, such as Intelligence, Surveillance and Reconnaissance (ISR), communication relay, collection of enemy order of battle information, mine warfare, maritime interdiction, surface warfare, Battle Damage Assessment (BDA), battlespace management, situational awareness, and target acquisition for special operations missions and maritime and littoral strike.

RDT&E KG INFRASTRUCTURE
This project proposal is #2 of 3 separate but synergistic CIP proposals to implement a fundamental WD core RDT&E communications infrastructure upgrade at primary locations to meet current and future IWC/LVC and Speed to Fleet communications requirements. This second of three proposals is for a KG infrastructure necessary to fundamentally increase the encryption transport and re-configuration capabilities of the RDT&E classified networks.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
Department of the Navy/ Research and Development	#003 - Software Development						Naval Air Warfare Center		
	FY 2017			FY 2018			FY 2019		
Software	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Internally Developed	0	-	$0	0	-	$0	0	-	$0
Externally Developed	7	362	$2,531	4	866	$3,465	2	338	$675
Total	7	362	$2,531	4	866	$3,465	2	338	$675

Justification:

PROJECTS ABOVE $1M:

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
Department of the Navy/ Research and Development	#004 - Minor Construction						Naval Air Warfare Center		
	FY 2017			FY 2018			FY 2019		
Minor Construction	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement	0	-	$0	0	-	$0	0	-	$0
New Construction	13	1,620	$21,055	4	2,582	$10,329	4	2,432	$9,726
Environmental Capability	0	-	$0	0	-	$0	0	-	$0
Total	13	1,620	$21,055	4	2,582	$10,329	4	2,432	$9,726

Justification:

PROJECTS ABOVE $1M:

FY 2017

Lead Capability Integration Facility (LCIF) LRP
Many emerging Naval Warfare System solutions are predicated on large, multi-system enclosures that require a solid floor integration space that is currently lacking at NAWCAD. This project will construct an addition to an existing facility that will provide additional space for Lead Capability Integration mission. Alternatives have been considered, however this project is the most cost effective solution for the government.

Bldg 8008 LRP

This project will construct an addition to an existing facility to provide high bay area for the safe and efficient reorganization of existing machinery. The addition will incorporate efficient process flows including space for materials, overhead crane, and an even elevation of floors. This project will eliminate the current poor layout where machines are located for fit within the current footprint rather than for efficient operations; improve geographically dispersed locations of associated functions; provide minimal space for storage of materials now housed in numerous Conex boxes, which are external to the facility. Also, this project will provide space where current operations can function in efficient ways with minimal disruptions. Alternatives have been considered, however this project is the most cost effective solution for the government.

10.0 LRP
In early 2016, the existing building occupied by Comptroller was condemned and deemed uninhabitable due to environmental and safety hazards. This project will construct a new building to provide office space for Comptroller personnel. Alternatives have been considered, however this project is the most cost effective solution for the government.

EW INTEGRATED PDS
Provide a classified Protected Distribution System (PDS) (i.e.. conduit with fiber runs) for RF signal propagation and
IT network capability that spans the EW buildings.

FY 2018

7.0 LRP
This project will construct a new building to provide office space for Command Corporate Operations personnel. Existing facilities are expensive to maintain and have environmental and safety hazards. Alternatives have been considered, however this project is the most cost effective solution for the government.

FY 2019

Engineering Support LRP
This project will construct a new building to provide office space for engineering personnel. Existing facilities are expensive to maintain and have environmental and safety hazards. Alternatives have been considered, but replacement is the most cost effective for the government. Alternatives have been considered, however this project is the most cost effective solution for the government.

Calibration Lab B410
This project will construct an addition to an existing facility to provide efficient reorganization of existing laboratory operations as well as provide space to execute calibration functions in accordance with DoD environmental standards and industry practice. The addition will incorporate efficient process flows and improve geographically dispersed locations of associated functions; Alternatives have been considered, however this project is the most cost effective solution for the government.

CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	**1**	**Non ADP**		**$22.091**	**$20.120**	**-$1.971**	
			Quality Control/Testing	$11.300	$9.562	-$1.738	Updated for FY17 Actuals
			Support Equipment	$10.791	$10.558	-$0.233	Updated for FY17 Actuals
	2	**ADP**		**$6.222**	**$6.304**	**$0.082**	
			Computer Hardware (Production)	$2.315	$2.315	$0.000	
			Computer Hardware (Network)	$3.011	$3.091	$0.080	Updated for FY17 Actuals
			Computer Software (Operating)	$0.490	$0.491	$0.001	
			Telecommunications	$0.406	$0.000	-$0.406	Error on PB18 ACA
			Other Support Equipment	$0.000	$0.407	$0.407	Error corrected from PB18 ACA
	3	**Software**		**$3.257**	**$2.531**	**-$0.726**	
			Externally Developed	$3.257	$2.531	-$0.726	Updated for FY17 Actuals
	4	**Minor Construction**		**$22.690**	**$21.055**	**-$1.635**	
			New Construction	$22.690	$21.055	-$1.635	Updated for FY17 Actuals
TOTAL FY 2017 CIP Program				**$54.260**	**$50.010**	**-$4.250**	

FY	L.I.	Category	Capability/Project	I.R.	C.P.R.	A.C.	Explanation
2018	**1**	**Non ADP**		**$27.811**	**$32.348**	**$4.537**	
			Quality Control/Testing	$14.400	$17.558	$3.158	Deferred FY17 Carryover into FY18
			Support Equipment	$13.411	$14.790	$1.379	Deferred FY17 Carryover into FY18
	2	**ADP**		**$7.170**	**$6.795**	**-$0.375**	
			Computer Hardware (Production)	$1.724	$1.724	$0.000	
			Computer Hardware (Network)	$4.846	$4.471	-$0.375	Reprogramming
			Computer Software (Operating)	$0.600	$0.600	$0.000	
	3	**Software**		**$3.242**	**$3.465**	**$0.223**	
			Externally Developed	$3.242	$3.465	$0.223	Reprogramming and deferred FY17 Carrryover into FY18
	4	**Minor Construction**		**$9.327**	**$10.329**	**$1.002**	
			New Construction	$9.327	$10.329	$1.002	Reprogramming
TOTAL FY 2018 CIP Program				**$47.550**	**$52.937**	**$5.387**	

FY	L.I.	Category	Capability/Project	I.R.	C.P.R.	A.C.	Explanation
2019	**1**	**Non ADP**		**$0.000**	**$28.517**	**$28.517**	
			Quality Control/Testing	$0.000	$16.907	$16.907	New program year added to budget
			Machinery	$0.000	$1.320	$1.320	
			Support Equipment	$0.000	$10.290	$10.290	New program year added to budget
	2	**ADP**		**$0.000**	**$9.432**	**$9.432**	
			Computer Hardware (Production)	$0.000	$1.369	$1.369	
			Computer Hardware (Network)	$0.000	$6.063	$6.063	New program year added to budget
			Computer Software (Operating)	$0.000	$2.000	$2.000	
	3	**Software**		**$0.000**	**$0.675**	**$0.675**	
			Externally Developed	$0.000	$0.675	$0.675	New program year added to budget
	4	**Minor Construction**		**$0.000**	**$9.726**	**$9.726**	
			New Construction	$0.000	$9.726	$9.726	New program year added to budget
TOTAL FY 2019 CIP Program				**$0.000**	**$48.350**	**$48.350**	

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
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(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Part 1			
1. Net Carry-In	2,332.8	2,458.4	2,382.5
2. Revenue	4,664.3	4,700.2	4,688.8
3. New Orders	4,789.9	4,624.2	4,607.2
4. Exclusions:			
Foreign Military Sales	248.5	124.1	37.5
Base Realignment and Closure	0.0	0.0	0.0
Other Federal Department and Agencies	59.6	32.2	9.4
Non-Federal and Others	22.3	8.5	6.7
Institutional Major Range & Test Facility Base	279.4	322.5	358.8
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
5. Orders for Carryover Calculation	4,180.1	4,136.9	4,194.8
6. Weighted Average Outlay Rate	50.8%	50.6%	50.2%
7. Carryover Rate	49.2%	49.4%	49.8%
8. Allowable Carryover	2,390.2	2,444.4	2,457.7
Allowable Carryover(First Year)	2,056.6	2,043.6	2,089.0
Allowable Carryover (Second Year Procurement-funded Orders)	333.6	400.8	368.6
Part II			
9. Balance of Customer Order at Year End	2,458.4	2,382.5	2,300.9
10. Work-in-progress	0.0	0.0	0.0
11. Exclusions:			
Foreign Military Sales	186.6	206.5	181.5
Base Realignment and Closure	0.1	0.1	0.1
Other Federal Department and Agencies	44.5	40.0	36.0
Non-Federal and Others	22.6	21.8	21.5
Institutional Major Range & Test Facility Base	141.9	190.6	215.7
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
12. Calculated Actuals Carryover	2,062.7	1,923.5	1,846.2

Some totals may not add due to rounding.
EXWC,NSWC,NUWC,NAWCDIV,SPAWAR,NRL use RDTEN rates.

4. Naval Surface Warfare Center

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NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – NAVAL SURFACE WARFARE CENTER
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Mission Statement / Overview:
The Naval Surface Warfare Center provides research, development, test and evaluation; in-service engineering; and fleet and integrated logistic support for surface ship combat systems, surface and mine warfare combat systems, ordnance, explosive ordnance disposal technology, mines, amphibious warfare systems, mine countermeasures, special warfare and strategic systems, systems interfaces, weapon systems and subsystems, unique equipment and related expendable ordnance of the Navy surface fleet. In addition, they provide primary technical capability in energetics through engineering, fleet and operational support, manufacturing technology, limited production, industrial base support and research, development, test and evaluation for energetic materials, ordnance devices and components and related ordnance engineering standards. Central to our strategy is the sustainment and development of critical core capabilities that support legacy and emerging systems in the Fleet. Critical to our vision is the need to acquire, train, and retain top quality, diverse, scientists and engineers and to maintain the corresponding infrastructure necessary to support the Navy's future strategic requirements.

Activity Group Composition:
The Center is comprised of eight operating divisions whose operations and locations are described briefly below.

CARDEROCK DIVISION: The mission of Naval Surface Warfare Center (NSWC) Carderock Division is to provide research, development, test and evaluation, analysis, acquisition support, in-service engineering, logistics and integration of surface and undersea vehicles and associated systems. The Carderock Division also works to develop and apply science and technology associated with naval architecture and marine engineering, and provide support to the maritime industry, and to execute other responsibilities as assigned by Commander, Naval Surface Warfare Center. The division has one primary operating site, Bethesda, MD, with smaller operating sites at Ft. Lauderdale, FL, Memphis, TN, Norfolk, VA, Bremerton, WA, and Bayview, ID.

CORONA DIVISION: The mission of this division is to serve warfighters and program managers as the Navy's independent performance assessment agent throughout systems' lifecycles by gauging the Navy's warfighting capability of weapons and integrated combat systems, from unit to force level. This is accomplished through assessment of those systems' performance, readiness, quality, supportability, and the adequacy of training, and to execute other responsibilities as assigned by Commander, Naval Surface Warfare Center. The division has one primary operating site, Corona, CA, with a small engineering site at Seal Beach, CA.

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CRANE DIVISION: The mission of this division is to provide acquisition engineering, in-service engineering and technical support for sensors, electronics, electronic warfare and special warfare weapons. The NSWC Crane Division also works to apply component and system-level product and industrial engineering to surface sensors, strategic systems, special warfare devices and electronic warfare/information operations systems, and to execute other responsibilities as assigned by Commander, Naval Surface Warfare Center. The division has one primary operating site, Crane, IN, with a small engineering site at Fallbrook, CA.

DAHLGREN DIVISION: The mission of this division is to provide research, development, test and evaluation, analysis, systems engineering, integration and certification of complex naval warfare systems related to surface warfare, strategic systems, combat and weapons systems associated with surface warfare. The NSWC Dahlgren Division also works to provide system integration and certification for weapons, combat systems and warfare systems, and to execute other responsibilities as assigned by Commander, Naval Surface Warfare Center. The division has two primary operating sites, Dahlgren, VA, and Dam Neck, VA.

INDIAN HEAD EXPLOSIVE ORDNANCE DISPOSAL (EOD) TECHNOLOGY DIVISION: The mission of this division is to provide research, development, engineering, manufacturing, test, evaluation and in-service support of energetic systems and energetic materials (chemicals, propellants and explosives) for ordnance, warheads, propulsion systems, pyrotechnic devices, fuzing, electronic devices, Cartridge Actuated Devices and Propellant Actuated Devices (CAD/PADs). In addition they provide Packaging, Handling, Storage, and Transportation (PHS&T), gun systems and special weapons for Navy, Joint Forces and the Nation. The division develops and delivers Explosive Ordnance Disposal (EOD) technology, knowledge, tools and equipment and their life cycle support through an expeditionary work force which meets the needs of the Department of Defense, combatant commanders and our foreign and interagency partners. It also supports the Executive Manager for EOD Technology and Training and executes other responsibilities as assigned by the Commander, Naval Surface Warfare Center. The primary site of operations is Indian Head, MD, with smaller operations at Rison, MD, MacAlester, OK, and Picatinny, NJ.

PANAMA CITY DIVISION: The mission of this division is to conduct research, development, test and evaluation, and in-service support of mine warfare systems, mines, naval special warfare systems and other missions that occur primarily in coastal (littoral) regions. The NSWC Panama City Division also works to execute other responsibilities as assigned by Commander, Naval Surface Warfare Center. The primary operating site is Panama City, FL.

NARRATIVE
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PHILADELPHIA DIVISION: The mission of NSWC Philadelphia Division is to provide research, development, test and evaluation, acquisition support, engineering, systems integration, in-service engineering and fleet support with cyber-security, comprehensive logistics, and life-cycle savings through commonality. These are provided for surface and undersea vehicle machinery, ship systems, equipment and material. The NSWC Philadelphia works to execute other responsibilities as assigned by Commander, Naval Surface Warfare Center.

PORT HUENEME DIVISION: The mission of this division is to provide test and evaluation, systems engineering, integrated logistic support, in-service engineering and integration of surface ship weapons, combat systems and warfare systems. The NSWC Port Hueneme Division also works to provide the leading interface to the surface force for in-service maintenance and engineering support provided by the Warfare Centers and to execute other responsibilities as assigned by the Commander, Naval Surface Warfare Center. The primary operating site is Port Hueneme, CA. The division also operates a small detachment in Dam Neck, VA.

Significant Changes Since the FY 2018 President's Budget:
The FY 2018 budget estimate includes an increase in civilian end strength to ensure the civilian workforce aligns with projected workload.

Financial Profile:

Orders/Revenue/Expense/Operating Results ($Millions):	FY 2017	FY 2018	FY 2019
Orders	$4,363.0	$4,398.5	$4,477.7
Revenue	$4,265.8	$4,398.5	$4,477.7
Expense	$4,162.2	$4,454.5	$4,538.2
Operating Results	$103.6	($56.0)	($60.5)
Capital Surcharge	$0.0	$0.0	$0.0
Net Operating Results (NOR)	$103.6	($56.0)	($60.5)
Prior Year AOR	$14.2	$116.6	$60.5
Other Changes Affecting AOR	($1.1)	($0.1)	$0.0
Accumulated Operating Results (AOR)	$116.6	$60.5	$0.0

Some totals may not add due to rounding.

Orders, Revenue and Expense: Estimated orders are based on historical trends and inflationary changes. Increases in expenses are driven by inflationary changes along with a substantial increase in overhead related to Section 212 of 2017 NDAA. Revenue is set to achieve zero AOR in FY 2019.

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Collections/Disbursements/Outlays ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Collections	$4,242.8	$4,398.4	$4,477.7
Disbursements	$4,157.3	$4,451.7	$4,524.5
Net Outlays	($85.5)	$53.3	$46.8

Some totals may not add due to rounding.

Budgeted collections and disbursements are based on revenue, cost, Capital Investment Program (CIP) outlay estimates, anticipated changes in accounts payable/accrued labor expenses and accounts receivable.

Workload:

Direct Labor Hours (000):	**FY 2017**	**FY 2018**	**FY 2019**
Current Estimate	25,864	25,425	25,425

Direct Labor Hours: The workforce continues to be sized in accordance with funded workload.

Performance Indicators: The NSWC outputs are scientific and engineering designs, developments, tests, evaluations, analyses and fleet support in NSWC assigned mission areas. The measure for these outputs is the direct labor hour worked for a customer. Customers are charged a predetermined stabilized billing rate per direct employee hour worked (revenue rate). The rate includes the salary and benefits costs of the performing employee (direct labor costs) and a share of the overhead costs of the NSWC, both general and administrative support and the unique production overhead costs of the performing employee's cost center. Non-labor, non-overhead costs, such as customer required material and equipment purchases, travel expenses, and contractual services, are charged to the customer on an actual cost reimbursable basis, and are excluded from the NSWC stabilized pricing structure. The NSWC use total stabilized cost per direct labor hour as their performance criterion.

NARRATIVE
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Unit Cost:	**FY 2017**	**FY 2018**	**FY 2019**
Total Stabilized Cost ($Millions)	$2,727.6	$2,768.5	$2,745.2
Workload (DLHs) (000)	25,864	25,424	25,374
Unit cost (per DLH)	$105.46	$108.89	$108.19

Unit Cost is the method established to monitor costs. Unit cost goals allow activities to respond to workload changes by encouraging reduced costs when workload declines and allowing appropriate increases in costs when customers request additional services.

Stabilized / Composite Rates:	**FY 2017**	**FY 2018**	**FY 2019**
Stabilized Rate	$104.70	$105.74	$105.82
Change from Prior Year		1.00%	0.07%
Composite Rate Change		1.43%	0.82%

The Stabilized Rate consists of direct labor and applied overhead. Unique direct non-labor costs are billed on a reimbursable basis to the customer. The composite rate change incorporates both the stabilized costs and the reimbursable costs. The composite rate change in FY 2019 reflects adjustments in direct workload and pricing changes.

Staffing:

Civilian/Military ES & Workyears:	**FY 2017**	**FY 2018**	**FY 2019**
Civilian End Strength	18,796	18,907	18,907
Civilian Workyears (straight time)	18,234	18,256	18,256
Military End Strength	203	190	168
Military Workyears	189	189	169

Civilian Personnel: The civilian resource estimates are a baseline projection of civilian resources necessary to fulfill programming objectives and coordination with customers. Civilian resource estimates have been adjusted to reflect a balanced program of civilian resources to funded workload.

Military Personnel: The Military resource estimates are a baseline projection of military personnel necessary to fulfill programming objectives and coordination with customers. Military resource estimates have been adjusted to reflect a balanced program of military resources to funded workload.

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Capital Investment Program (CIP): The Capital Investment Program allows the NWCF to achieve its mission by reinvesting in plant equipment and facilities. Included in the capital budget are the following types of assets: automated data processing equipment (ADPE); non-ADPE equipment; automated data processing software, internally or externally developed; and minor construction. Minor construction includes projects meeting the criteria of the Defense Laboratory Revitalization Program. The projects will replace aging temporary buildings and upgrade and expand lab capability to accommodate workload growth and increase efficiency.

CIP Authority ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Equipment, Non-ADP / Telecom	$6.9	$9.7	$15.0
Equipment, ADPE / Telecom	$10.4	$11.3	$3.4
Software Development	$0.0	$0.6	$0.0
Minor Construction	$17.2	$40.1	$24.3
Total	$34.4	$61.8	$42.7

Some totals may not add due to rounding.

Carryover Compliance ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Net Carry-In	$1,947.2	$2,044.4	$2,044.4
Allowable Carryover	$2,091.5	$2,147.0	$2,189.1
Calculated Actual Carryover	$1,702.1	$1,696.6	$1,690.9
Delta (Actual-Allowable): Above Ceiling (+)/Below Ceiling	($389.4)	($450.4)	($498.2)

Some totals may not add due to rounding.

Carryover for each year is within the allowable carryover limit.

REVENUE AND EXPENSES
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL SURFACE WARFARE CENTER
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(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Revenue:			
Gross Sales			
Operations	4,239.1	4,356.6	4,434.9
Capital Surcharges	0.0	0.0	0.0
Capital Investment Recovery	26.7	41.8	42.7
Other Income			
Total Income	4,265.8	4,398.4	4,477.7
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	15.4	14.5	13.4
Civilian Personnel Compensation & Benefits	2,558.3	2,597.6	2,620.7
Travel and Transportation of Personnel	124.4	131.6	134.4
Material & Supplies (Internal Operations)	241.0	252.6	258.5
Equipment	53.8	105.0	106.6
Other Purchases from NWCF	187.4	121.8	140.1
Transportation of Things	11.7	5.6	5.6
Capital Investment Recovery	26.7	41.8	42.7
Printing and Reproduction	0.5	2.3	2.4
Advisory and Assistance Services	1.9	0.0	0.0
Rent, Communication, Utilities & Misc Charges	62.7	67.4	69.9
Other Purchased Services	878.8	1,114.2	1,143.8
Total Expenses	4,162.7	4,454.5	4,538.2
Work in Process Adjustment	0.0	0.0	0.0
Comp Work for Activity Retention Adjustment	-0.5	0.0	0.0
Cost of Goods Sold	4,162.2	4,454.5	4,538.2
Operating Result	103.6	-56.1	-60.5
Adjustments Affecting NOR	-1.1	0.0	0.0
Capital Surcharges	0.0	0.0	0.0
Extraordinary Expenses Unmatched	0.0	0.0	0.0
Other Changes Affecting NOR (All Others)	-1.1	0.0	0.0
Net Operating Result	103.6	-56.1	-60.5
PY AOR	14.2	116.6	60.5
TOTAL AOR	116.6	60.6	0.0
Non-Recoverable Adjustments impacting AOR	0.0	-0.1	0.0
AOR for budget purposes	116.6	60.5	0.0

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL SURFACE WARFARE CENTER
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(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
1. New Orders	4,363.0	4,398.4	4,477.7
a. Orders from DoD Components:	3,825.4	3,765.9	3,834.4
Department of the Navy	3,262.7	3,137.9	3,194.7
O & M, Navy	1,112.2	982.0	1,000.3
O & M, Marine Corps	72.3	61.8	63.4
O & M, Navy Reserve	2.4	2.2	2.3
O & M, Marine Corp Reserve	0.8	0.8	0.8
Aircraft Procurement, Navy	72.1	69.8	71.0
Weapons Procurement, Navy	81.8	93.8	95.6
Ammunition Procurement, Navy/MC	68.2	62.6	63.8
Shipbuilding & Conversion, Navy	401.9	361.0	367.3
Other Procurement, Navy	422.1	419.2	427.1
Procurement, Marine Corps	27.6	30.4	31.0
Family Housing, Navy/MC	0.0	0.0	0.0
Research, Dev., Test, & Eval., Navy	999.6	1,042.3	1,060.1
Military Construction, Navy	0.1	0.0	0.0
National Defense Sealift Fund	1.7	12.0	12.1
Other Navy Appropriations	0.0	0.0	0.0
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	62.6	112.6	114.2
Army Operation & Maintenance	17.5	17.8	18.0
Army Res, Dev, Test, Eval	31.9	33.9	34.4
Army Procurement	10.6	54.9	55.7
Army Other	2.6	5.9	6.0
Department of the Air Force	93.7	102.6	104.2
Air Force Operation & Maintenance	39.4	32.8	33.4
Air Force Res, Dev, Test, Eval	28.0	26.5	27.0
Air Force Procurement	26.2	43.3	43.9
Air Force Other	0.0	0.0	0.0
DOD Appropriation Accounts	406.5	412.9	421.3
Base Closure & Realignment	0.0	0.0	0.0
Operation & Maintenance Accounts	84.4	83.0	84.5
Res, Dev, Test & Eval Accounts	251.3	254.2	259.8
Procurement Accounts	64.5	66.7	68.0
Defense Emergency Relief Fund	0.0	0.0	0.0
DOD Other	6.1	8.9	9.0
b. Orders from other Fund Activity Groups	290.6	398.3	403.8
c. Total DoD	4,116.0	4,164.2	4,238.2
d. Other Orders:	247.0	234.2	239.5
Other Federal Agencies	68.0	64.0	64.9
Foreign Military Sales	160.1	154.8	158.8
Non Federal Agencies	18.9	15.5	15.8
2. Carry-In Orders	1,947.2	2,044.4	2,044.4
3. Total Gross Orders	6,310.2	6,442.9	6,522.1
a. Funded Carry-Over before Exclusions	2,044.4	2,044.4	2,044.4
4. Revenue(-)	4,265.8	4,398.4	4,477.7
5. End of Year Work-In-Process (-)	0.0	0.0	0.0
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	342.3	347.9	353.6
7. Funded Carryover	1,702.1	1,696.6	1,690.9

Note: Line 5 (End of Year Work-In-Process) is adjusted for Non-DOD BRAC, FMS, and Institutional MRTFB

CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL SURFACE WARFARE CENTER
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(DOLLARS IN MILLIONS)

	Costs
FY 2017 Actuals	**4,162.228**
FY 2018 President's Budget:	**4,316.414**
Estimated Impact in FY 2018 of Actual FY 2017 Experience:	**149.157**
Pricing Adjustments:	**-7.497**
Civilian Personnel	0.000
Fuel Price	0.000
General Inflation	-7.497
Program Changes:	**-3.582**
Other Changes:	**0.000**
Capital Investment Recovery	0.000
Facilities Sustainment, Restoration & Modernization	0.000
Other (list)	0.000
FY 2018 Current Estimate:	**4,454.492**
Pricing Adjustments:	**46.157**
Annualization of Prior Year Pay Raises	**12.387**
Civilian Personnel	12.312
Military Personnel	0.075
FY 2019 Pay Raise	**0.203**
Civilian Personnel	0.000
Military Personnel	0.203
Fuel Price Changes	-0.006
General Purchase Inflation	30.984
Other Price Changes (list)	**2.589**
Working Capital Fund Price Changes	2.589
Productivity Initiatives and Other Efficiencies:	**0.000**
Program Changes:	**-2.899**
Other Changes:	**40.417**
Capital Investment Recovery	0.881
Facilities Sustainment, Restoration & Modernization	29.144
Change in work days	10.454
Civilian Equivalency Rate Changes	-0.062
FY 2019 Estimate:	**4,538.167**

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CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL SURFACE WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

		FY 2017		FY 2018		FY 2019	
Line #	Description	Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	**Non-ADPE and Telecom Equipment >= $.250M**	**24**	**$6.851**	**27**	**$9.705**	**18**	**$15.013**
	- Vehicles	0	$0.000	0	$0.000	1	$0.250
	- Material Handling	0	$0.000	1	$0.600	0	$0.000
	- Installation Security	0	$0.000	0	$0.000	0	$0.000
	- Quality Control/Testing	11	$3.768	14	$4.445	10	$8.693
	- Medical Equipment	0	$0.000	0	$0.000	0	$0.000
	- Machinery	6	$0.633	6	$2.219	3	$3.118
	- Support Equipment	7	$2.450	6	$2.441	4	$2.952
2	**ADPE and Telecom Equipment >= $.250M**	**28**	**$10.437**	**26**	**$11.339**	**3**	**$3.353**
	- Computer Hardware (Production)	12	$5.733	11	$3.453	0	$0.000
	- Computer Hardware (Network)	16	$4.704	13	$6.636	3	$3.353
	- Computer Software (Operating)	0	$0.000	0	$0.000	0	$0.000
	- Telecommunications	0	$0.000	2	$1.250	0	$0.000
	- Other Support Equipment	0	$0.000	0	$0.000	0	$0.000
3	**Software Development >= $.250M**	**0**	**$0.000**	**1**	**$0.600**	**0**	**$0.000**
	- Internally Developed	0	$0.000	1	$0.600	0	$0.000
	- Externally Developed	0	$0.000	0	$0.000	0	$0.000
4	**Minor Construction (>= $.250M and <= $6.000M)**	**36**	**$17.152**	**39**	**$40.136**	**15**	**$24.342**
	- Replacement Capability	14	$5.207	17	$18.551	2	$2.580
	- New Construction	22	$11.945	22	$21.585	13	$21.762
	- Environmental Capability	0	$0.000	0	$0.000	0	$0.000
	Grand Total	**88**	**$34.440**	**93**	**$61.780**	**36**	**$42.708**
	Total Capital Outlays		**$36.640**		**$39.030**		**$39.030**
	Total Capital Investment Recovery		**$26.715**		**$41.835**		**$42.716**

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
#001 - Non-ADPE	#001 - Non-ADPE						Naval Undersea Warfare Center		
	FY 2017			FY 2018			FY 2019		
Non-ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	0	-	$0	0	-	$0	1	700	$700
Material Handling	2	248	$496	4	236	$944	1	350	$350
Installation Security	0	-	$0	0	-	$0	0	-	$0
Quality Control/ Testing	6	591	$3,544	3	287	$861	0	-	$0
Medical Equipment	0	-	$0	0	-	$0	0	-	$0
Machinery	1	158	$158	1	275	$275	0	-	$0
Support Equipment	3	239	$717	5	885	$4,427	5	825	$4,123
Total	12	410	$4,915	13	501	$6,507	7	739	$5,173

Justification:

These Non-ADP investments fund the acquisition of mission essential equipment that support research and development, test and evaluation of current and newly developed submarine and undersea systems. Investments include the replacement of equipment that is unsafe, beyond economical repair; technically obsolete; or otherwise unusable, as well as, support equipment for new capabilities. These investments support submarine and undersea warfare systems including advanced sonar and combat systems, autonomous vehicles, weapons system, sensors and payload integration, advanced launcher systems, communications/imaging systems, rangecraft, material depot, and range systems. Equipment procurements will support initiatives such as:

- Undersea warfare systems test and evaluation
- Undersea tracking range development and operation
- Environmental and marine mammal mitigation measures
- Undersea communication system development and testing
- Autonomous and advanced sensor systems
- USW sonar systems calibration and testing
- Rapid prototyping and fabrication of USW systems
- Torpedo and unmanned systems in-service engineering
- USW obsolescence engineering
- USW materials fabrication
- Material handling

The Naval Undersea Warfare Center is the Navy's source for undersea systems expertise and technology providing the Navy with innovative, effective and affordable systems and services. If this equipment is not acquired, the Warfare Center will be unable to support and test critical undersea warfare components and provide the Navy with affordable, innovative capabilities to meet future fleet needs. The Warfare Center can expect to incur loss of personnel productivity, decreased customer satisfaction, rapidly

escalating maintenance costs, reduced services to the technical community, and technical obsolescence. Not being able to test and evaluate systems early in the development phase will increase the cost to the Navy by increasing development time and at-sea testing. Consequently, the Warfare Center will be unable to protect the fleet and make the necessary contributions to prepare for the future. An economic analysis was performed on all projects equal to or greater than $1M. A cost comparison analysis was performed on all individual projects less than $1M. All non-ADPE projects have an estimated useful life of 10 years and a range of payback periods from 0.5 – 9.67 years.

Subsidiary Shock Test System (SSTS) - FY17 $1.670K - The SSTS will replace the LAB vibration table which will add the capability to conduct automated sinusoidal, random and sign on random vibration qualification testing. The current LAB vibration table is a 48 year old, outdated sinusoidal vibration system that has reached end of life. The payback period of this investment is 5.8 years for FY17.

Electronic Warfare (EW) Simulator/Stimulator - FY18 $1,600K - Project will procure a transportable EW simulator to provide EW/Information Operations (IO) test and evaluation capabilities to support Development/Operational Tests and EW field tests to mitigate technical risks with regards to advanced technologies for future submarine systems. Current simulators are no longer reliable and cannot support the current operational tempo for testing. The payback period of this investment is 8.0 years for FY18.

Survivability Lab Equipment Upgrade - FY18 $1,357K - Project will procure and install a new HVAC system for Building 114. The ability to control the Survivability Lab's environmental conditions in the high humidity months is critical to Division Newport's ability to conduct Environmental Qualification Testing (EQT). The payback period of this investment is 3.4 years for FY18.

KB Dock Float System Upgrade - FY19 $1,500K - Mooring vessels to the existing degraded float system at the Keyport/Bangor (KB) Dock is becoming a safety and operations concern for both vessels and personnel as the system degrades. Investment implements needed upgrades to three floats at KB Dock, SUBASE Bangor. Upgrades to include ship-side utilities management system, attachments to pier piles, cleats, bumpers, and restoring the floats' integrity. Keyport, Bangor Pier - KB Dock

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
#002 - ADPE	#002 - ADPE						Naval Undersea Warfare Center		
	FY 2017			FY 2018			FY 2019		
ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	7	354	$2,477	6	341	$2,047	4	426	$1,702
Computer Hardware (Network)	10	173	$1,734	5	621	$3,107	2	612	$1,224
Computer Software (Operating System)	0	-	$0	0	-	$0	0	-	$0
Telecommunications	0	-	$0	0	-	$0	0	-	$0
Other Support Equipment	1	420	$420	2	203	$406	0	-	$0
	0	-	$0	0	-	$0	0	-	$0
Total	18	257	$4,631	13	428	$5,560	6	488	$2,926

Justification:

These investments will support the acquisition of automated data processing and telecommunications equipment for the undersea research and development community. Funds will provide networks/connectivity between shore-based Undersea Warfare systems and procurement of hardware for mission essential research, development, test and evaluation and high speed computing needs. Investments will include submarine networks (simulated integrated combat systems), integrated networked simulation visualization systems and information assurance and security upgrades.

In order to provide the necessary scientific computer resources at the Naval Undersea Warfare Center, adequate resources must be acquired to meet the research, development, test and evaluation needs. These computational engines, visualization engines and repositories of DoD high performance computer systems are required for engineers and scientists to develop innovative undersea warfare solutions. Replacement of obsolete computer equipment will provide the Warfare Center with more reliable and more cost effective resources which will ensure that the technical areas have the capabilities they need to meet requirements. Increased reliability will reduce maintenance costs, increase overall efficiency, and enhance compatibility throughout the Warfare Center. Investment in equipment will also provide enhanced test and evaluation capabilities which will help the Warfare Center implement technologies and reach back capability that enables forward deployed technical resources to be more efficient and effective.

ADP Equipment supporting the research and development community must remain on the cutting edge of technology to conduct complex simulations, perform predictive analysis, and analyze undersea system performance. The capability to conduct cutting edge scientific computing within the R&D community is in jeopardy if investments are not made. Current equipment supporting mission essential systems will no longer be supported by the manufacturer. Investment in network infrastructure to support RDT&E laboratories at the Warfare Center is required in order to support Fleet customers. Without a network infrastructure in place, the RDT&E laboratories will not be able to function, support their customers or allow the Warfare Center to pursue its mission. If these investments are not made the Navy will be limited in their capability for the shore-based development, integration and testing of new submarine sonar, combat and weapon systems.

An economic analysis was performed on all projects equal to or greater than $1M. A cost comparison analysis was performed on all individual projects less than $1M. ADPE Projects have an average useful life of 5 years according to guidance provided in the OMB A-94 circular. These projects have a range of payback periods from 0.2 - 5.0 years.

Building Access Control (Phase III) FY18 $1,327K - Project will procure and integrate a system for exterior door access control functionality using Common Access Card (CAC) for high occupancy/mission critical Division Newport buildings and provide a connection to the Security Monitoring Center (SMC). Phase I was conducted in FY15 and Phase II in FY16. Phase III is expected to upgrade the remaining of the high occupancy/mission critical buildings at the Division. The payback period of this investment is 5.0 years for FY18.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
#003 - Software Development	#003 - Software Development						Naval Undersea Warfare Center		
	FY 2017			FY 2018			FY 2019		
Software	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Internally Developed	4	622	$2,486	4	359	$1,434	2	397	$793
Externally Developed	1	192	$192	0	-	$0	1	490	$490
	0	-	$0	0	-	$0	0	-	$0
	0	-	$0	0	-	$0	0	-	$0
Total	5	536	$2,678	4	359	$1,434	3	428	$1,283

Justification:

These investments will support the acquisition or development of software for the more effective and efficient operation of navy owned towed array calibration facilities, improve simulated submarine networks and more closely integrate submarine systems including sonar, combat control and communication systems. These investments will also improve the Navy's capabilities in obsolescence management, and in USW modeling and simulation, and in support of business functions.
These investments will directly support the transformation of the Warfare Centers to become a more agile support organization. These investments will improve the Navy's modeling and simulation capabilities and test and evaluation capabilities for submarine networks and systems. These modeling and simulation capabilities also enable the Warfare Centers to be more proactive in developing life-cycle solutions by providing the capability to model end-to-end mission/platform level naval engagements.
Without these investments, the warfare center will be unable to continue development, test and integration of submarine systems in a common, integrated fashion. Undersea warfare models need to be reviewed in light of modern computing architectures and futuristic ASW concepts such as distributed netted systems (DNS) and improved, redesigned, or replaced as appropriate so that NUWC's mission-level USW modeling and analysis capability can be sustained for the next generation of analysis problems.
Without these investments, the undersea simulation environment will not be fully equipped for high-level architecture (HLA) operation to support high-fidelity Hardware in the Loop (HWIL) Synthetic Ocean for joint warfighting training operations. Furthermore, the simulation environment will not have the flexibility to tailor training scenarios to any realistic scenario future operational commanders need to intensively prepare for and strategic/tactical analysis. Without investments, programs will continue to invest in unique software solutions leading to higher costs and time to develop and integrate submarine systems into the Fleet.
An economic analysis was performed on the project equal to or greater than $1M. A cost comparison analysis was performed on all individual projects less than $1M. The useful life for these projects is 5 years and a range of payback periods from .7 - 4.1 years.

eCraft Enterprise Solution - (FY17- $1,695K) Software Development Internal
Project will upgrade and enhance DIVNPT's eCraft system and develop a common post award contract management tool (with required interfaces to authoritative data sources) to deploy across NAVSEA WCs. The objective is for eCraft to serve as the single, end to end corporate commercial acquisition management solution for NAVSEA WC's. The payback period of this investment is .5 years for FY17.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
#004 - Minor Construction	#004 - Minor Construction						Naval Undersea Warfare Center		
	FY 2017			FY 2018			FY 2019		
Minor Construction	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement	0	-	$0	1	260	$260	1	2,750	$2,750
New Construction	14	218	$3,050	20	235	$4,702	9	497	$4,470
Environmental Capability	0	-	$0	0	-	$0	1	745	$745
	0	-	$0	0	-	$0	0	-	$0
	0	-	$0	0	-	$0	0	-	$0
	0	-	$0	0	-	$0	0	-	$0
Total	14	218	$3,050	21	236	$4,962	11	724	$7,965

Justification:

Investments in Minor Construction enhance the Naval Warfare Center Mission by developing buildings, structures or other real property. Minor Construction projects will replace obsolete facilities, consolidate operations for productivity increases, provide state of the art processing areas for new R&D missions, and correct environmental deficiencies. Minor construction projects include all costs to deliver a complete and usable project. Minor Construction projects meet the DOD capitalization criteria. The below MCON projects utilize Sec. 2804 of the FY08 National Defense Authorization Act (NDAA) authority for the Lab Revitalization Demonstration Program (LDRP) and authority to correct Life, Safety & Health issues.

Minor Construction is used at the Naval Warfare Centers to:

- modify existing spaces and construct new facilities to provide suitable space to design and test new equipment for the surface warfare community.
- improve security measures and provide increase security for new initiatives
- reduce operating expenses by building or improving government owned facilities so that leased space, high maintenance space, or portable space may be vacated.
- reduce energy consumption by installing energy efficient building systems
- modify existing systems to bring facilities up to current building, safety, or environmental codes.

Economic Information:

An economic analysis was performed on the project equal to or greater than $1M. A cost comparison analysis was performed on all individual projects less than $1M. Projects have an average useful life of 20 years according to guidance provided in the OMB A-94 circular. These projects have a range of payback periods from 2.9 - 11.4 years.

Unmanned Systems Prototyping and Experimentation Facility - FY17 $1.170K - This CIP project will provide infrastructure upgrades to support unmanned systems development, payload integration, hardware in the loop testing, and other rapid prototyping efforts associated with accelerated prototype evaluations prior to at-sea testing. Upgrades include HVAC, electrical, lighting, fire/safety/CO2, flooring, etc. The payback period of this investment is 6.2 years for FY17.

Building Restoration - North End Bldg 1 - FY19 $2,750K - Renovate and convert the north end of Bldg 1 to usable office space based on architecture & engineering (A&E) design received from NAVFAC. The facility is currently vacant due to it being unsafe and inoperative. The project accomodates consolidation of the Weapon System Engineering Division near the Torpedo IMA, in addition to Obsolescence Management & In-Service Engineering growth. Facilities has assessed growth requirements and determined recapitalization of this Bldg to be the most cost-effective option to support expanded functions. Demolition of the Bldg would cost $2M. Keyport - Bldg 1

CAPITAL BUDGET EXECUTION
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FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	**1**	**Non ADP**		**$9.707**	**$6.851**	**($2.856)**	
			Vehicles	$0.000	$0.000	$0.000	
			Material Handling	$0.000	$0.000	$0.000	
			Quality Control/Testing	$4.084	$3.768	($0.316)	Program Restructure/Adjustments for PY Obligations & Carryover
			Machinery	$2.145	$0.633	($1.512)	Program Restructure/Adjustments for PY Obligations & Carryover
			Support Equipment	$3.478	$2.450	($1.028)	Program Restructure/Adjustments for PY Obligations & Carryover
	2	**ADP**		**$12.239**	**$10.437**	**($1.802)**	
			Computer Hardware (Production)	$5.524	$5.733	$0.209	Program Restructure/Adjustments for PY Obligations & Carryover
			Computer Hardware (Network)	$6.713	$4.704	($2.009)	Program Restructure/Adjustments for PY Obligations & Carryover
			Computer Software (Operating)	$0.000	$0.000	$0.000	
			Telecommunications	$0.002	$0.000	($0.002)	Program Restructure/Adjustments for PY Obligations & Carryover
			Other Support Equipment	$0.000	$0.000	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
			Internally Developed	$0.000	$0.000	$0.000	
			Externally Developed	$0.000	$0.000	$0.000	
	4	**Minor Construction**		**$33.072**	**$17.152**	**($15.920)**	
			Replacement	$17.022	$5.207	($11.815)	Program Restructure/Adjustments for PY Obligations & Carryover
			New Construction	$16.050	$11.945	($4.105)	Program Restructure/Adjustments for PY Obligations & Carryover
			Environmental Capability	$0.000	$0.000	$0.000	
TOTAL FY 2017 CIP Program				**$55.018**	**$34.440**	**($20.578)**	

FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2018	**1**	**Non ADP**		**$7.312**	**$9.705**	**$2.393**	
			Vehicles	$0.000	$0.000	$0.000	
			Material Handling	$0.000	$0.600	$0.600	Program Restructure/Adjustments for Deferrals
			Quality Control/Testing	$4.516	$4.445	($0.071)	Program Restructure/Adjustments for Deferrals
			Machinery	$0.000	$2.219	$2.219	Program Restructure/Adjustments for Deferrals
			Support Equipment	$2.796	$2.441	($0.355)	Program Restructure/Adjustments for Deferrals
	2	**ADP**		**$10.124**	**$11.339**	**$1.215**	
			Computer Hardware (Production)	$3.337	$3.453	$0.116	Program Restructure/Adjustments for Deferrals
			Computer Hardware (Network)	$5.287	$6.636	$1.349	Program Restructure/Adjustments for Deferrals
			Computer Software (Operating)	$0.000	$0.000	$0.000	
			Telecommunications	$1.500	$1.250	($0.250)	Program Restructure/Adjustments for Deferrals
			Other Support Equipment	$0.000	$0.000	$0.000	
	3	**Software**		**$0.600**	**$0.600**	**$0.000**	
			Internally Developed	$0.600	$0.600	$0.000	
			Externally Developed	$0.000	$0.000	$0.000	
	4	**Minor Construction**		**$23.794**	**$40.136**	**$16.342**	
			Replacement	$5.824	$18.551	$12.727	Program Restructure/Adjustments for Deferrals
			New Construction	$17.970	$21.585	$3.615	Program Restructure/Adjustments for Deferrals
			Environmental Capability	$0.000	$0.000	$0.000	
TOTAL FY 2018 CIP Program				**$41.830**	**$61.780**	**$19.950**	

FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2019	**1**	**Non ADP**		**$15.013**	**$15.013**	**$0.000**	
			Vehicles	$0.250	$0.250	$0.000	
			Material Handling	$0.000	$0.000	$0.000	
			Quality Control/Testing	$8.693	$8.693	$0.000	
			Machinery	$3.118	$3.118	$0.000	
			Support Equipment	$2.952	$2.952	$0.000	
	2	**ADP**		**$3.353**	**$3.353**	**$0.000**	
			Computer Hardware (Production)	$0.000	$0.000	$0.000	
			Computer Hardware (Network)	$3.353	$3.353	$0.000	
			Computer Software (Operating)	$0.000	$0.000	$0.000	
			Telecommunications	$0.000	$0.000	$0.000	
			Other Support Equipment	$0.000	$0.000	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
			Internally Developed	$0.000	$0.000	$0.000	
			Externally Developed	$0.000	$0.000	$0.000	
	4	**Minor Construction**		**$24.342**	**$24.342**	**$0.000**	
			Replacement	$2.580	$2.580	$0.000	
			New Construction	$21.762	$21.762	$0.000	
			Environmental Capability	$0.000	$0.000	$0.000	
TOTAL FY 2019 CIP Program				**$42.708**	**$42.708**	**$0.000**	

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL SURFACE WARFARE CENTER
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	FY 2017	FY 2018	FY 2019
Part 1			
1. Net Carry-In	1,947.2	2,044.4	2,044.4
2. Revenue	4,265.8	4,398.4	4,477.7
3. New Orders	4,363.0	4,398.4	4,477.7
4. Exclusions:			
Foreign Military Sales	160.1	154.8	158.8
Base Realignment and Closure	0.0	0.0	0.0
Other Federal Department and Agencies	68.0	64.0	64.9
Non-Federal and Others	18.9	15.5	15.8
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
5. Orders for Carryover Calculation	4,116.0	4,164.1	4,238.2
6. Weighted Average Outlay Rate	55%	54.3%	54.3%
7. Carryover Rate	45.3%	45.7%	45.7%
8. Allowable Carryover	2,091.5	2,147.0	2,189.2
Allowable Carryover(First Year)	1,864.5	1,903.0	1,936.9
Allowable Carryover (Second Year Procurement-funded Orders)	227.0	244.0	252.3
Part II			
9. Balance of Customer Order at Year End	2,044.4	2,044.4	2,044.4
10. Work-in-progress	0.0	0.0	0.0
11. Exclusions:			
Foreign Military Sales	237.7	241.7	245.8
Base Realignment and Closure	0.1	0.1	0.1
Other Federal Department and Agencies	78.6	83.6	88.5
Non-Federal and Others	25.8	22.5	19.1
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
12. Calculated Actuals Carryover	1,702.2	1,696.5	1,690.9

Some totals may not add due to rounding.
EXWC,NSWC,NUWC,NAWCDIV,SPAWAR,NRL use RDTEN rates.

5. Naval Undersea Warfare Center

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NAVY WORKING CAPITAL FUND - NAVAL UNDERSEA WARFARE CENTER
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Mission Statement / Overview:
The mission of the Naval Undersea Warfare Center (NUWC) is to operate the Navy's full spectrum research, development, test and evaluation, engineering and fleet support center for submarines, autonomous underwater systems and offensive and defensive weapon systems associated with Undersea Warfare.

Activity Group Composition:
The Naval Undersea Warfare Center was established in January 1992, and is composed of two divisions, located in Newport, RI and Keyport, WA, and several detachments. The NUWC Headquarters organization is located at Newport RI.

NEWPORT DIVISION: The mission of this division is to provide research, development, test and evaluation, engineering, analysis and assessment, and fleet support capabilities for submarines, autonomous underwater systems, and offensive and defensive undersea weapon systems, and stewards existing and emerging technologies in support of undersea warfare. Execute other responsibilities as assigned by the Commander, Naval Undersea Warfare Center. The primary operating site is in Newport, RI with smaller operations at West Palm Beach, FL, Andros Island Bahamas and Norfolk, VA.

KEYPORT DIVISION: The mission of this division is to provide test and evaluation; in-service engineering, maintenance, and repair; Fleet readiness, and industrial-base support for undersea warfare systems, countermeasures, and sonar systems. We execute other responsibilities as assigned by the Commander, Naval Undersea Warfare Center. The major operating site is at Keyport WA, with detachments in Hawthorne NV, San Diego CA, Pearl Harbor and Ford Island HI, Nanoose British Columbia, and Naval Sea Logistics Center Mechanicsburg PA**.**

Significant Changes Since the FY 2018 President's Budget:
The FY 2018 budget estimate includes an increase in civilian end strength to align civilian workforce with projected workload.

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Orders/Revenue/Expense/Operating Results ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Orders	$1,180.1	$1,236.6	$1,258.1
Revenue	$1,142.9	$1,229.4	$1,255.0
Expense	$1,136.1	$1,239.9	$1,259.8
Operating Results	$6.8	($10.5)	($4.8)
Capital Surcharge	$0.0	$0.0	$0.0
Net Operating Results (NOR)	$6.8	($10.5)	($4.8)
Other Changes Affecting AOR	$0.1	$0.0	$0.0
Accumulated Operating Results (AOR)	$15.3	$4.8	$0.0

Some totals may not add due to rounding.

Orders, Revenue and Expense: Estimated orders are based on historical trends and inflationary changes. Increases in expenses are driven by inflationary changes along with a substantial increase in overhead related to Sec 212 of 2017 NDAA. Revenue is set to achieve zero AOR in FY2019.

Collections/Disbursements/Outlays	**FY 2017**	**FY 2018**	**FY 2019**
Collections	$1,153.0	$1,228.9	$1,254.7
Disbursements	$1,127.8	$1,247.2	$1,256.3
Outlays	($25.2)	$18.3	$1.6

Some totals may not add due to rounding.

Budgeted collections and disbursements are based on revenue, cost, Capital Investment Program (CIP) outlay estimates, anticipated changes in accounts payable/accrued labor expenses and accounts receivable.

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Workload:

Direct Labor Hours (000):	**FY 2017**	**FY 2018**	**FY 2019**
Current Estimate	7,104	6,898	6,898

The workforce assumes a flat profile in line with anticipated workload.

Performance Indicators: The NUWCs output are scientific and engineering designs, developments, test, evaluations, analyses and fleets support in NUWC's assigned mission areas. The measure for these outputs is the direct labor hour worked for a customer. Customers are charged a predetermined stabilized billing rate per direct employee hour worked (revenue rate). The rate includes the salary and benefits costs of the performing employee (direct labor costs) and a share of the overhead costs of the NUWC, both general and administrative support and the unique production overhead costs of the employee's cost center. Non-labor, non-overhead costs, such as customer required material and equipment purchases, travel expenses, and contractual services, are charged to the customer on an actual cost reimbursable basis, and are excluded from NUWC's stabilized pricing structure. The NUWC use total stabilized cost per direct labor hour as their performance criterion.

Unit Cost:	**FY 2017**	**FY 2018**	**FY 2019**
Total Stabilized Cost ($Millions)	$720.4	$753.1	$700.1
Workload (DLHs) (000)	7,104	6,898	6,550
Unit cost (per DLH)	$101.41	$109.18	$106.89

Unit cost represents the average cost of delivering goods and services to our customers and is the method established to monitor costs. Unit cost goals allow activities to respond to workload changes by encouraging reduced costs when workload declines and allowing appropriate increases in costs when customers request additional services.

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Stabilized / Composite Rates:	**FY 2017**	**FY 2018**	**FY 2019**
Stabilized Rate	$99.63	$105.02	$106.27
Change from Prior Year		5.41%	1.19%
Composite Rate Change		3.80%	1.48%

The Stabilized Rate consists of direct labor and applied overhead. Unique direct non-labor costs are billed on a reimbursable basis to the customer. The composite rate change incorporates both the stabilized costs and the reimbursable costs. The composite rate change in FY 2019 reflects adjustments to direct workload and pricing changes.

Staffing:

Civilian/Military ES & Workyears:	**FY 2017**	**FY 2018**	**FY 2019**
Civilian End Strength	5,430	5,413	5,413
Civilian Workyears (straight time)	5,242	5,259	5,259
Military End Strength	50	44	44
Military Workyears	24	32	32

Civilian Personnel: The civilian resource estimates are a baseline projection of civilian resources necessary to fulfill programming objectives and coordination with customers. Civilian resource estimates have been adjusted to reflect a balanced program of civilian resources to funded workload.

Military Personnel: The Military resource estimates are a baseline projection of military personnel necessary to fulfill programming objectives and coordination with customers. Military resource estimates have been adjusted to reflect a balanced program of military resources to funded workload.

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Capital Investment Program (CIP): The Capital Investment Program allows the NWCF to achieve its mission by reinvesting in plant equipment and facilities. Included in the capital budget are the following types of assets: automated data processing equipment (ADPE); non-ADPE equipment; automated data processing software, internally or externally developed; and minor construction. Minor construction includes projects meeting the criteria of the Defense Laboratory Revitalization Program. The projects will replace aging temporary buildings and upgrade and expand lab capability to accommodate workload growth and increase efficiency.

CIP Authority ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Equipment, Non-ADP / Telecom	$4.9	$6.5	$5.2
Equipment, ADPE / Telecom	$4.6	$5.6	$2.9
Software Development	$2.7	$1.4	$1.3
Minor Construction	$3.1	$5.0	$8.0
Total	$15.3	$18.5	$17.3

Some totals may not add due to rounding.

Carryover Compliance:	**FY 2017**	**FY 2018**	**FY 2019**
Net Carry-In	$624.4	$661.6	$668.9
Allowable Carryover	$520.6	$525.9	$538.3
Calculated Actual Carryover	$393.5	$395.8	$376.6
Delta (Actual-Allowable)	($127.2)	($130.1)	($161.7)

*Above Ceiling (+)/Below Ceiling (-)

Some totals may not add due to rounding.

Carryover for each budgeted year is within the allowable carryover limit.

REVENUE AND EXPENSES
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL UNDERSEA WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Revenue:			
Gross Sales			
Operations	1,131.0	1,210.2	1,235.6
Capital Surcharges	0.0	0.0	0.0
Capital Investment Recovery	11.9	19.1	19.4
Other Income			
Total Income	1,142.9	1,229.4	1,255.0
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	3.4	2.9	3.0
Civilian Personnel Compensation & Benefits	710.6	722.6	728.7
Travel and Transportation of Personnel	34.7	29.8	30.3
Material & Supplies (Internal Operations)	58.2	87.5	89.1
Equipment	3.9	4.0	4.1
Other Purchases from NWCF	77.1	77.0	77.3
Transportation of Things	3.4	2.1	2.1
Capital Investment Recovery	11.9	19.1	19.4
Printing and Reproduction	1.1	1.1	1.2
Advisory and Assistance Services	0.0	0.0	0.0
Rent, Communication, Utilities & Misc Charges	21.6	22.0	22.4
Other Purchased Services	210.9	271.7	282.3
Total Expenses	1,136.7	1,239.9	1,259.8
Work in Process Adjustment	0.0	0.0	0.0
Comp Work for Activity Retention Adjustment	-0.6	0.0	0.0
Cost of Goods Sold	1,136.1	1,239.9	1,259.8
Operating Result	6.8	-10.5	-4.8
Adjustments Affecting NOR	0.1	0.0	0.0
Capital Surcharges	0.0	0.0	0.0
Extraordinary Expenses Unmatched	0.0	0.0	0.0
Other Changes Affecting NOR (All Others)	0.1	0.0	0.0
Net Operating Result	6.8	-10.5	-4.8
PY AOR	8.4	15.3	4.8
TOTAL AOR	15.3	4.8	0.0
Non-Recoverable Adjustments impacting AOR	0.0	0.0	0.0
AOR for budget purposes	15.3	4.8	0.0

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL UNDERSEA WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
1. New Orders	1,180.1	1,236.6	1,258.1
a. Orders from DoD Components:	994.1	988.8	1,008.5
Department of the Navy	955.5	958.4	975.1
O & M, Navy	272.9	290.9	296.2
O & M, Marine Corps	1.9	1.3	1.3
O & M, Navy Reserve	0.8	0.8	0.8
O & M, Marine Corp Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	7.3	11.9	11.9
Weapons Procurement, Navy	66.8	71.9	72.2
Ammunition Procurement, Navy/MC	0.1	0.0	0.0
Shipbuilding & Conversion, Navy	102.7	109.6	110.3
Other Procurement, Navy	158.2	142.5	147.2
Procurement, Marine Corps	0.1	1.4	1.4
Family Housing, Navy/MC	0.0	0.0	0.0
Research, Dev., Test, & Eval., Navy	344.6	327.5	333.2
Military Construction, Navy	0.0	0.0	0.0
National Defense Sealift Fund	0.1	0.6	0.6
Other Navy Appropriations	0.0	0.0	0.0
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	3.9	3.7	3.7
Army Operation & Maintenance	0.1	0.9	0.9
Army Res, Dev, Test, Eval	1.6	0.9	0.9
Army Procurement	2.2	1.9	1.9
Army Other	0.0	0.0	0.0
Department of the Air Force	3.9	3.9	3.9
Air Force Operation & Maintenance	0.1	1.4	1.4
Air Force Res, Dev, Test, Eval	3.8	2.5	2.6
Air Force Procurement	0.0	0.0	0.0
Air Force Other	0.0	0.0	0.0
DOD Appropriation Accounts	30.8	22.8	25.9
Base Closure & Realignment	0.0	0.0	0.0
Operation & Maintenance Accounts	3.1	1.1	3.1
Res, Dev, Test & Eval Accounts	26.0	20.1	21.2
Procurement Accounts	1.4	1.3	1.3
Defense Emergency Relief Fund	0.0	0.0	0.0
DOD Other	0.3	0.2	0.2
b. Orders from other Fund Activity Groups	80.9	90.9	93.4
c. Total DoD	1,075.0	1,079.7	1,101.9
d. Other Orders:	105.1	156.9	156.1
Other Federal Agencies	5.9	6.9	6.9
Foreign Military Sales	57.1	114.1	113.4
Non Federal Agencies	42.1	35.9	35.9
2. Carry-In Orders	624.4	661.6	668.9
3. Total Gross Orders	1,804.6	1,898.2	1,926.9
a. Funded Carry-Over before Exclusions	661.6	668.9	671.9
4. Revenue(-)	1,142.9	1,229.4	1,255.0
5. End of Year Work-In-Process (-)	0.0	0.0	0.0
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	268.2	273.1	295.4
7. Funded Carryover	393.5	395.8	376.6

Note: Line 5 (End of Year Work-In-Process) is adjusted for Non-DOD BRAC, FMS, and Institutional MRTFB

CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL UNDERSEA WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	Costs
FY 2017 Actuals	**1,136.1**
FY 2018 President's Budget:	**1,229.9**
Estimated Impact in FY 2018 of Actual FY 2017 Experience:	**12.9**
Pricing Adjustments:	**-1.1**
Civilian Personnel	0.0
Fuel Price	0.0
General Inflation	-1.1
Program Changes:	**-8.6**
Other Changes:	**6.8**
Capital Investment Recovery	4.4
Facilities Sustainment, Restoration & Modernization	2.4
Other (list)	0.0
FY 2018 Current Estimate:	**1,239.9**
Pricing Adjustments:	**11.2**
Annualization of Prior Year Pay Raises	**3.6**
Civilian Personnel	3.6
Military Personnel	0.0
FY 2019 Pay Raise	**0.0**
Civilian Personnel	0.0
Military Personnel	0.0
Fuel Price Changes	0.0
General Purchase Inflation	6.3
Other Price Changes (list)	**1.3**
Working Capital Fund Price Changes	1.3
Productivity Initiatives and Other Efficiencies:	**0.0**
Program Changes:	**0.9**
Increased Workload	0.9
Other Changes:	**7.8**
Capital Investment Recovery	0.2
Facilities Sustainment, Restoration & Modernization	5.3
Change in work days	2.3
Civilian Equivalency Rate Changes	0.0
FY 2019 Estimate:	**1,259.8**

CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL UNDERSEA WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

		FY 2017		FY 2018		FY 2019	
Line #	Description	Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	**Non-ADPE and Telecom Equipment >= $.250M**	**12**	**$4.915**	**13**	**$6.507**	**7**	**$5.173**
	- Vehicles	0	$0.000	0	$0.000	1	$0.700
	- Material Handling	2	$0.496	4	$0.944	1	$0.350
	- Installation Security	0	$0.000	0	$0.000	0	$0.000
	- Quality Control/Testing	6	$3.544	3	$0.861	0	$0.000
	- Medical Equipment	0	$0.000	0	$0.000	0	$0.000
	- Machinery	1	$0.158	1	$0.275	0	$0.000
	- Support Equipment	3	$0.717	5	$4.427	5	$4.123
2	**ADPE and Telecom Equipment >= $.250M**	**18**	**$4.631**	**13**	**$5.560**	**6**	**$2.926**
	- Computer Hardware (Production)	7	$2.477	6	$2.047	4	$1.702
	- Computer Hardware (Network)	10	$1.734	5	$3.107	2	$1.224
	- Computer Software (Operating)	0	$0.000	0	$0.000	0	$0.000
	- Telecommunications	0	$0.000	0	$0.000	0	$0.000
	- Other Support Equipment	1	$0.420	2	$0.406	0	$0.000
3	**Software Development >= $.250M**	**5**	**$2.678**	**4**	**$1.434**	**3**	**$1.283**
	- Internally Developed	4	$2.486	4	$1.434	2	$0.793
	- Externally Developed	1	$0.192	0	$0.000	1	$0.490
4	**Minor Construction (>= $.250M and <= $6.000M)**	**14**	**$3.050**	**21**	**$4.962**	**11**	**$7.965**
	- Replacement Capability	0	$0.000	1	$0.260	1	$2.750
	- New Construction	14	$3.050	20	$4.702	9	$4.470
	- Environmental Capability	0	$0.000	0	$0.000	1	$0.745
	Grand Total	**49**	**$15.274**	**51**	**$18.463**	**27**	**$17.347**
	Total Capital Outlays		**$13.463**		**$15.735**		**$18.228**
	Total Capital Investment Recovery		**$11.895**		**$19.141**		**$19.366**

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
#001 - Non-ADPE	#001 - Non-ADPE						Naval Undersea Warfare Center		
	FY 2017			FY 2018			FY 2019		
Non-ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	0	-	$0	0	-	$0	1	700	$700
Material Handling	2	248	$496	4	236	$944	1	350	$350
Installation Security	0	-	$0	0	-	$0	0	-	$0
Quality Control/ Testing	6	591	$3,544	3	287	$861	0	-	$0
Medical Equipment	0	-	$0	0	-	$0	0	-	$0
Machinery	1	158	$158	1	275	$275	0	-	$0
Support Equipment	3	239	$717	5	885	$4,427	5	825	$4,123
Total	12	410	$4,915	13	501	$6,507	7	739	$5,173

Justification:

These Non-ADP investments fund the acquisition of mission essential equipment that support research and development, test and evaluation of current and newly developed submarine and undersea systems. Investments include the replacement of equipment that is unsafe, beyond economical repair; technically obsolete; or otherwise unusable, as well as, support equipment for new capabilities. These investments support submarine and undersea warfare systems including advanced sonar and combat systems, autonomous vehicles, weapons system, sensors and payload integration, advanced launcher systems, communications/imaging systems, rangecraft, material depot, and range systems. Equipment procurements will support initiatives such as:

- Undersea warfare systems test and evaluation
- Undersea tracking range development and operation
- Environmental and marine mammal mitigation measures
- Undersea communication system development and testing
- Autonomous and advanced sensor systems
- USW sonar systems calibration and testing
- Rapid prototyping and fabrication of USW systems
- Torpedo and unmanned systems in-service engineering
- USW obsolescence engineering
- USW materials fabrication
- Material handling

The Naval Undersea Warfare Center is the Navy's source for undersea systems expertise and technology providing the Navy with innovative, effective and affordable systems and services. If this equipment is not acquired, the Warfare Center will be unable to support and test critical undersea warfare components and provide the Navy with affordable, innovative capabilities to meet future fleet needs. The Warfare Center can expect to incur loss of personnel productivity, decreased customer satisfaction, rapidly escalating maintenance costs, reduced services to the technical community, and technical obsolescence. Not being able to test and evaluate systems early in the development

phase will increase the cost to the Navy by increasing development time and at-sea testing. Consequently, the Warfare Center will be unable to protect the fleet and make the necessary contributions to prepare for the future. An economic analysis was performed on all projects equal to or greater than $1M. A cost comparison analysis was performed on all individual projects less than $1M. All non-ADPE projects have an estimated useful life of 10 years and a range of payback periods from 0.5 – 9.67 years.

Subsidiary Shock Test System (SSTS) - FY17 $1.670K - The SSTS will replace the LAB vibration table which will add the capability to conduct automated sinusoidal, random and sign on random vibration qualification testing. The current LAB vibration table is a 48 year old, outdated sinusoidal vibration system that has reached end of life. The payback period of this investment is 5.8 years for FY17.

Electronic Warfare (EW) Simulator/Stimulator - FY18 $1,600K - Project will procure a transportable EW simulator to provide EW/Information Operations (IO) test and evaluation capabilities to support Development/Operational Tests and EW field tests to mitigate technical risks with regards to advanced technologies for future submarine systems. Current simulators are no longer reliable and cannot support the current operational tempo for testing. The payback period of this investment is 8.0 years for FY18.

Survivability Lab Equipment Upgrade - FY18 $1,357K - Project will procure and install a new HVAC system for Building 114. The ability to control the Survivability Lab's environmental conditions in the high humidity months is critical to Division Newport's ability to conduct Environmental Qualification Testing (EQT). The payback period of this investment is 3.4 years for FY18.

KB Dock Float System Upgrade - FY19 $1,500K - Mooring vessels to the existing degraded float system at the Keyport/Bangor (KB) Dock is becoming a safety and operations concern for both vessels and personnel as the system degrades. Investment implements needed upgrades to three floats at KB Dock, SUBASE Bangor. Upgrades to include ship-side utilities management system, attachments to pier piles, cleats, bumpers, and restoring the floats' integrity. Keyport, Bangor Pier - KB Dock

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
#002 - ADPE	#002 - ADPE						Naval Undersea Warfare Center		
	FY 2017			FY 2018			FY 2019		
ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	7	354	$2,477	6	341	$2,047	4	426	$1,702
Computer Hardware (Network)	10	173	$1,734	5	621	$3,107	2	612	$1,224
Computer Software (Operating System)	0	-	$0	0	-	$0	0	-	$0
Telecommunications	0	-	$0	0	-	$0	0	-	$0
Other Support Equipment	1	420	$420	2	203	$406	0	-	$0
	0	-	$0	0	-	$0	0	-	$0
Total	18	257	$4,631	13	428	$5,560	6	488	$2,926

Justification:

These investments will support the acquisition of automated data processing and telecommunications equipment for the undersea research and development community. Funds will provide networks/connectivity between shore-based Undersea Warfare systems and procurement of hardware for mission essential research, development, test and evaluation and high speed computing needs. Investments will include submarine networks (simulated integrated combat systems), integrated networked simulation visualization systems and information assurance and security upgrades.

In order to provide the necessary scientific computer resources at the Naval Undersea Warfare Center, adequate resources must be acquired to meet the research, development, test and evaluation needs. These computational engines, visualization engines and repositories of DoD high performance computer systems are required for engineers and scientists to develop innovative undersea warfare solutions. Replacement of obsolete computer equipment will provide the Warfare Center with more reliable and more cost effective resources which will ensure that the technical areas have the capabilities they need to meet requirements. Increased reliability will reduce maintenance costs, increase overall efficiency, and enhance compatibility throughout the Warfare Center. Investment in equipment will also provide enhanced test and evaluation capabilities which will help the Warfare Center implement technologies and reach back capability that enables forward deployed technical resources to be more efficient and effective.

ADP Equipment supporting the research and development community must remain on the cutting edge of technology to conduct complex simulations, perform predictive analysis, and analyze undersea system performance. The capability to conduct cutting edge scientific computing within the R&D community is in jeopardy if investments are not made. Current equipment supporting mission essential systems will no longer be supported by the manufacturer. Investment in network infrastructure to support RDT&E laboratories at the Warfare Center is required in order to support Fleet customers. Without a network infrastructure in place, the RDT&E laboratories will not be able to function, support their customers or allow the Warfare Center to pursue its mission. If these investments are not made the Navy will be limited in their capability for the shore-based development, integration and testing of new submarine sonar, combat and weapon systems.

An economic analysis was performed on all projects equal to or greater than $1M. A cost comparison analysis was performed on all individual projects less than $1M. ADPE Projects have an average useful life of 5 years according to guidance provided in the OMB A-94 circular. These projects have a range of payback periods from 0.2 - 5.0 years.

Building Access Control (Phase III) FY18 $1,327K - Project will procure and integrate a system for exterior door access control functionality using Common Access Card (CAC) for high occupancy/mission critical Division Newport buildings and provide a connection to the Security Monitoring Center (SMC). Phase I was conducted in FY15 and Phase II in FY16. Phase III is expected to upgrade the remaining of the high occupancy/mission critical buildings at the Division. The payback period of this investment is 5.0 years for FY18.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
#003 - Software Development	#003 - Software Development						Naval Undersea Warfare Center		
	FY 2017			FY 2018			FY 2019		
Software	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Internally Developed	4	622	$2,486	4	359	$1,434	2	397	$793
Externally Developed	1	192	$192	0	-	$0	1	490	$490
	0	-	$0	0	-	$0	0	-	$0
	0	-	$0	0	-	$0	0	-	$0
Total	5	536	$2,678	4	359	$1,434	3	428	$1,283

Justification:

These investments will support the acquisition or development of software for the more effective and efficient operation of navy owned towed array calibration facilities, improve simulated submarine networks and more closely integrate submarine systems including sonar, combat control and communication systems. These investments will also improve the Navy's capabilities in obsolescence management, and in USW modeling and simulation, and in support of business functions.
These investments will directly support the transformation of the Warfare Centers to become a more agile support organization. These investments will improve the Navy's modeling and simulation capabilities and test and evaluation capabilities for submarine networks and systems. These modeling and simulation capabilities also enable the Warfare Centers to be more proactive in developing life-cycle solutions by providing the capability to model end-to-end mission/platform level naval engagements.
Without these investments, the warfare center will be unable to continue development, test and integration of submarine systems in a common, integrated fashion. Undersea warfare models need to be reviewed in light of modern computing architectures and futuristic ASW concepts such as distributed netted systems (DNS) and improved, redesigned, or replaced as appropriate so that NUWC's mission-level USW modeling and analysis capability can be sustained for the next generation of analysis problems.
Without these investments, the undersea simulation environment will not be fully equipped for high-level architecture (HLA) operation to support high-fidelity Hardware in the Loop (HWIL) Synthetic Ocean for joint warfighting training operations. Furthermore, the simulation environment will not have the flexibility to tailor training scenarios to any realistic scenario future operational commanders need to intensively prepare for and strategic/tactical analysis. Without investments, programs will continue to invest in unique software solutions leading to higher costs and time to develop and integrate submarine systems into the Fleet.
An economic analysis was performed on the project equal to or greater than $1M. A cost comparison analysis was performed on all individual projects less than $1M. The useful life for these projects is 5 years and a range of payback periods from .7 - 4.1 years.

eCraft Enterprise Solution - (FY17- $1,695K) Software Development Internal
Project will upgrade and enhance DIVNPT's eCraft system and develop a common post award contract management tool (with required interfaces to authoritative data sources) to deploy across NAVSEA WCs. The objective is for eCraft to serve as the single, end to end corporate commercial acquisition management solution for NAVSEA WC's. The payback period of this investment is .5 years for FY17.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
#004 - Minor Construction	#004 - Minor Construction						Naval Undersea Warfare Center		
	FY 2017			FY 2018			FY 2019		
Minor Construction	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement	0	-	$0	1	260	$260	1	2,750	$2,750
New Construction	14	218	$3,050	20	235	$4,702	9	497	$4,470
Environmental Capability	0	-	$0	0	-	$0	1	745	$745
	0	-	$0	0	-	$0	0	-	$0
	0	-	$0	0	-	$0	0	-	$0
	0	-	$0	0	-	$0	0	-	$0
Total	14	218	$3,050	21	236	$4,962	11	724	$7,965

Justification:

Investments in Minor Construction enhance the Naval Warfare Center Mission by developing buildings, structures or other real property. Minor Construction projects will replace obsolete facilities, consolidate operations for productivity increases, provide state of the art processing areas for new R&D missions, and correct environmental deficiencies. Minor construction projects include all costs to deliver a complete and usable project. Minor Construction projects meet the DOD capitalization criteria. The below MCON projects utilize Sec. 2804 of the FY08 National Defense Authorization Act (NDAA) authority for the Lab Revitalization Demonstration Program (LDRP) and authority to correct Life, Safety & Health issues.

Minor Construction is used at the Naval Warfare Centers to:

- modify existing spaces and construct new facilities to provide suitable space to design and test new equipment for the surface warfare community.
- improve security measures and provide increase security for new initiatives
- reduce operating expenses by building or improving government owned facilities so that leased space, high maintenance space, or portable space may be vacated.
- reduce energy consumption by installing energy efficient building systems
- modify existing systems to bring facilities up to current building, safety, or environmental codes.

Economic Information:

An economic analysis was performed on the project equal to or greater than $1M. A cost comparison analysis was performed on all individual projects less than $1M. Projects have an average useful life of 20 years according to guidance provided in the OMB A-94 circular. These projects have a range of payback periods from 2.9 - 11.4 years.

Unmanned Systems Prototyping and Experimentation Facility - FY17 $1.170K - This CIP project will provide infrastructure upgrades to support unmanned systems development, payload integration, hardware in the loop testing, and other rapid prototyping efforts associated with accelerated prototype evaluations prior to at-sea testing. Upgrades include HVAC, electrical, lighting, fire/safety/CO2, flooring, etc. The payback period of this investment is 6.2 years for FY17.

Building Restoration - North End Bldg 1 - FY19 $2,750K - Renovate and convert the north end of Bldg 1 to usable office space based on architecture & engineering (A&E) design received from NAVFAC. The facility is currently vacant due to it being unsafe and inoperative. The project accomodates consolidation of the Weapon System Engineering Division near the Torpedo IMA, in addition to Obsolescence Management & In-Service Engineering growth. Facilities has assessed growth requirements and determined recapitalization of this Bldg to be the most cost-effective option to support expanded functions. Demolition of the Bldg would cost $2M. Keyport - Bldg 1

CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL UNDERSEA WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	**1**	**Non ADP**		**$6.013**	**$4.915**	**($1.098)**	
			Vehicles	$0.000	$0.000	$0.000	
			Material Handling	$0.701	$0.496	($0.205)	Actuals/Deferred Projects
			Quality Control/Testing	$4.644	$3.544	($1.100)	Actuals/Deferred Projects
			Machinery	$0.158	$0.158	$0.000	
			Support Equipment	$0.510	$0.717	$0.207	Reprogram/Actuals
	2	**ADP**		**$5.436**	**$4.631**	**($0.805)**	
			Computer Hardware (Production)	$2.718	$2.477	($0.241)	Actuals/Deferred Projects
			Computer Hardware (Network)	$2.718	$1.734	($0.984)	Actuals/Deferred Projects
			Computer Software (Operating)	$0.000	$0.000	$0.000	
			Telecommunications	$0.000	$0.000	$0.000	
			Other Support Equipment	$0.000	$0.420	$0.420	Reprogramming
	3	**Software**		**$3.637**	**$2.678**	**($0.959)**	
			Internally Developed	$3.445	$2.486	($0.959)	Actuals/Deferred Projects
			Externally Developed	$0.192	$0.192	$0.000	
	4	**Minor Construction**		**$4.155**	**$3.050**	**($1.105)**	
			Replacement	$0.000	$0.000	$0.000	
			New Construction	$4.155	$3.050	($1.105)	Actuals/Deferred Projects
			Environmental Capability	$0.000	$0.000	$0.000	
TOTAL FY 2017 CIP Program				**$19.241**	**$15.274**	**($3.967)**	

FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2018	**1**	**Non ADP**		**$6.886**	**$6.507**	**($0.379)**	
			Vehicles	$0.700	$0.000	($0.700)	Reprogramming
			Material Handling	$0.740	$0.944	$0.204	Deferred Projects
			Quality Control/Testing	$2.756	$0.861	($1.895)	Reprogamming/Deferred Projects
			Machinery	$0.000	$0.275	$0.275	Reprogramming
			Support Equipment	$2.690	$4.427	$1.737	Reprogramming
	2	**ADP**		**$2.936**	**$5.560**	**$2.624**	
			Computer Hardware (Production)	$1.966	$2.047	$0.081	Reprogramming / Deferred Projects
			Computer Hardware (Network)	$0.610	$3.107	$2.497	Reprogramming / Deferred Projects
			Computer Software (Operating)	$0.000	$0.000	$0.000	
			Telecommunications	$0.000	$0.000	$0.000	
			Other Support Equipment	$0.360	$0.406	$0.046	Deferred Projects
	3	**Software**		**$0.840**	**$1.434**	**$0.594**	
			Internally Developed	$0.490	$1.434	$0.944	Reprogramming / Deferred Projects
			Externally Developed	$0.350	$0.000	($0.350)	Reprogramming
	4	**Minor Construction**		**$3.985**	**$4.962**	**$0.977**	
			Replacement	$0.375	$0.260	($0.115)	Reprogramming / Deferred Projects
			New Construction	$2.865	$4.702	$1.837	Reprogramming / Deferred Projects
			Environmental Capability	$0.745	$0.000	($0.745)	Reprogramming
TOTAL FY 2018 CIP Program				**$14.647**	**$18.463**	**$3.816**	

FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2019	**1**	**Non ADP**		**$5.173**	**$5.173**	**$0.000**	
			Vehicles	$0.700	$0.700	$0.000	
			Material Handling	$0.350	$0.350	$0.000	
			Quality Control/Testing	$0.000	$0.000	$0.000	
			Machinery	$0.000	$0.000	$0.000	
			Support Equipment	$4.123	$4.123	$0.000	
	2	**ADP**		**$2.926**	**$2.926**	**$0.000**	
			Computer Hardware (Production)	$1.702	$1.702	$0.000	
			Computer Hardware (Network)	$1.224	$1.224	$0.000	
			Computer Software (Operating)	$0.000	$0.000	$0.000	
			Telecommunications	$0.000	$0.000	$0.000	
			Other Support Equipment	$0.000	$0.000	$0.000	
	3	**Software**		**$1.283**	**$1.283**	**$0.000**	
			Internally Developed	$0.793	$0.793	$0.000	
			Externally Developed	$0.490	$0.490	$0.000	
	4	**Minor Construction**		**$7.965**	**$7.965**	**$0.000**	
			Replacement	$2.750	$2.750	$0.000	
			New Construction	$4.470	$4.470	$0.000	
			Environmental Capability	$0.745	$0.745	$0.000	
TOTAL FY 2019 CIP Program				**$17.347**	**$17.347**	**$0.000**	

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL UNDERSEA WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Part 1			
1. Net Carry-In	624.4	661.6	668.9
2. Revenue	1,142.9	1,229.4	1,255.0
3. New Orders	1,180.1	1,236.6	1,258.1
4. Exclusions:			
Foreign Military Sales	57.1	114.1	113.4
Base Realignment and Closure	0.0	0.0	0.0
Other Federal Department and Agencies	5.9	6.9	6.9
Non-Federal and Others	42.1	35.9	35.9
Institutional Major Range & Test Facility Base	81.7	72.7	70.8
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
5. Orders for Carryover Calculation	993.3	1,007.0	1,031.1
6. Weighted Average Outlay Rate	54.2%	54.7%	54.7%
7. Carryover Rate	45.8%	45.3%	45.3%
8. Allowable Carryover	520.6	525.9	538.2
Allowable Carryover(First Year)	454.9	456.2	467.1
Allowable Carryover (Second Year Procurement-funded Orders)	65.7	69.7	71.1
Part II			
9. Balance of Customer Order at Year End	661.6	668.9	671.9
10. Work-in-progress	0.0	0.0	0.0
11. Exclusions:			
Foreign Military Sales	174.0	175.0	186.9
Base Realignment and Closure	0.0	0.0	0.0
Other Federal Department and Agencies	3.5	4.1	4.9
Non-Federal and Others	43.6	44.6	44.5
Institutional Major Range & Test Facility Base	47.1	49.4	59.1
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
12. Calculated Actuals Carryover	393.4	395.8	376.5

Some totals may not add due to rounding.
EXWC,NSWC,NUWC,NAWCDIV,SPAWAR,NRL use RDTEN rates.

6. SPAWAR Systems Center

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NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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Mission Statement / Overview:
The Space and Naval Warfare Systems Centers (SSCs) bring knowledge superiority to the warfighter. Their mission is to provide Naval, Joint, and National knowledge superiority through quality Research, Development, Test, and Evaluation (RDT&E); to rapidly deploy and provide full cycle support for sustainable, survivable, and interoperable Command, Control, Communication, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR), Information Operations (IO), Enterprise Information Services (EIS) and space capabilities. The Space and Naval Warfare Systems Command (SPAWAR) is the Navy's information dominance systems command, and the SSCs are SPAWAR's principal technical agent. Information dominance is the ability to seize and control the information domain "high ground" when, where, and however required for decisive competitive advantage across the range of Navy missions.

The SSCs are the C4ISR providers of choice for hundreds of customers throughout Navy and Department of Defense (DoD), and play an important role in the support of related technologies for Homeland Security, the Federal Bureau of Investigation, Department of State, and other federal agencies. As such, the SSCs must maintain innovative scientific and technical expertise, facilities, and the understanding of defense requirements to ensure that the Navy can develop, acquire, and maintain the systems needed to meet customer requirements at an acceptable price. The SSCs provide cradle-to-grave products and services including:

- Warfare systems analysis
- Plan and conduct effective technology programs
- Cost conscious systems engineering and technical support to program managers in all phases of systems development and acquisition
- Test and evaluation support including RDT&E and measurement facilities
- Technical input to the development of operational tactics
- Electronics material support (technical and management) for systems and equipment
- Specialized technical support to the Fleet for quick-reaction requirements

Activity Group Composition:
The SSCs are under the management of SPAWAR. This organizational structure facilitates the entire cycle of systems engineering from research and development through waterfront support. SSC Pacific has its headquarters in San Diego, CA, with offices in Philadelphia, PA; Pearl Harbor, HI; Guam; and Japan. SSC Atlantic has its headquarters in Charleston, SC, with offices in Norfolk, VA; and Washington, DC.

NARRATIVE
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RESEARCH AND DEVELOPMENT – SPACE AND NAVAL WARFARE SYSTEMS CENTERS
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Significant Changes Since the FY 2018 President's Budget: The budget estimates have been updated to reflect changes in civilian pay factor, as well as revised general inflation factor, and fuel rates.

Financial Profile:

Orders/Revenue/Expense/Operating Results ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Orders	$2,168.6	$2,318.5	$2,265.6
Revenue	$2,181.3	$2,343.9	$2,326.3
Expense	$2,184.0	$2,342.1	$2,333.7
Operating Results	($2.7)	$1.8	($7.4)
Capital Surcharge	$0.0	($11.5)	($5.5)
Net Operating Results (NOR)	($2.7)	($9.7)	($12.9)
Prior Year AOR	$25.3	$22.6	$12.9
Other Changes Affecting AOR	$0.0	$0.0	$0.0
Accumulated Operating Results (AOR)	$22.6	$12.9	$0.0

Some totals may not add due to rounding.

Orders, Revenue and Expense: Changes in orders from FY 2017 to FY 2019 are based on updated new orders estimates as coordinated with customers. Contributing to the change in revenue and expense from FY 2017 to FY 2019 are changes in civilian labor estimates required to support anticipated customer workload. Other changes to revenue and expense are a result of the pay raise and inflation/pricing. In addition, the $11.5 and $5.5 million capital surcharge in FY 2018 and FY 2019 are to fund vital Capital Investment Program (CIP) increases that are higher than capital investment recovery.

Collections/Disbursements/Outlays ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Collections	$2,177.1	$2,276.7	$2,300.4
Disbursements	$2,212.9	$2,295.2	$2,297.6
Outlays	$35.8	$18.5	($2.7)

Some totals may not add due to rounding.

Current net outlay projections reflect changes in workload and updated operating estimates.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – SPACE AND NAVAL WARFARE SYSTEMS CENTERS
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Workload:

Direct Labor Hours (000):	**FY 2017**	**FY 2018**	**FY 2019**
Current Estimate	10,381	10,678	10,664

The rates are based on Direct Labor Hours (DLHs) required for stabilized workload. The changes in direct labor hours estimates relate to supporting customer workload for efforts like cyber support, Distributed Common Ground System (DCGS), etc.

Performance Indicators: The Centers' outputs are scientific and engineering designs, developments, tests, evaluations, analyses, installations, and fleet support for systems in the SSCs' mission areas. The measure for these outputs is the direct labor hour worked for a customer. Customers are charged a predetermined stabilized billing rate per direct employee hour worked. The revenue rate includes the salary and benefits costs of the performing employee (direct labor costs) and a share of the overhead costs of the SSCs, both general and administrative support and the unique production overhead costs of the performing employee's cost center. Non-labor, non-overhead costs, such as customer required material and equipment purchases, travel expenses, and contractual services, are charged to the customer on an actual cost reimbursable basis, and are excluded from the SSCs' stabilized pricing structure. The SSCs use total stabilized cost per direct labor hour as their performance criterion.

Unit Cost:	**FY 2017**	**FY 2018**	**FY 2019**
Total Stabilized Cost ($Millions)	$1,161.4	$1,224.4	$1,230.6
Workload (DLHs) (000)	10,381	10,678	10,664
Unit cost (per DLH)	$111.87	$114.67	$115.41

The Unit Cost is the method established to authorize and control costs. Unit cost goals allow activities to respond to workload changes in execution by encouraging reduced costs when workload declines and allowing appropriate increases in costs when customers request additional services. FY 2019 unit cost reflects stabilized costs per associated stabilized hours as an expense rate.

Stabilized / Composite Rates:	**FY 2017**	**FY 2018**	**FY 2019**
Stabilized Rate	$108.42	$114.56	$114.72
Change from Prior Year		5.66%	0.14%
Composite Rate Change		3.78%	0.95%

The Stabilized Rate consists of direct labor and applied overhead. Unique direct non-labor costs are billed on a reimbursable basis to the customer. The composite rate change incorporates both the stabilized costs and the reimbursable costs. The composite rate change in FY 2019 reflects adjustments to direct workload and pricing changes.

Staffing:

Civilian/Military ES & Workyears:	**FY 2017**	**FY 2018**	**FY 2019**
Civilian End Strength	8,532	8,694	8,694
Civilian Workyears (straight time)	8,306	8,545	8,555
Military End Strength	82	80	79
Military Workyears	74	80	79

Civilian Personnel: Civilian strength levels, measured by both end strength and full-time equivalents (FTEs) remain steady in FY 2019.

Military Personnel: The Military resource estimates are a baseline projection of military personnel necessary to fulfill programming objectives and coordination with customers. Military resource estimates have been adjusted to reflect a balanced program of military resources to funded workload and remain steady in FY 2019.

Capital Investment Program (CIP): The Capital Investment Program allows the NWCF to achieve its mission by reinvesting in plant equipment and facilities. Included in the capital budget are the following types of assets: Automated Data Processing Equipment (ADPE); non-ADPE; automated data processing software, internally or externally developed; and minor construction. Minor construction includes projects meeting the criteria of the Defense Laboratory Revitalization Program (DLRP). The projects will replace aging temporary buildings and upgrade and expand lab capability to accommodate workload growth and increase efficiency.

CIP Authority ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Equipment, Non-ADP / Telecom	$0.0	$0.0	$0.0
Equipment, ADPE / Telecom	$0.9	$3.8	$2.4
Software Development	$0.0	$2.2	$0.0
Minor Construction	$9.6	$14.1	$10.8
Total	$10.5	$20.1	$13.2

Some totals may not add due to rounding.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – SPACE AND NAVAL WARFARE SYSTEMS CENTERS
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Carryover Compliance ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Net Carry-In	$1,116.4	$1,103.7	$1,078.3
Allowable Carryover	$1,036.9	$1,079.8	$1,069.7
Calculated Actual Carryover	$903.6	$875.0	$820.3
Delta (Actual-Allowable): Above Ceiling (+)/Below Ceiling (-)	($133.2)	($204.8)	($249.3)

Some totals may not add due to rounding.

Budgeted carryover is within the allowable ceiling target amount.

REVENUE AND EXPENSES
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Revenue:			
Gross Sales			
Operations	2,175.8	2,324.9	2,313.1
Capital Surcharges	0.0	11.5	5.5
Capital Investment Recovery	5.5	7.5	7.7
Other Income			
Total Income	2,181.3	2,343.9	2,326.3
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	7.9	7.9	7.8
Civilian Personnel Compensation & Benefits	1,177.2	1,236.8	1,249.6
Travel and Transportation of Personnel	48.6	47.7	50.0
Material & Supplies (Internal Operations)	134.7	136.0	137.6
Equipment	138.9	109.5	110.9
Other Purchases from NWCF	25.3	30.7	31.3
Transportation of Things	11.0	6.7	6.8
Capital Investment Recovery	5.5	7.5	7.7
Printing and Reproduction	0.4	0.4	0.4
Advisory and Assistance Services	0.0	0.0	0.0
Rent, Communication, Utilities & Misc Charges	32.5	38.8	39.2
Other Purchased Services	602.0	720.0	692.3
Total Expenses	2,184.0	2,342.1	2,333.7
Work in Process Adjustment	0.0	0.0	0.0
Comp Work for Activity Retention Adjustment	0.0	0.0	0.0
Cost of Goods Sold	2,184.0	2,342.1	2,333.7
Operating Result	-2.7	1.8	-7.4
Adjustments Affecting NOR	0.0	-11.5	-5.5
Capital Surcharges	0.0	-11.5	-5.5
Extraordinary Expenses Unmatched	0.0	0.0	0.0
Other Changes Affecting NOR (All Others)	0.0	0.0	0.0
Net Operating Result	-2.7	-9.7	-12.9
PY AOR	25.3	22.6	12.9
TOTAL AOR	22.6	12.9	0.0
Non-Recoverable Adjustments impacting AOR	0.0	0.0	0.0
AOR for budget purposes	22.6	12.9	0.0

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
1. New Orders	2,168.6	2,318.5	2,265.6
a. Orders from DoD Components:	1,907.8	2,028.7	1,975.0
Department of the Navy	1,464.5	1,605.5	1,597.7
O & M, Navy	495.1	512.1	523.4
O & M, Marine Corps	85.9	95.2	95.9
O & M, Navy Reserve	4.6	6.2	4.6
O & M, Marine Corp Reserve	0.4	0.3	0.2
Aircraft Procurement, Navy	13.0	14.0	14.1
Weapons Procurement, Navy	0.2	0.9	0.9
Ammunition Procurement, Navy/MC	0.0	0.0	0.0
Shipbuilding & Conversion, Navy	66.4	73.5	73.1
Other Procurement, Navy	430.0	532.7	516.0
Procurement, Marine Corps	33.4	43.8	43.1
Family Housing, Navy/MC	0.6	0.5	0.5
Research, Dev., Test, & Eval., Navy	335.0	325.4	324.9
Military Construction, Navy	0.0	0.3	0.2
National Defense Sealift Fund	0.2	0.1	0.2
Other Navy Appropriations	0.0	0.6	0.5
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	41.2	46.5	40.5
Army Operation & Maintenance	18.1	19.7	16.3
Army Res, Dev, Test, Eval	13.1	12.8	12.1
Army Procurement	9.2	13.3	11.2
Army Other	0.8	0.7	0.9
Department of the Air Force	91.8	100.6	79.3
Air Force Operation & Maintenance	48.8	57.3	49.8
Air Force Res, Dev, Test, Eval	33.1	37.8	27.5
Air Force Procurement	7.6	5.5	2.0
Air Force Other	2.2	0.0	0.0
DOD Appropriation Accounts	310.4	276.1	257.5
Base Closure & Realignment	0.3	0.0	0.0
Operation & Maintenance Accounts	87.0	88.2	90.9
Res, Dev, Test & Eval Accounts	109.1	97.7	74.8
Procurement Accounts	37.4	32.9	34.9
Defense Emergency Relief Fund	0.0	0.0	0.0
DOD Other	77.2	57.3	56.8
b. Orders from other Fund Activity Groups	119.2	106.1	104.2
c. Total DoD	2,027.0	2,134.7	2,079.2
d. Other Orders:	141.7	183.7	186.4
Other Federal Agencies	84.4	105.1	108.7
Foreign Military Sales	46.7	49.5	51.3
Non Federal Agencies	10.5	29.1	26.4
2. Carry-In Orders	1,116.4	1,103.7	1,078.3
3. Total Gross Orders	3,285.0	3,422.2	3,343.8
a. Funded Carry-Over before Exclusions	1,103.7	1,078.3	1,017.5
4. Revenue(-)	2,181.3	2,343.9	2,326.3
5. End of Year Work-In-Process (-)	0.0	0.0	0.0
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	200.1	203.3	197.3
7. Funded Carryover	903.6	875.0	820.3

Note: Line 5 (End of Year Work-In-Process) is adjusted for Non-DOD BRAC, FMS, and Institutional MRTFB

CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	Costs
FY 2017 Actuals	**2,184.0**
FY 2018 President's Budget:	**2,439.4**
Estimated Impact in FY 2018 of Actual FY 2017 Experience:	**0.0**
Pricing Adjustments:	**-3.1**
Civilian Personnel	0.0
General Purchase Inflation	-3.1
Fuel Price	0.0
Program Changes:	**-95.1**
Material purchases for Defense Health Agency (DHA) TRICARE and Marine Corps' Global Combat Support System (GCSS)	-88.4
PACOM PWC Support	-3.5
Other	-3.2
Other Changes:	**0.9**
Capital Investment Recovery	0.0
Facilities Sustainment, Restoration & Modernization	0.9
FY 2018 Current Estimate:	**2,342.1**
Pricing Adjustments:	**20.8**
Annualization of Prior Year Pay Raises	**6.3**
Civilian Personnel	6.2
Military Personnel	0.1
FY 2019 Pay Raise	**0.2**
Civilian Personnel	0.0
Military Personnel	0.2
Fuel Price Changes	0.0
General Purchase Inflation	14.3
Other Price Changes	**0.1**
Working Capital Fund Price Changes	0.1
Program Changes:	**-33.9**
US Strategic C2 Facility System Engineering	-11.0
Installation Support	-10.9
Tactical Undersea Network Architectures	-4.6
Unmanned Aerial Vehicles Information Ops	-4.6
USAF Global Hawk	-2.8
Other Changes:	**4.7**
Capital Investment Recovery	0.2
Facilities Sustainment, Restoration & Modernization	0.9
Change in Work Days	4.7
NISE realignment from G&A to CIP	-1.9
Other	0.7
FY 2019 Estimate:	**2,333.7**

CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

		FY 2017		FY 2018		FY 2019	
Line #	Description	Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	**Non-ADPE and Telecom Equipment >= $.250M**	**0**	**$0.000**	**0**	**$0.000**	**0**	**$0.000**
	- Vehicles	0	$0.000	0	$0.000	0	$0.000
	- Material Handling	0	$0.000	0	$0.000	0	$0.000
	- Installation Security	0	$0.000	0	$0.000	0	$0.000
	- Quality Control/Testing	0	$0.000	0	$0.000	0	$0.000
	- Medical Equipment	0	$0.000	0	$0.000	0	$0.000
	- Machinery	0	$0.000	0	$0.000	0	$0.000
	- Support Equipment	0	$0.000	0	$0.000	0	$0.000
2	**ADPE and Telecom Equipment >= $.250M**	**2**	**$0.926**	**3**	**$3.805**	**1**	**$2.400**
	- Computer Hardware (Production)	1	$0.440	1	$0.605	0	$0.000
	- Computer Hardware (Network)	1	$0.486	2	$3.200	1	$2.400
	- Computer Software (Operating)	0	$0.000	0	$0.000	0	$0.000
	- Telecommunications	0	$0.000	0	$0.000	0	$0.000
	- Other Support Equipment	0	$0.000	0	$0.000	0	$0.000
3	**Software Development >= $.250M**	**0**	**$0.000**	**3**	**$2.150**	**0**	**$0.000**
	- Internally Developed	0	$0.000	1	$0.400	0	$0.000
	- Externally Developed	0	$0.000	2	$1.750	0	$0.000
4	**Minor Construction (>= $.250M and <= $6.000M)**	**8**	**$9.598**	**8**	**$14.146**	**4**	**$10.808**
	- Replacement Capability	3	$6.633	1	$1.495	1	$2.408
	- New Construction	5	$2.965	7	$12.651	3	$8.400
	- Environmental Capability	0	$0.000	0	$0.000	0	$0.000
	Grand Total	**10**	**$10.524**	**14**	**$20.101**	**5**	**$13.208**
	Total Capital Outlays		**$4.719**		**$9.675**		**$11.525**
	Total Capital Investment Recovery		**$5.514**		**$7.500**		**$7.708**

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
Department of the Navy/ Research and Development	#002 - ADPE						Space and Naval Warfare Systems Centers		
	FY 2017			FY 2018			FY 2019		
ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	1	440	$440	1	605	$605	0	-	$0
Computer Hardware (Network)	1	486	$486	2	1,600	$3,200	1	2,400	$2,400
Computer Software (Operating System	0	-	$0	0	-	$0	0	-	$0
Telecommunications	0	-	$0	0	-	$0	0	-	$0
Other Support Equipment	0	-	$0	0	-	$0	0	-	$0
Total	2	463	$926	3	1,268	$3,805	1	2,400	$2,400

Justification:

PROJECTS UNDER $1M

Investment in the computer hardware (Production) capability will extend functionality of existing systems and enable efficient wideband Radio Frequency (RF) testing, recording, and analysis. A cost analysis has been performed. If these investments are not made, data integrity and streamlined data-driven decision making will be hindered, technical risks may be encountered during the test and evaluation phase, and redundant costs will be incurred.

Investments in the computer hardware (network) capability will provide a technology refresh that will allow the network to continue operations and support future needs. The current capability provides a local area network for laboratories as well as a high-speed connection to the Defense Research and Engineering Network (DREN) and Non-Classified Internet Protocol Router Network (NIPRNET) using both Transmission Control Protocol/Internet Protocol (TCP/IP) and Asynchronous Transfer Mode (ATM) protocols. Specifically, the project adds capacity that will provide cost effective virtualized environment to support Navy lab consolidation efforts. The investment will support increased performance, along with state of the art “GREEN" technology that will result in reduced power, Heating, Ventilation and Air Conditioning (HVAC), and floor space requirements. A cost analysis was performed for this project. Without this upgrade, portions of the current Research, Development, Test & Evaluation (RDT&E) network architecture will not support the future networking needs of the research, development, and in-service engineering communities. If this investment is not made, it will result in a lack of networking support, continued limited computer and storage capability, and limited ability to support RDT&E virtualization/hosting efforts for the Navy. These efforts are key to the success of the Navy and DoD operations now and in the future.

PROJECTS ABOVE $1M

The "**Research Development Testing & Evaluation (RDT&E) Network Upgrade**" project for FY18 and FY19 in the computer hardware (network) capability will provide a technology refresh that will allow the network to continue operations and support future needs of SPAWAR. The current capability provides a local area network for laboratories as well as a high-speed connection to the Defense Research and Engineering Network (DREN) and Non-Classified Internet Protocol Router Network (NIPRNET) using both Transmission Control Protocol/Internet Protocol (TCP/IP). In addition, the technology refresh will not only support emerging requirements but will also improve scalability and recoverability, and reduce power consumption. A cost/economic analysis has been performed. If this investment is not made, it will result in a lack of networking support, continued limited computer and storage capability, the inability to support cybersecurity, and limited ability to support RDT&E virtualization/hosting efforts for the Navy. These efforts are key to the success of the Navy and DoD operations now and in the future.

The **"Secret Wide Area Network (SWAN) Crypto Refresh** " project in FY18 in the computer hardware (network) capability provides 48 General Electric Tactical Local Area Network Encryption (TACLANE) encryptors for the Secret Wide Area Network (SWAN) and the Secure Defense Research and Engineering Network (SDREN). Secret-level encryption is currently provided over the RDTE network on 100Mb (to the desktop) and 1Gb (core) General Electric TACLANEs. The core TACLANEs are going to be at their End of Life (EOL) within 2-3 years. Current devices do not have the ability to do network security separation via Virtual Local Area Networks (VLANs). The Security Technical Implementation Guide (STIG) requirements for the whole network separation is unable to be met globally, so efforts are required to be mitigated at the local lab level. At times, bandwidth has maxed out to the labs. The EOL TACLANEs need to be replaced with a solution that will sustain network and security growth 10 years into the future. The solution must enable VLAN technology over Layer 2 encryptors to achieve a lower risk level, along with full STIG compliance with an enterprise level solution for system, data, voice, etc. A cost/economic analysis has been performed. If this investment is not made, EOL equipment will no longer be supported resulting in high security risk, low reliability of network, and STIG non-compliance, bandwidth growth for projects will not be met, network management of encryptors will remain as a time-intensive manual processes, and network security and technology will be limited.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
Department of the Navy/ Research and Development	#003 - Software Development						Space and Naval Warfare Systems Centers		
	FY 2017			FY 2018			FY 2019		
Software	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Internally Developed	0	-	$0	1	400	$400	0	-	$0
Externally Developed	0	-	$0	2	875	$1,750	0	-	$0
Total	0	-	$0	3	717	$2,150	0	-	$0

Justification:

PROJECTS UNDER $1M

The investment in the internally developed capability provides a net-centric and secure enterprise information environment that allows stakeholders to collaborate, evaluate, and participate in the development, testing, and qualifications of Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) software products. This increases the ability to rapidly develop and deploy software capabilities and reduces the product life cycle costs. A cost analysis has been performed.

The investment in the externally developed capability provides a net-centric and secure enterprise information environment that allows stakeholders to collaborate, evaluate, and participate in the development, testing, and qualifications of Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) software products. This increases the ability to rapidly develop and deploy software capabilities and reduces the product life cycle costs. A cost analysis has been performed.

PROJECTS ABOVE $1M

The "**Scalable Workflow Automation Tool (SWAT)**" project in FY18 will expand and mature the process and technical capabilities by providing scalable a workflow automation tool to support the internal business operations. This effort will enable the stand down of redundant tools to standardize the processes and data utilized across the command. An economic analysis has been performed on this project. There are no license fees associated with this project at this time. If the investment is not made, there would be limited capability to adequately integrate standardized data, which would hinder data integrity and the streamlined data-driven decision making necessary to effectively support projects in operations.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
Department of the Navy/ Research and Development	#004 - Minor Construction						Space and Naval Warfare Systems Centers		
	FY 2017			FY 2018			FY 2019		
Minor Construction	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement	3	2,211	$6,633	1	1,495	$1,495	1	2,408	$2,408
New Construction	5	593	$2,965	7	1,807	$12,651	3	2,800	$8,400
Environmental Capability	0	-	$0	0	-	$0	0	-	$0
Total	8	1,200	$9,598	8	1,768	$14,146	4	2,702	$10,808

Justification:

All projects are within the $6 million threshold for minor construction afforded by the Defense Laboratory Revitalization Act.

REPLACEMENT

PROJECTS UNDER $1M

Investment in the replacement capability will expand current lab space and upgrade the Heating, Ventilation and Air Conditioning (HVAC) and infrastructure that supports several projects by providing classified environment with connections to the Secure Wide Area Network (SWAN), Enterprise, Engineering and Certification (E2C), and the Input/Output (I/O) Range. The expansion of the lab will allow for Common Afloat Network Enterprise System (CANES), Strategic Command (STRATCOM), and United States Pacific Command (USPACOM) support to be provided in the classified environment in Hawaii. An economic/cost analysis has been performed on this project. Without this investment, the existing lab space will not be able to fully support customer requirements in the Hawaii area.

PROJECTS ABOVE $1M:

The "Enclose Network Integration Engineering Facility (NIEF)" project is in FY17. The Network Integration Engineering Facility (NIEF) performs unclassified (UNCLAS) system software loads for the fleet in an effort to reduce installation time onboard ships during Chief of Naval Operations (CNO) ship alteration availabilities. Classified (CLASS) software loads are performed in the ship. A full system load operates with CLASS data (certificates, Internet Protocols (IPs), and application specific data). The NIEF does not meet applicable security requirements to load classified data because it is an open exposed space operating at the unclassified level. This project allows the NIEF to fully load unclassified, classified, and Coalition Secret enclaves to their classification level in a lab environment. In addition, it reduces the technical risk of problems with the installation process, and reduces the overall installation time by two to four weeks. An economic analysis has been performed. If the project is not completed, the opportunity to reduce ship installation time will not be realized, the NIEF will continue to be limited at the UNCLAS level to load and test software, and equipment and operations will continue to be hindered by uncontrolled environmental conditions. This project is part of the Lab Revitalization Demonstration Program (LRDP).

The "**High Voltage Laboratory**" project is in FY17. Current facilities cannot accommodate the high voltage and power testing necessary for multiple programs. There is no appropriate nanomaterials research space, and there are limitations to the devices and materials that can be tested. To continue advancing the fleet's mission capabilities, an expansion of the High Voltage Laboratory facility is required. The expanded facility will advance the capabilities to include high voltage and power testing on-site for multiple projects and programs. The laboratory will serve as an end-to-end facility for emerging Research, Development, Test & Evaluation (RDT&E) Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) technologies focused on high voltage, electronic materials, and electromagnetic spectrum systems. The facility will house three labs: a nanomaterials lab, high voltage lab, and Electro Magnetic Interference (EMI) lab. Providing modern laboratory facilities will add new opportunities for the fleet to discover and develop future C4ISR communication technologies focused on high power, nanotechnology, and Radio Frequency (RF) systems. Alternatives considered were moving to other sites, using more contractors, and adapting to existing facilities. However, these alternatives would result in higher costs. An economic analysis has been performed. If this investment is not provided, the Navy will continue to lack appropriate test and experimental facility assets, and advancements in Navy nanotechnology will be limited. This project is part of the Lab Revitalization Demonstration Program (LRDP).

The "**Unmanned Systems (UxS) Integration Lab"** project is in FY18. The project will convert 3,200 square feet (SF) of storage space into an Unmanned Systems (UxS) Integration Lab. SPAWAR is one of the Navy's foremost labs for developing & fielding integrated Unmanned Systems (UxS), and is the established technical lead in UxS Intelligence, Surveillance, Reconnaissance, and Information Operations (ISR/IO) sensors, integration, Test and Evaluation (T&E), and related systems. The lab will co-locate multiple technologies and competencies in a coordinated and synthesized effort that will reduce time and cost to bring advanced capabilities to the warfighter. In addition, it will also allow for rapid prototyping of UxS payloads and autonomy science and technology efforts which are not available in current infrastructure. An economic analysis has been completed. Without this lab, there will be an inability to keep pace with rapidly expanding UxS arena and warfighter needs. This project is part of the Lab Revitalization Demonstration Program (LRDP).

The **"Nanosat Integration Center of Excellence"** project is in FY19. Current facilities are insufficient to meet mission requirements. Development of the Nanosat Integration Center of Excellence (COE) project will enable the Navy to rapidly respond to warfighter needs by designing and integrating specialized and classified nanosat payloads that are tailored to address emerging threats. Nanosatellites (small satellites or cube satellites) typically range in size from 10cm to 30cm in diameter and can provide an attractive alternative to traditional satellites. Nanosatellites are the cutting edge in space technology and are used for a wide variety of missions including satellite communications, Intelligence, Surveillance, and Reconnaissance (ISR), environmental monitoring, special communications, and Tagging, Tracking, and Locating (TTL). Nanosatellites make use of Commercial Off-The-Shelf (COTS) components and use less stringent standards and less complex modular designs, making them affordable. They can deliver capabilities at significantly lower development costs than conventional satellites. The nanosat modular designs afford more flexibility to the warfighter, enabling developers to quickly address rapidly evolving warfighter needs. Nanosats are robust and resistant to space effects of vibration, vacuum, and temperature, and their small size makes them difficult to target. Integrating nanosatellites in-house will shorten development time, provide increased government oversight for improved cyber resiliency, decrease reliance on private industry, and considerably reduce costs for the Navy and the warfighter. An economic analysis has been completed. Without this effort, continued use of off-site testing facilities will result in an increased cost to Navy/DoD sponsors. This project is part of the Lab Revitalization Demonstration Program (LRDP).

NEW CONSTRUCTION

No existing facilities currently support the necessary new mission capability. A cost analysis has been performed for all projects.

PROJECTS UNDER $1M

Investments in new construction will provide SPAWAR with solutions to address deficiencies in buildings and structures to meet mission efforts. The projects proposed in this capability will be used to provide unique facilities to support cyber requirements, create additional power usage by increasing air cooling capacity, construct a new server room to accommodate 35 server racks, install an additional emergency lighting system and new telecommunications cabling, improve electrical and mechanical Heating Ventilation and Air Conditioning (HVAC) systems, modernize and upgrade damaged floor decking and ceilings, construct an electrical substation, and create a Mobile Information and Cellular Communications Technology Engineering Center (MICCTEC) that does not currently exist at any US Navy government facility. Without these investments, there would be inability to perform the critical research, development, and testing of network defense, network exploitation, and network attack tools/capabilities necessary to support the warfighter. There would also continue to be a lack of space to support critical Navy programs. In addition, lack of production capacity would expose the command to schedule risk, jeopardize costs, and hinder the ability to support the Navy and DoD customers.

PROJECTS ABOVE $1M:

The **"Building 3147 1L13 Reconfiguration"** project will reconfigure/renovate lab 1L13 in building 3147 to create a Cyber Range Operations Center (C-ROC) within the lab space. Building 3147 was constructed in 1997. It houses administrative spaces and twelve Electrical, Electronics & Communications Integration Laboratories. This project will include the construction of a new server room to accommodate 35 server racks, replace existing raised deck floor tiles and suspended ceiling tiles, paint walls, upgrade the lab security to current standards, and install the following: carpet on the concrete deck portion of the lab, new systems furniture and lab work benches, additional emergency lighting, and new telecommunications cabling for unclassified and classified Information Technology (IT) systems. Without this renovation, the facility will continue to be underutilized. An economic analysis has been performed. This project is part of the Laboratory Revitalization Demonstration Program (LRDP).

The **"Building 187 Production Engineering Facility"** project is in FY18. Building 187 was constructed in 1962. This project will overhaul the Heating, Ventilation, and Air Conditioning (HVAC) system and lighting, add handicap features to the restrooms and improve finishes throughout the building. In addition, overhaul will include lead and asbestos abatement. The building's electrical system overhaul will consist of consolidation and replacement of outdated power systems. The overhaul of this building will greatly enhance its functionality and provide additional efficiency and capability to meet the commitments made to the customers. A cost analysis has been performed. Without the overhaul of the whole building, the existing facility's age and its current functionality will compromise the efficiency and capability required to meet customer needs. This project is part of the Lab Revitalization Demonstration Program (LRDP).

The **"Building 198 Expeditionary Systems Integration Laboratory"** project is in FY18. Building 198 is an electrical, electronics & communications integration lab, commonly known as the Vehicle Integration Bay (VIB). The VIB program is gradually being phased out and will transition to an interactive, collaborative, and flexible Digital Information Facility (DIF). The DIF work environments will range from informal to private communication areas, promoting mobility, collaboration, increased speed in decision-making, and drive collective innovation. The DIF transition will require infrastructure changes to be made to the building's code-deficient fire protection system, the Heating, Ventilation and Air Conditioning (HVAC) system, and the overall electrical and IT infrastructure to improve operational efficiency. In addition, the project will include construction of new walls for a reconfigurable laboratory space, an IT server room, and shipping and receiving area. The improvements made to the infrastructure will provide proper airflow distribution for associated spaces, additional HVAC capacity, and additional electrical distribution capacity such as Uninterruptible Power Supply (UPS) and generator power. Reconfiguration of the space will provide a laboratory platform in support of the systems used by the Marine Corps and Expeditionary forces. An economic analysis has been performed. Without the infrastructure changes and reconfiguration, the facility will operate at less than maximum efficiency and productivity and will continue to have areas that are underutilized. This project is part of the Laboratory Revitalization Demonstration Program (LRDP).

The "**Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) End-to-End Integration and Testing Facility**" project is in FY18. This dedicated, non-program specific laboratory testing facility is required to perform full interoperability certification on the entire C4ISR baseline (system-of-systems) prior to ship/aircraft installation. The facility will support growth in existing mission areas and new mission workload, specifically, comprehensive testing and evaluation for systems integration of contractor-supplied and off-the-shelf hardware and software prior to delivery to the fleet. This lab will provide a realistic operational environment to support cyber certification testing and training to sailors prior to deployment. It will facilitate rapid technology transition by allowing for testing of developmental and prototype capabilities in-line with currently fielded C4ISR systems. The ability to test developmental capabilities in an operationally representative test environment alongside the current operational systems reduces the time to field new solutions and reduces the risk of unattended adverse effects on operations from these new solutions. A dedicated laboratory space will allow re-configuration to support testing for multiple platforms as well as consolidate functions being performed at distant locations. An economic analysis has been performed. The lack of additional space for end-to-end testing will continue to impact technology transition from space & technology efforts to the fleet. This project is part of the Lab Revitalization Demonstration Program (LRDP).

The **"Building 237 Engineering Laboratory"** project is in FY19. Building 237 was constructed in 1982 and requires extensive renovation of its exterior surfaces including foundation, walls, windows, roof, Heating, Ventilation and Air Conditioning (HVAC), fire protection, electrical system, etc. The existing overhead plenum is not equipped with fire suppression sprinklers. Fireproofing in the warehouse area is damaged and requires replacement in order to bring it up to current fire code. The HVAC system uses a ceiling plenum for return air, which violates current codes and may lead to mold growth. The window system has also failed on numerous occasions. The overhaul of this building will greatly enhance its functionality. An economic analysis has been performed. Without the renovations, the building's exterior, HVAC system, fire protection system, and current configuration will impede the functionality necessary to support the laboratory projects in operations. Additionally, the code-based improvements to the fire protection system will be deficient. This project is part of the Laboratory Revitalization Demonstration Program (LRDP).

The **"Command, Control, Communication, Computers, Cyber-Defense and Combat Systems and Intelligence, Surveillance and Reconnaissance (C6ISR) Laboratory"** project is in FY19. Building 3456 was constructed in 1918 and was converted to a laboratory space. The facility is in need of a complete replacement due to its age, condition, and current configuration. This project will construct a Sensitive Compartmented Information Facility (SCIF) with administrative spaces and secret laboratory areas. Appropriate Heating, Ventilation and Air Conditioning (HVAC), plumbing, lighting, and electrical systems will be included, along with handicap accessibility throughout the building. Once the new facility is complete, building 3456 will be demolished. An economic analysis has been performed. Without replacement, the existing aged building, HVAC, plumbing, lighting, electrical systems, and current configuration will hinder the functionality necessary to support the laboratory projects in operation. This project is part of the Laboratory Revitalization Demonstration Program (LRDP).

The **"Command, Control, Communication, Computers, Cyber-Defense and Combat Systems and Intelligence, Surveillance and Reconnaissance (C6ISR) Test and Evaluation Platform"** project is in FY19. The project will replace the existing outdoor operations testing area and provide a properly configured staging and testing area within a fenced outdoor compound. The compound will include a 9,900 square feet (SF) Rubb building with shipping/receiving, assembly, storage rack, workbench areas, outdoor equipment staging areas, and correctly positioned concrete antenna pads. Once the outdoor compound and Rubb building have been completed, the existing compound and staging area will be removed, and the area will be restored to pre-staging conditions. This test and evaluation platform will greatly compliment the functionality of the C6ISR Laboratory, in support of the laboratory projects in operation. An economic analysis has been performed. Without this project, C6ISR projects and staff will continue to be split across two facilities, and the area will not be sufficient to house highly sensitive deployable equipment. This project is part of the Laboratory Revitalization Demonstration Program (LRDP).

CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	**1**	**Non ADP**		**$0.000**	**$0.000**	**$0.000**	
	2	**ADP**		**$3.133**	**$0.926**	**($2.207)**	
			Computer Hardware (Production)	$2.533	$0.440	($2.093)	Authority adjusted as projects were reprioritized.
			Computer Hardware (Network)	$0.600	$0.486	($0.114)	Authority adjusted as projects were reprioritized.
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
	4	**Minor Construction**		**$12.587**	**$9.598**	**($2.989)**	
			Replacement	$5.955	$6.633	$0.678	Authority adjusted as projects were reprioritized.
			New Construction	$6.632	$2.965	($3.667)	Authority adjusted as projects were reprioritized.
TOTAL FY 2017 CIP Program				**$15.720**	**$10.524**	**($5.196)**	

FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2018	**1**	**Non ADP**		**$0.000**	**$0.000**	**$0.000**	
	2	**ADP**		**$5.300**	**$3.805**	**($1.495)**	
			Computer Hardware (Production)	$2.100	$0.605	($1.495)	Authority adjusted as projects were reprioritized.
			Computer Hardware (Network)	$3.200	$3.200	$0.000	
	3	**Software**		**$0.000**	**$2.150**	**$2.150**	
			Internally Developed	$0.000	$0.400	$0.400	Authority adjusted as projects were reprioritized.
			Externally Developed	$0.000	$1.750	$1.750	Authority adjusted as projects were reprioritized.
	4	**Minor Construction**		**$13.707**	**$14.146**	**$0.439**	
			Replacement	$0.000	$1.495	$1.495	Authority adjusted as projects were reprioritized.
			New Construction	$13.707	$12.651	($1.056)	Authority adjusted as projects were reprioritized.
TOTAL FY 2018 CIP Program				**$19.007**	**$20.101**	**$1.094**	

FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2019	**1**	**Non ADP**		**$0.000**	**$0.000**	**$0.000**	
	2	**ADP**		**$2.400**	**$2.400**	**$0.000**	
			Computer Hardware (Network)	$2.400	$2.400	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
	4	**Minor Construction**		**$10.808**	**$10.808**	**$0.000**	
			Replacement	$2.408	$2.408	$0.000	
			New Construction	$8.400	$8.400	$0.000	
TOTAL FY 2019 CIP Program				**$13.208**	**$13.208**	**$0.000**	

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Part 1			
1. Net Carry-In	1,116.4	1,103.7	1,078.3
2. Revenue	2,181.3	2,343.9	2,326.3
3. New Orders	2,168.6	2,318.5	2,265.6
4. Exclusions:			
Foreign Military Sales	46.7	49.5	51.3
Base Realignment and Closure	-0.3	0.0	0.0
Other Federal Department and Agencies	84.4	105.1	108.7
Non-Federal and Others	10.5	29.1	26.4
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
5. Orders for Carryover Calculation	2,027.3	2,134.8	2,079.2
6. Weighted Average Outlay Rate	55.4%	54.6%	54.9%
7. Carryover Rate	44.6%	45.4%	45.1%
8. Allowable Carryover	1,036.9	1,079.8	1,069.6
Allowable Carryover(First Year)	904.2	969.2	937.7
Allowable Carryover (Second Year Procurement-funded Orders)	132.7	110.6	131.9
Part II			
9. Balance of Customer Order at Year End	1,103.7	1,078.3	1,017.5
10. Work-in-progress	0.0	0.0	0.0
11. Exclusions:			
Foreign Military Sales	43.2	48.6	50.3
Base Realignment and Closure	0.9	0.4	0.3
Other Federal Department and Agencies	131.5	126.1	124.0
Non-Federal and Others	24.4	28.2	22.6
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
12. Calculated Actuals Carryover	903.7	875.0	820.3

Some totals may not add due to rounding.
EXWC,NSWC,NUWC,NAWCDIV,SPAWAR,NRL use RDTEN rates.

7. Naval Research Laboratory

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NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Mission Statement / Overview:

The Naval Research Laboratory (NRL), the Navy's single, integrated corporate laboratory, provides the Navy with a broad foundation of in-house expertise from scientific through advanced development activity. Specific leadership responsibilities are assigned in the following areas: primary in-house research in the physical, engineering, space, and environmental sciences; broadly based exploratory and advanced development program in response to identified and anticipated Navy and Marine Corps needs; broad multidisciplinary support to the Naval Warfare Centers; and space systems technology development and support.

NRL operates as the Navy's full-spectrum corporate laboratory, conducting a broadly based multidisciplinary program of scientific research and advanced technological development directed toward maritime applications of new and improved materials, techniques, equipment, systems and ocean, atmospheric, and space sciences and related technologies. In fulfillment of this mission, NRL initiates and conducts broad scientific research of a basic and long-range nature in scientific areas of interest to the Navy; conducts exploratory and advanced technological development deriving from or appropriate to the scientific program areas; develops prototype systems applicable to specific projects; assumes responsibility as the Navy's principal R&D activity in areas of unique professional competence upon designation from appropriate Navy or Department of Defense (DoD) authority; performs scientific research and development for other Navy activities and, where specifically qualified, for other agencies of the DoD and, in defense-related efforts, for other Government agencies; serves as the lead Navy activity for space technology and space systems development and support; and serves as the lead Navy activity for mapping, charting, and geodesy marine chemistry & geochemistry research and development for the National Geospatial-Intelligence Agency.

Activity Group Composition:

In addition to its Washington, D.C. campus of about 131 acres and 89 main buildings, NRL maintains 14 other research sites. The many diverse scientific and technological research and support facilities include a large facility located at the Stennis Space Center in Bay St. Louis, Mississippi, a facility at the Naval Support Activity, Monterey Bay in Monterey, California, the Chesapeake Bay Detachment in Maryland, and additional sites located in Maryland, Virginia, Alabama, and Florida.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

SCIENTIFIC DEVELOPMENT SQUADRON ONE (VXS-1): This division is located aboard the Patuxent River Naval Air Station in Lexington Park, Maryland, operates and maintains three uniquely configured P-3 Orion and one RC-12 Huron turboprop aircraft as airborne research platforms for worldwide scientific research operations.

CHESAPEAKE BAY DETACHMENT: The detachment occupies a 168-acre site near Chesapeake Beach, Maryland, and provides facilities and support services for research in radar, electronic warfare, optical devices, materials, communications, and fire rescue. Because of its location high above the Chesapeake Bay on the western shore, unique experiments can be performed in conjunction with the Tilghman Island site 16 km across the bay.

NRL STENNIS SPACE CENTER (NRL-SSC): NRL-SSC is a tenant activity at NASA's Stennis Space Center. Other Navy tenants at the Stennis Space Center include the Naval Meteorology and Oceanography Command and the Naval Oceanographic Office, who are major operational users of the oceanographic and atmospheric research and development performed by the NRL. This unique concentration of operational and research oceanographies makes NRL-SSC the center of naval oceanography and the largest such grouping in the western world.

MARINE METEOROLOGY DIVISION: Located in Monterey, California, this division is a tenant activity of the Naval Support Activity, Monterey Bay, is collocated with the Fleet Numerical Meteorology and Oceanography Center to support development of numerical atmospheric prediction systems and related user products. This collocation allows easy access to a large vector classified supercomputer mainframe, providing real time as well as archived global atmospheric and oceanographic databases for research at Monterey and at other NRL locations.

Significant Changes Since the FY 2018 President's Budget:

The budget estimates have been updated to reflect changes in civilian pay factors in FY 2019, as well as revised general inflation factors and fuel rates.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Financial Profile:

Revenue/Expense/Operating Results ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Orders	$937.1	$884.1	$894.3
Revenue	$862.2	$919.2	$924.4
Expense	$867.1	$928.6	$944.6
Operating Results	($4.9)	($9.5)	($20.2)
Capital Surcharge	$0.0	$0.0	$0.0
Net Operating Results (NOR)	($4.9)	($9.5)	($20.2)
Prior Year AOR	$34.6	$29.7	$20.2
Accumulated Operating Results (AOR)	$29.7	$20.2	($0.0)

Some totals may not add due to rounding.

Revenue and Expense: The changes in revenue primarily reflect inflation. The changes in expense primarily reflect inflation.

Collections/Disbursements/Outlays ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Collections	$852.1	$919.6	$930.3
Disbursements	$879.0	$913.2	$942.4
Net Outlays	$27.1	($6.4)	$12.1

Some totals may not add due to rounding.

Fluctuations in net outlays reflect the timing of end-of-year billings and the impact of anticipated net operating results.

Workload:

Direct Labor Hours (000):	**FY 2017**	**FY 2018**	**FY 2019**
Current Estimate	3,018	3,029	3,040

The direct workforce (scientists and engineers) remain relatively steady in FY 2019. Growth in hours is due to one more workday in FY 2019 compared to FY 2017/2018.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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Performance Indicators: The NRL outputs are scientific and engineering designs, developments, tests, evaluations, analyses and fleet support in NRL assigned mission areas. The measure for these outputs is the direct labor hour worked for a customer. Customers are charged a predetermined stabilized billing rate per direct employee hour worked (revenue rate). The rate includes the salary and benefits costs of the performing employee (direct labor costs) and a share of the overhead costs of NRL, both general and administrative support and the unique production overhead costs of the performing employee's cost center. Non-labor, non-overhead costs, such as customer required material and equipment purchases, travel expenses, and contractual services, are charged to the customer on an actual cost reimbursable basis, and are excluded from the NRL stabilized pricing structure. The NRL use total cost per direct labor hour as their performance criterion.

Unit Cost:	**FY 2017**	**FY 2018**	**FY 2019**
Total Stabilized Cost ($Millions)	$470.1	$492.5	$493.0
Workload (DLHs) (000)	3,018	3,029	3,040
Unit cost (per DLH)	$155.8	$162.6	$162.2

The Unit Cost is an expense rate method established to authorize and control costs. Unit cost goals allow activities to respond to workload changes in execution by encouraging reduced costs when workload declines and allowing appropriate increases in costs when customers request additional services.

FY 2019 unit cost reflects stabilized costs per associated stabilized hours as an expense rate.

Stabilized / Composite Rates:	**FY 2017**	**FY 2018**	**FY 2019**
Stabilized Rate	$142.79	$154.46	$151.04
Change from Prior Year		8.17%	-2.21%
Composite Rate Change		4.75%	0.06%

The Stabilized Rate consists of direct labor and applied overhead. Unique direct non-labor costs are billed on a reimbursable basis to the customer. The composite rate change incorporates both the stabilized costs and the reimbursable costs. The composite rate change in FY 2019 reflects adjustments to pricing changes due to inflation factors as well as an increase to Sustainment costs due to the adjustment of the Sustainment Unit Cost of RDT&E facilities.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Staffing:

Civilian/Military ES & Workyears:	**FY 2017**	**FY 2018**	**FY 2019**
Civilian End Strength	2,542	2,523	2,523
Civilian Workyears (straight time)	2,467	2,478	2,478
Military End Strength	59	58	60
Military Workyears	60	58	60

Civilian Personnel: Civilian strength levels, measured by both end strength and full-time equivalents (FTEs) remain steady in FY 2019.

Military Personnel: The Military resource estimates are a baseline projection of military personnel necessary to fulfill programming objectives and coordination with customers. Military resource estimates have been adjusted to reflect a minor increase in funded workload FY 2019.

Capital Investment Program (CIP):

CIP Authority ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Equipment, Non-ADP / Telecom	$12.5	$15.2	$19.2
Equipment, ADPE / Telecom	$2.4	$2.5	$2.5
Software Development	$0.0	$0.0	$0.0
Minor Construction	$1.5	$16.8	$6.0
Total	$16.5	$34.5	$27.7

Some totals may not add due to rounding.

The Capital Investment Program allows the NWCF to achieve its mission by reinvesting in plant equipment and facilities. Included in the capital budget are the following types of assets: Automated Data Processing Equipment (ADPE); non-ADPE equipment; automated data processing software, internally or externally developed; and minor construction. Minor construction includes projects meeting the criteria of the Defense Laboratory Revitalization Program (DLRP). The projects will replace aging buildings and upgrade and expand lab capability to accommodate workload growth and increase efficiency.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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Carryover Compliance ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Net Carry-In	$395.7	$470.6	$435.5
Allowable Carryover	$437.2	$419.0	$423.1
Calculated Actual Carryover	$420.0	$401.0	$377.4
Delta (Actual-Allowable)	($17.2)	($18.0)	($45.7)
Above Ceiling (+)/Below Ceiling (-)			

Some totals may not add due to rounding.

Budgeted carryover is within the allowable ceiling target amount.

REVENUE AND EXPENSES
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Revenue:			
Gross Sales			
Operations	848.8	894.7	896.7
Capital Surcharges	0.0	0.0	0.0
Capital Investment Recovery	13.4	24.5	27.7
Other Income			
Total Income	862.2	919.2	924.4
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	3.7	3.8	4.1
Civilian Personnel Compensation & Benefits	372.5	375.4	378.7
Travel and Transportation of Personnel	10.1	11.9	12.2
Material & Supplies (Internal Operations)	34.1	56.6	56.9
Equipment	53.9	41.5	42.0
Other Purchases from NWCF	7.7	17.7	17.9
Transportation of Things	0.7	1.8	1.8
Capital Investment Recovery	13.4	24.5	27.7
Printing and Reproduction	0.1	0.1	0.1
Advisory and Assistance Services	0.0	0.0	0.0
Rent, Communication, Utilities & Misc Charges	21.0	33.9	36.1
Other Purchased Services	349.8	361.3	367.2
Total Expenses	867.0	928.6	944.6
Work in Process Adjustment	0.1	0.0	0.0
Comp Work for Activity Retention Adjustment	0.0	0.0	0.0
Cost of Goods Sold	867.1	928.6	944.6
Operating Result	-4.9	-9.5	-20.2
Adjustments Affecting NOR	-0.7	0.0	0.0
Capital Surcharges	0.0	0.0	0.0
Extraordinary Expenses Unmatched	-0.7	0.0	0.0
Other Changes Affecting NOR (All Others)	0.0	0.0	0.0
Net Operating Result	-5.6	-9.5	-20.2
PY AOR	35.3	29.7	20.2
TOTAL AOR	29.7	20.2	0.0
Non-Recoverable Adjustments impacting AOR	0.0	0.0	0.0
AOR for budget purposes	29.7	20.2	0.0

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
1. New Orders	937.1	884.1	894.3
a. Orders from DoD Components:	859.5	821.1	830.6
Department of the Navy	572.5	545.6	551.9
O & M, Navy	48.8	44.1	44.6
O & M, Marine Corps	1.4	1.2	1.2
O & M, Navy Reserve	0.0	0.0	0.0
O & M, Marine Corp Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	0.9	0.9	0.9
Weapons Procurement, Navy	0.1	0.0	0.0
Ammunition Procurement, Navy/MC	0.0	0.0	0.0
Shipbuilding & Conversion, Navy	2.3	1.8	1.9
Other Procurement, Navy	11.8	8.8	8.9
Procurement, Marine Corps	0.1	0.1	0.1
Family Housing, Navy/MC	0.0	0.0	0.0
Research, Dev., Test, & Eval., Navy	507.3	488.7	494.4
Military Construction, Navy	0.0	0.0	0.0
National Defense Sealift Fund	0.0	0.0	0.0
Other Navy Appropriations	0.0	0.0	0.0
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	15.9	15.2	15.4
Army Operation & Maintenance	6.9	6.9	7.0
Army Res, Dev, Test, Eval	8.3	7.6	7.7
Army Procurement	0.0	0.0	0.0
Army Other	0.7	0.7	0.8
Department of the Air Force	132.3	127.9	129.4
Air Force Operation & Maintenance	9.0	9.0	9.1
Air Force Res, Dev, Test, Eval	105.3	100.8	101.9
Air Force Procurement	18.0	18.2	18.4
Air Force Other	0.0	0.0	0.0
DOD Appropriation Accounts	138.7	132.4	133.9
Base Closure & Realignment	0.0	0.0	0.0
Operation & Maintenance Accounts	13.3	10.9	11.1
Res, Dev, Test & Eval Accounts	112.8	109.0	110.3
Procurement Accounts	10.3	10.2	10.3
Defense Emergency Relief Fund	0.0	0.0	0.0
DOD Other	2.3	2.3	2.3
b. Orders from other Fund Activity Groups	7.2	6.6	6.7
c. Total DoD	866.7	827.7	837.3
d. Other Orders:	70.4	56.3	57.0
Other Federal Agencies	63.0	49.7	50.3
Foreign Military Sales	0.4	0.4	0.4
Non Federal Agencies	7.1	6.3	6.3
2. Carry-In Orders	395.7	470.6	435.5
3. Total Gross Orders	1,332.8	1,354.7	1,329.8
a. Funded Carry-Over before Exclusions	470.6	435.5	405.4
4. Revenue(-)	862.2	919.2	924.4
5. End of Year Work-In-Process (-)	0.2	0.2	0.2
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	50.5	34.3	27.8
7. Funded Carryover	420.0	401.0	377.4

Note: Line 5 (End of Year Work-In-Process) is adjusted for Non-DOD BRAC, FMS, and Institutional MRTFB

CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	Costs
FY 2017 Estimated Actuals	**867.1**
FY 2018 President's Budget:	**927.1**
Estimated Impact in FY 2018 of Actual FY 2017 Experience:	**0.4**
Pricing Adjustments:	**2.5**
Civilian Personnel	2.5
Fuel Price	0.0
Program Changes:	**0.0**
Other Changes:	**-1.5**
Capital Investment Recovery	0.0
Facilities Sustainment, Restoration & Modernization	0.0
General Inflation Change	-1.5
FY 2018 Current Estimate:	**928.6**
Pricing Adjustments:	**7.6**
Annualization of Prior Year Pay Raises	**3.5**
Civilian Personnel	3.2
Military Personnel	0.3
FY 2019 Pay Raise	**0.0**
Civilian Personnel	0.0
Military Personnel	0.0
Fuel Price Changes	0.0
General Purchase Inflation	4.0
Other Price Changes (list)	**0.1**
Working Capital Fund Price Changes	0.1
Productivity Initiatives and Other Efficiencies:	**0.0**
Program Changes:	**0.0**
Other Changes:	**8.4**
Capital Investment Recovery	3.2
Facilities Sustainment, Restoration & Modernization	5.2
Change in work days	0.0
Civilian Equivalency Rate Changes	0.0
FY 2019 Estimate:	**944.6**

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CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

		FY 2017		FY 2018		FY 2019	
Line #	Description	Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	**Non-ADPE and Telecom Equipment >= $.250M**	**24**	**$12.498**	**27**	**$15.168**	**36**	**$19.219**
	- Vehicles	0	$0.000	0	$0.000	0	$0.000
	- Material Handling	0	$0.000	0	$0.000	0	$0.000
	- Installation Security	0	$0.000	0	$0.000	0	$0.000
	- Quality Control/Testing	0	$0.000	1	$0.565	1	$0.507
	- Medical Equipment	0	$0.000	0	$0.000	0	$0.000
	- Machinery	0	$0.000	0	$0.000	1	$0.369
	- Support Equipment	24	$12.498	26	$14.603	34	$18.343
2	**ADPE and Telecom Equipment >= $.250M**	**6**	**$2.449**	**4**	**$2.539**	**6**	**$2.509**
	- Computer Hardware (Production)	3	$1.342	3	$2.145	4	$1.854
	- Computer Hardware (Network)	1	$0.363	0	$0.000	2	$0.655
	- Computer Software (Operating)	1	$0.251	0	$0.000	0	$0.000
	- Telecommunications	1	$0.493	1	$0.394	0	$0.000
	- Other Support Equipment	0	$0.000	0	$0.000	0	$0.000
3	**Software Development >= $.250M**	**0**	**$0.000**	**0**	**$0.000**	**0**	**$0.000**
	- Internally Developed	0	$0.000	0	$0.000	0	$0.000
	- Externally Developed	0	$0.000	0	$0.000	0	$0.000
4	**Minor Construction (>= $.250M and <= $6.000M)**	**1**	**$1.513**	**7**	**$16.787**	**1**	**$6.000**
	- Replacement Capability	0	$0.000	0	$0.000	0	$0.000
	- New Construction	1	$1.513	7	$16.787	1	$6.000
	- Environmental Capability	0	$0.000	0	$0.000	0	$0.000
	Grand Total	**31**	**$16.460**	**38**	**$34.494**	**43**	**$27.728**
	Total Capital Outlays		**$5.082**		**$34.494**		**$27.728**
	Total Capital Investment Recovery		**$13.423**		**$34.494**		**$27.728**

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
Department of the Navy/ Research and Development	#001 - Non-ADPE						Naval Research Laboratory		
	FY 2017			FY 2018			FY 2019		
Non-ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	0	-	$0	0	-	$0	0	-	$0
Material Handling	0	-	$0	0	-	$0	0	-	$0
Installation Security	0	-	$0	0	-	$0	0	-	$0
Quality Control/ Testing	0	-	$0	1	565	$565	1	507	$507
Medical Equipment	0	-	$0	0	-	$0	0	-	$0
Machinery	0	-	$0	0	-	$0	1	369	$369
Support Equipment	24	521	$12,498	26	562	$14,603	34	540	$18,343
Total	24	521	$12,498	27	562	$15,168	36	534	$19,219

Justification:

Support Equipment
Capital investment in the support equipment capability will preserve, enhance and support requirements to maintain a technologically advanced, state-of-the-art laboratory and is tied directly to NRL's science and technology (S&T) mission. Investments cover a broadly based multi-disciplinary program of scientific research and advanced technological development directed toward maritime applications of new and improved materials, techniques, equipment, systems, and ocean, atmospheric and space sciences and related technologies.

NRL's largest investment in FY 2018 is the "**Hypersonic Wind Tunnel,**" costing more than one million dollars. This investment will support advanced spacecraft engineering in addition to nozzle thruster development, hypersonic air breathing propulsion, and hypersonic aerothermodynamics.

NRL's largest investment in FY 2019 is the "**Tactical Communications System.**" This investment will establish highly realistic, Naval tactical communications environments in a controlled laboratory environment, including the ability to create artificial Electro-Magnetic Interference (EMI) and degraded signal quality similar to real warfighter scenarios in relevant geographic locations.

Quality Control/ Testing
There are two proposed investments in FY 2018 & FY 2019. The FY 2018 investment "**Persistent VISTA Test & Evaluation Detector**" project is a turnkey, self-contained system to measure far- and extreme-ultraviolet (FUV/EUV) radiation. The detector system will be used in our existing vacuum ultraviolet calibration facility, where it will serve as an essential system to support the evaluation and optimization of innovative remote sensing instruments for space and to perform critical technology readiness level maturation. The FY 2019 investment of the "**RF Channel Simulator**" will provide capabilities of simulating multiple RF channels while simulating the following effects: Doppler, phase shifts, group delay and attenuation. The system will provide the quality control/testing that is needed in order to verify that the RF links used in satellites are closed and communication with the satellite is possible.

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Machinery
In 2019, the "**Water Jet Cutter**" investment will provide in-house capabilities that will drastically decrease prototype development times and immediately benefit numerous projects such as custom built fuel cells for UAV's, AUV's, precision cut various armor pieces, and Lab maintenance.

Pre-investment economic analyses were performed for all investments.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
Department of the Navy/ Research and Development	#002 - ADPE						Naval Research Laboratory		
	FY 2017			FY 2018			FY 2019		
ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	3	447	$1,342	3	715	$2,145	4	464	$1,854
Computer Hardware (Network)	1	363	$363	0	-	$0	2	328	$655
Computer Software (Operating System	1	251	$251	0	-	$0	0	-	$0
Telecommunications	1	493	$493	1	394	$394	0	-	$0
Other Support Equipment	0	-	$0	0	-	$0	0	-	$0
Total	6	408	$2,449	4	635	$2,539	6	418	$2,509

Justification:

ADP Equipment

Computer Hardware (Production)

Several investments in computer hardware (production) are proposed for FY 2018 and FY 2019. In FY 2018, the investments will benefit the following areas: ship combat system performance assessments by using a Modeling and Simulation (M&S) tool to study different scenarios for ship defense, combat & weapon systems, and reduce the computation times for highly visible Navy programs.

In FY 2019, some of the investments will benefit the following areas: accelerate the development of improved materials, capture global meteorological satellite data for near real-time processing and remotely-sensed product algorithm development, improve computing power and performance, and design more robust thermal control systems for future spacecraft.

Computer Hardware (Network)

In FY 2019, the computer hardware investment will produce a viable and functional network archiving system that will maintain domain resources for management and spacecraft engineering activities. The second investment will be to replace the existing backbone network with a new Backbone Cabling System Structure that provide better security, availability, and bandwidth.

Telecommunications

In FY 2018, the telecommunications investment will produce a communications test-bed with versatile ultra-wideband precision signals capable of challenging the newest radar and communication receivers and antenna structures.

Pre-investment economic analyses were performed for all investments.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
Department of the Navy/ Research and Development	#004 - Minor Construction						Naval Research Laboratory		
	FY 2017			FY 2018			FY 2019		
Minor Construction	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement	0	-	$0	0	-	$0	0	-	$0
New Construction	1	1,513	$1,513	7	2,398	$16,787	1	6,000	$6,000
Environmental Capability	0	-	$0	0	-	$0	0	-	$0
Total	1	1,513	$1,513	7	2,398	$16,787	1	6,000	$6,000

Justification:
PROJECTS UNDER $1M

"**The Redundant Feeder for Electra Laser Facility in Bldg 71**", budgeted for execution in FY 2017, was approved to be reclassified/deferred into FY 2018, will provide a redundant (parallel) feeder from the Building 246 substation. The Electra Laser facility located at Building 71 is powered from a single electrical feeder. There have been instances where the feeder experiences a failure. As there is no redundant feed, power remains disconnected until it can be manually restored. The redundant feeder will be used in emergency situations where the primary feeder experiences a failure and for planned outages on the primary feeder. A redundant feed system will ensure adequate power is available to the facility in times of primary failure and will ensure that there is not a loss in research time and resources in the event of an unplanned outage.

During FY 2018, the "**Communications Backup Generator - Bldg 222**" project will provide a 175 KVA emergency backup generator to provide emergency power. This building is the main hub for telephones at the NRL campus. Due to the fire alarm system, it is critical to maintain power for the telephone systems at all times in case of power outages. The fire alarm system transmits alarms to Building 72 and the Regional Fire Department via telephone. In order to maintain communications with fire alarms during an electrical outage for Building 222, an emergency generator is needed to support the main hub for telephones. Also, the life/safety systems for Building 222 will be added to the generator. The only alternative is status quo, which will result in intermittent loss of functionality whenever the power is lost. In the event of an emergency where power is lost and life/safety is an issue, there is a risk of no communication with the NRL Fire Station or the Regional Fire Department. Status quo exposes potential risks to life/safety and the backup systems will mitigate the potential loss of life.

PROJECTS OVER $1M

"**The Backup Generator for Building A49"** was originally budgeted for execution in FY 2017, but was approved to be reclassified/deferred into FY 2018. This project will provide a 2000 KVA emergency backup generator to provide emergency power. Building A49 houses the Center for Computational Science. Their operations are currently running without any backup system - if there is a power outage, the building's system will only have Un-interruptible Power Supply (UPS) backup which is wholly inadequate for their research requirements and SIPRNET operations at the NRL campus. The only alternative is status quo, which will result in intermittent loss of functionality whenever the power is lost. In the event of an emergency where power is lost, research potential is reduced to the point that computers need to initiate shut down procedures in accordance with local UPS capabilities. The status quo exposes NRL to potential risk to critical work stoppage.

"Upgrade Fire Protection – Blossom Point" was originally budgeted for execution in FY 2017, but was approved to be reclassified/deferred into FY 2018. This project will upgrade the fire protection systems to reduce the risk of losing important facilities, research, life and other damages. The facilities at Blossom Point are without adequate fire protection and a

survey report dated 30 September 2012 cited several deficiencies. The investment includes four phases: 1) The installation of a fire alarm reporting system that will monitor Buildings 1, 3, 4, 11, 12 and 13. 2) Provide sprinkler systems to Buildings 1, 3, 4, 11 and 12.
3) Provide a new combination fire alarm/mass notification system for Building 11. 4) The underground water main feed from the Building 13 fire pump-house will be extended to the buildings listed in phase (2). The only alternative is status quo, which may result in injury, loss of life and/or complete or partial loss of adjacent facilities.

"Install Central Hot Water Heating Plant – Bldg A59" was originally budgeted for execution in FY 2017, but was approved to be reclassified/deferred into FY 2018. This project will provide a central hot water heating plant that will include a hot water loop inside the building and be utilized for steam-to-hot water conversion with one set of pumps, receivers, heat exchangers, valves, etc. and will be sized to accommodate the whole building. The building currently has about 25 steam-to-hot water converters including all associated pumps, receivers, heat exchangers, valves, etc. Maintenance on the systems has increased incrementally over time as each system has aged and consolidating them into one centralized system will reduce the labor hours and maintenance costs. The labor required to maintain the central system will be less than a quarter of the total expended to maintain multiple systems. The status quo has a continuous large expenditure of labor to maintain multiple systems.

During FY 2018, "**Build-out of Parking Garage – Bldg 260**" project will convert space (approximately 7,200 square feet) in the garage under Building 260 from parking to office and lab space. The work involves demolition of the existing ceiling lights and flooring in the area. The new area will have a floor slab above the existing 100-year flood plain. The area will be subdivided with walls to form three offices, a conference room, four labs, an open office area, a storage area and a set of restrooms. The flooring will be carpet in the offices and hallways and tile elsewhere. A suspended ceiling will be provided along with lights. The existing sprinklers system will be modified to meet Fire Code. The upgrades will provide HVAC, steps and Americans with Disabilities (ADA) accessibility.

Additionally, in FY 2018, the "**Redundant Feeder for Physics Laboratory - Bldg 256**" project will provide a redundant (parallel) feeder from the Building 246 substation. This redundant feeder will ensure that operations can continue at Building 256 without loss of productivity in the event of an unplanned outage. Critical productivity will be lost if a power outage occurs and thus this redundant feeder will ensure that productivity is not compromised.

The FY 2019 "**Build-out of Mezzanine Bldg A59**" project will convert storage space into environmentally controlled, multi-security level capable laboratories, data processing facilities, and assembly and test areas to prosecute the design and development of the technology for the next generation of spacecraft, and ground systems required to close critical gaps in Naval war fighting capabilities. Delaying this project will substantially impact the development necessary for the spacecraft technology demonstrations, technologies that utilize data from space systems, and their continued expansion into vital Naval, GPS Space Technology, Maritime Domain Awareness (MDA), and DoD systems.

Pre-investment economic analyses were performed for all investments.

CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	**1**	**Non ADP**		**$13.943**	**$12.498**	**($1.445)**	
			Vehicles	$0.000	$0.000	$0.000	
			Material Handling	$0.000	$0.000	$0.000	
			Installation Security	$0.000	$0.000	$0.000	
			Quality Control/Testing	$0.000	$0.000	$0.000	
			Medical Equipment	$0.000	$0.000	$0.000	
			Machinery	$0.000	$0.000	$0.000	
			Support Equipment	$13.943	$12.498	($1.445)	Authority adjusted as projects were reprioritized.
	2	**ADP**		**$2.806**	**$2.449**	**($0.357)**	
			Computer Hardware (Production)	$1.373	$1.342	($0.031)	Authority adjusted as projects were reprioritized.
			Computer Hardware (Network)	$0.372	$0.363	($0.009)	Actual Exectution Data
			Computer Software (Operating)	$0.256	$0.251	($0.005)	Actual Exectution Data
			Telecommunications	$0.805	$0.493	($0.312)	Authority adjusted as projects were reprioritized.
			Other Support Equipment	$0.000	$0.000	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
			Internally Developed	$0.000	$0.000	$0.000	
			Externally Developed	$0.000	$0.000	$0.000	
	4	**Minor Construction**		**$11.570**	**$1.513**	**($10.057)**	
			Replacement	$0.000	$0.000	$0.000	
			New Construction	$11.570	$1.513	($10.057)	Authority adjusted as projects were reprioritized.
			Environmental Capability	$0.000	$0.000	$0.000	
TOTAL FY 2017 CIP Program				**$28.319**	**$16.460**	**($11.859)**	

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2018	**1**	**Non ADP**		**$15.646**	**$15.168**	**($0.478)**	
			Vehicles	$0.000	$0.000	$0.000	
			Material Handling	$0.000	$0.000	$0.000	
			Installation Security	$0.000	$0.000	$0.000	
			Quality Control/Testing	$0.000	$0.565	$0.565	Funding adjusted as projects were reprioritized
			Medical Equipment	$0.000	$0.000	$0.000	
			Machinery	$0.000	$0.000	$0.000	
			Support Equipment	$15.646	$14.603	($1.043)	Authority adjusted as projects were reprioritized.
	2	**ADP**		**$2.119**	**$2.539**	**$0.420**	
			Computer Hardware (Production)	$1.750	$2.145	$0.395	Authority adjusted as projects were reprioritized.
			Computer Hardware (Network)	$0.000	$0.000	$0.000	
			Computer Software (Operating)	$0.000	$0.000	$0.000	
			Telecommunications	$0.369	$0.394	$0.025	Authority adjusted as projects were reprioritized.
			Other Support Equipment	$0.000	$0.000	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
			Internally Developed	$0.000	$0.000	$0.000	
			Externally Developed	$0.000	$0.000	$0.000	
	4	**Minor Construction**		**$6.750**	**$16.787**	**$10.037**	
			Replacement	$0.000	$0.000	$0.000	
			New Construction	$6.750	$16.787	$10.037	Authority adjusted as projects were reprioritized.
			Environmental Capability	$0.000	$0.000	$0.000	
TOTAL FY 2018 CIP Program				**$24.515**	**$34.494**	**$9.979**	

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2019	**1**	**Non ADP**		**$19.219**	**$19.219**	**$0.000**	
			Vehicles	$0.000	$0.000	$0.000	
			Material Handling	$0.000	$0.000	$0.000	
			Installation Security	$0.000	$0.000	$0.000	
			Quality Control/Testing	$0.507	$0.507	$0.000	
			Medical Equipment	$0.000	$0.000	$0.000	
			Machinery	$0.369	$0.369	$0.000	
			Support Equipment	$18.343	$18.343	$0.000	
	2	**ADP**		**$2.509**	**$2.509**	**$0.000**	
			Computer Hardware (Production)	$1.854	$1.854	$0.000	
			Computer Hardware (Network)	$0.655	$0.655	$0.000	
			Computer Software (Operating)	$0.000	$0.000	$0.000	
			Telecommunications	$0.000	$0.000	$0.000	
			Other Support Equipment	$0.000	$0.000	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
			Internally Developed	$0.000	$0.000	$0.000	
			Externally Developed	$0.000	$0.000	$0.000	
	4	**Minor Construction**		**$6.000**	**$6.000**	**$0.000**	
			Replacement	$0.000	$0.000	$0.000	
			New Construction	$6.000	$6.000	$0.000	
			Environmental Capability	$0.000	$0.000	$0.000	
TOTAL FY 2019 CIP Program				**$27.728**	**$27.728**	**$0.000**	

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Part 1			
1. Net Carry-In	395.7	470.6	435.5
2. Revenue	862.2	919.2	924.4
3. New Orders	937.1	884.1	894.3
4. Exclusions:			
Foreign Military Sales	0.4	0.4	0.4
Base Realignment and Closure	0.0	0.0	0.0
Other Federal Department and Agencies	63.0	49.7	50.3
Non-Federal and Others	7.1	6.3	6.3
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
5. Orders for Carryover Calculation	866.6	827.7	837.3
6. Weighted Average Outlay Rate	50.8%	50.7%	50.7%
7. Carryover Rate	49.2%	49.3%	49.3%
8. Allowable Carryover	437.2	419.0	423.1
Allowable Carryover(First Year)	426.4	408.1	412.8
Allowable Carryover (Second Year Procurement-funded Orders)	10.8	10.9	10.3
Part II			
9. Balance of Customer Order at Year End	470.6	435.5	405.4
10. Work-in-progress	0.2	0.2	0.2
11. Exclusions:			
Foreign Military Sales	0.9	0.4	0.2
Base Realignment and Closure	0.0	0.0	0.0
Other Federal Department and Agencies	44.4	30.2	24.6
Non-Federal and Others	5.2	3.7	3.1
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
12. Calculated Actuals Carryover	419.9	401.0	377.3

Some totals may not add due to rounding.
EXWC,NSWC,NUWC,NAWCDIV,SPAWAR,NRL use RDTEN rates.

8. Military Sealift Command

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DEPARTMENT OF THE NAVY
TRANSPORTATION – MILITARY SEALIFT COMMAND
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Mission Statement / Overview:
The Military Sealift Command (MSC) is the single manager-operating agency for sealift services. Over ocean movement of supplies and provisions to the deployed operating forces is a primary focus of MSC; it also maintains prepositioned equipment and supplies as well as other special mission services. These combine to support the Department of the Navy (DON) in deterring potential threats and promptly responding to crisis in the maritime crossroads. This submission addresses MSC's Navy mission operating within the Navy Working Capital Fund (NWCF), providing support to the Fleet Commanders (FLTCOMs) and other Department Of Defense activities by providing unique vessels and programs. Ship availability for MSC customers is the metric for evaluating mission performance in the sealift transportation business area.

Activity Group Composition:
The MSC supports Commander, U.S. Pacific Fleet (COMPACFLT) and United States Fleet Forces Command (USFFC), the Naval Sea Systems Command (NAVSEA), the Space and Naval Warfare Systems Command (SPAWAR), the Strategic Systems Programs (SSP), the Missile Defense Agency (MDA) and the U.S. Air Force with unique vessels and programs

The five programs budgeted through the Navy Working Capital Fund (NWCF) are:
1. Combat Logistics Force (CLF): Provides support utilizing civilian mariner manned non-combatant ships for material support.

2. Special Mission Ships (SMS): Provides unique seagoing platforms, operation of Navy Command Ships, and contracted Harbor Tugs.

3. Afloat Prepositioning Force: Navy (APF-N): Deploys advance material for strategic lifts for the Marine Expeditionary Forces. This program will contain the HST USNS GUAM and HST-2 USNS PUERTO RICO beginning in FY17.

4. Service Support Ships (SSS): Provides Navy with towing, rescue and salvage, submarine support and cable laying repair series as well as command and control platform and floating medical facilities. In FY18, the EPF program will be consolidated with the SSS program.

5. Expeditionary Fast Transport – Navy (EPF): The EPF program was formerly called the Joint High Speed Vessel (JHSV) program; it has been renamed the EPF Program. The Program is a cooperative effort for a high-speed, shallow draft vessel intended for rapid intra-theater transport of medium sized cargo payloads. EPF will reach speeds of 35-45 knots (65-83 km/h; 40-52 mph) and allow for the rapid transit and deployment of conventional or Special Forces as well as equipment and supplies. In FY18, the EPF program will be consolidated with the SSS program.

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Significant Changes Since the FY 2018 President's Budget:

FY 2017 to FY 2018:

CLF – In support of Cybersecurity, the program received additional reimbursable funding in FY 2018 to accomplish the IT requirements necessary for cybersecurity.

SMS – The SBX-1 Charter Ship will operate a full year as per diem in FY 2018.

APF-N – USNS PUERTO RICO (HST-2) will be leased by Bay Ferries Limited (BFL). In support of Sealift Readiness requirements, the program received additional reimbursable funding.

SSS/EPF – The USNS SAFEGUARD (T-ARS 50), USNS GRAPPLE (T-ARS 53) and the USNS NAVAJO (T-ATF 169) were deactivated in FY 2017. In FY 2018, the USNS H WILLIAMS (ESB-4) will operate a little less than a full year as per diem while the USNS YUMA (EPF-8) and the USNS BISMARK (EPF-9) will operate a full year as per diem. The USNS BURLINGTON (EPF-10) will be operational for 77 days of the year as per diem. Pre-delivery costs will be recognized for USNS BURLINGTON (EPF-10) and EPF-11. PSA costs will be recognized for USNS BISMARK (EPF-9) and USNS BURLINGTON (EPF-10). In support of the modernization in combat capability for worldwide EPF missions, the program received additional reimbursable funding for the Adaptive Force Packages (AFP). The USNS PONCE (AFSB) will deactivate in FY 2018. MSC will operate a reimbursable chartered ship Commercial Salvage / Tow Vessel (T-ARS) in FY 2018 and the COMFORT (T-AH 20) transitions from a ROS-45 status to a ROS-5 status.

FY 2018 to FY 2019:

CLF – No major changes.

SMS – No major changes.

APF-N – No major changes.

SSS / EPF– The USNS H WILLIAMS (ESB-4) will operate a full year in FY 2019 as per diem while the ESB-5 will be operational for a little over half the year as per diem. The USNS BURLINGTON (EPF-10) will be operating the full year as per diem while the EPF-11 will be operational as per diem for a little over half the year. Pre-delivery costs will be recognized for ESB-5, T-ATS 1 and T-ATS 2.

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TRANSPORTATION – MILITARY SEALIFT COMMAND
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Financial Profile:

Revenue/Expense/Operating Results ($ Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Revenue	$3,053.5	$2,626.6	$2,866.8
Expense	$2,868.3	$2,816.1	$2,857.0
Operating Results	$185.2	($189.6)	$9.8
Capital Surcharge	$0.0	$0.0	$0.0
Net Operating Results (NOR)	$185.2	($189.6)	$9.8
Prior Year AOR	$225.4	$179.8	($9.8)
Other Changes Affecting AOR	($230.8)	$0.0	$0.0
Accumulated Operating Results (AOR)	$179.8	($9.8)	$0.0

Some totals may not add due to rounding

Orders, Revenue and Expense: The variations in revenue and expense from year to year are associated with the changes in ship fleet within the following classes as discussed in the significant changes section above; T-AO, T-AOE, T-AKE, T-AGS, T-AH, T-ATF, T-ARS, ESB (MLP), and EPF . FY 2018 reflects adjustments to AOR to maintain operating cash associated with budgetary resources required for projected outlays.

Net Operating Result (NOR): The FY 2018 President's Budget reflected a NOR of -$198.5 vice the current estimate of -$189.6 for FY 2018. The variance is a result of changes in ship fleet within the T-AO, T-AOE, T-AKE, T-AGS, T-AH, T-ATF, T-ARS, ESB (MLP) and EPF as reflected in the significant changes section above. All changes have been incorporated into the FY 2019 rates.

Collections/Disbursements/Outlays ($ Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Collections	$3,071.0	$2,626.6	$2,866.8
Disbursements	$2,866.4	$2,814.0	$2,857.2
Outlays	$204.6	($187.4)	$9.6

Some totals may not add due rounding

Collections: FY 2017 actuals, FY 2018 and FY 2019 reflect expected revenue based on current estimates adjusted for changes in accounts receivable.

Disbursements: FY 2017 actuals, FY 2018 and FY 2019 represent budgeted expenses and Capital Investment Program (CIP) outlays adjusted for changes in accounts payable.

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Workload:	**FY 2017**	**FY 2018**	**FY 2019**
CLF	10,585	10,585	10,585
SMS	8,030	8,395	8,395
APF-N	5,840	5,840	5,840
SSS	4,745	7,994	8,779
EPF	2,718		

Workload for MSC refers to the number of per diem days associated with each of the five MSC programs. EPF class will realign under SSS class in FY 2018.

CLF – No major workload changes.

SMS – The increase in FY 2018 is due to full year of operational costs being recognized for the Charter Ship SBX-1 as it will operate as per diem vice reimbursable.

APF-N – No major workload changes.

SSS - In FY 2018, MSC consolidated the SSS and EPF programs. The increase in FY 2018 is for partial year funding for H. WILLIAMS (ESB-4) 252 days. In FY 2018 partial funding will be recognized for USNS BURLINGTON (EPF-10) 77 days. The increase in FY 2019 is as a result of the H WILLIAMS (ESB-4) and BURLINGTON (ESB-10) operating a full year as per diem and partial funding will be recognized for ESB-5 for 187 days and EPF-11 for 197 days.

EPF – For FY 2018, the EPF program will be consolidated with the SSS. EPF per diem days changed slightly from 2,920 in PB 2018 due to delivery dates of USNS YUMA and USNS BISMARK being delayed.

Reimbursable Orders ($ Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Current Estimate	$3,053.5	$2,626.6	$2,866.8

Orders for MSC equate to revenue. Variances are due to changes in per diem days, fuel price changes, and requirement to attain zero AOR in FY 2019.

Direct Labor Hours (000):	**FY 2017**	**FY 2018**	**FY 2019**
Current Estimate	19,749	17,507	17,540

Direct labor hours refer to Civilian Mariners (CIVMARS) only.

The decrease in FY 2018 is due to the deactivation of USNS PONCE. Increase in FY 2019 is due to additional ships coming online as discussed in the significant changes section

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Performance Indicators: Program Performance is measured by ship availability days, which measures days against plan that ships are actually available to perform the function for which they were intended. Any change in ship operations such as FOS to ROS, transitioning ships between coasts, or changing ship status (e.g., from ROS-15 days, ROS-30 days or ROS-45 days) are coordinated with the respective MSC customer.

A summary of performance goals is reflected below:

Performance Measure (000):	**Goal**	**FY 2017**	**FY 2018**	**FY 2019**
Ship Availability	95%	95%	95%	95%

Unit Cost:	**FY 2017**	**FY 2018**	**FY 2019**
CLF	$123,147	$124,165	$129,851
SMS	$48,920	$39,001	$39,660
APF-N	$61,343	$65,953	$63,900
SSS	$94,654	$72,233	$70,815
EPF	$57,394		

Unit Cost: MSC operates under five distinct unit cost goals - one for each of the programs. All programs have cost/per day as the unit cost basis (costs include only per diem expenses in the annual operating budget (AOB). Ship mix – (e.g., class of ships and operating status) impacts unit cost levels. Costs in all years are primarily a function of approved escalation, fuel, CIVMAR salaries, ship mix, and Maintenance and Repair (M&R). EPF class is realigning under SSS class in FY 2018.

Performance Rate Change From Prior Year	**FY 2017**	**FY 2018**	**FY 2019**
CLF	-3.4%	-4.5%	10.3%
SMS	-4.3%	-28.4%	15.9%
APF-N	77.4%	-36.5%	-5.3%
SSS	-28.0%	-25.8%	17.2%
EPF	-30.0%		

Percentages reflect the change in unit cost from year to year and reflect changes in ship mix stated in the significant changes section. EPFs are realigned under SSS in FY 2018.

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Staffing:

Civilian/Military ES & Workyears:	**FY 2017**	**FY 2018**	**FY 2019**
Civilian End Strength	6,773	6,676	6,675
Civilian Workyears (straight time)	9,276	8,709	8,662
Military End Strength	159	165	165
Military Workyears	159	165	165

Civilian Personnel: End Strength changes associated mainly with new ships coming on and off line. Workyear variance is primarily a function of decreasing lapse rate.

Military Personnel: Variances are due primarily with additional end strength needed to support realignment of MSC resources.

Capital Investment Program (CIP): The Capital Investment Program allows the NWCF to achieve its mission by reinvesting in plant equipment and facilities. Included in the capital budget are the following types of assets: automated data processing equipment (ADPE); non-ADPE equipment; automated data processing software, internally or externally developed; and minor construction.

CIP Authority ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Equipment, Non-ADP / Telecom	$0.0	$0.0	$0.0
Equipment, ADPE / Telecom	$5.2	$10.2	$4.0
Software Development	$0.0	$0.0	$0.0
Minor Construction	$2.8	$0.0	$1.4
Total	$7.9	$10.2	$5.4

Some totals may not add due to rounding

REVENUE AND EXPENSES
DEPARTMENT OF THE NAVY
TRANSPORTATION - MILITARY SEALIFT COMMAND
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(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Revenue:			
Gross Sales			
Operations	3,049.1	2,616.4	2,861.5
Capital Surcharges	0.0	0.0	0.0
Capital Investment Recovery	4.5	10.2	5.2
Other Income			
Total Income	3,053.5	2,626.6	2,866.8
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	15.3	15.5	16.1
Civilian Personnel Compensation & Benefits	853.2	814.4	822.6
Travel and Transportation of Personnel	37.3	36.6	38.3
Material & Supplies (Internal Operations)	412.7	488.0	467.6
Equipment	109.5	97.1	95.8
Other Purchases from NWCF	4.0	2.1	2.5
Transportation of Things	10.5	11.2	11.4
Capital Investment Recovery	4.5	10.2	5.2
Printing and Reproduction	0.3	0.4	0.4
Advisory and Assistance Services	0.0	0.0	0.0
Rent, Communication, Utilities & Misc Charges	444.0	398.2	412.7
Other Purchased Services	977.0	942.6	984.3
Total Expenses	2,868.3	2,816.1	2,857.0
Work in Process Adjustment	0.0	0.0	0.0
Comp Work for Activity Retention Adjustment	0.0	0.0	0.0
Cost of Goods Sold	2,868.3	2,816.1	2,857.0
Operating Result	185.2	-189.6	9.8
Adjustments Affecting NOR	0.0	0.0	0.0
Capital Surcharges	0.0	0.0	0.0
Extraordinary Expenses Unmatched	0.0	0.0	0.0
Other Changes Affecting NOR (All Others)	0.0	0.0	0.0
Net Operating Result	185.2	-189.6	9.8
PY AOR	225.4	179.8	-9.8
TOTAL AOR	410.6	-9.8	0.0
Non-Recoverable Adjustments impacting AOR	-230.8	0.0	0.0
AOR for budget purposes	179.8	-9.8	0.0

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
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(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
1. New Orders	2,999.4	2,626.6	2,866.8
a. Orders from DoD Components:	2,992.1	2,619.2	2,858.7
Department of the Navy	2,930.2	2,532.3	2,763.8
O & M, Navy	2,895.0	2,497.2	2,725.6
O & M, Marine Corps	25.1	26.4	28.9
O & M, Navy Reserve	0.0	0.0	0.0
O & M, Marine Corp Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	0.0	0.0	0.0
Weapons Procurement, Navy	0.0	0.0	0.0
Ammunition Procurement, Navy/MC	0.0	0.0	0.0
Shipbuilding & Conversion, Navy	0.0	0.0	0.0
Other Procurement, Navy	10.1	8.6	9.4
Procurement, Marine Corps	0.0	0.0	0.0
Family Housing, Navy/MC	0.0	0.0	0.0
Research, Dev., Test, & Eval., Navy	0.0	0.0	0.0
Military Construction, Navy	0.0	0.0	0.0
National Defense Sealift Fund	0.0	0.0	0.0
Other Navy Appropriations	0.0	0.0	0.0
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	0.0	0.0	0.0
Army Operation & Maintenance	0.0	0.0	0.0
Army Res, Dev, Test, Eval	0.0	0.0	0.0
Army Procurement	0.0	0.0	0.0
Army Other	0.0	0.0	0.0
Department of the Air Force	29.6	20.0	21.8
Air Force Operation & Maintenance	29.6	20.0	21.8
Air Force Res, Dev, Test, Eval	0.0	0.0	0.0
Air Force Procurement	0.0	0.0	0.0
Air Force Other	0.0	0.0	0.0
DOD Appropriation Accounts	32.3	66.9	73.1
Base Closure & Realignment	0.0	0.0	0.0
Operation & Maintenance Accounts	32.3	30.6	33.4
Res, Dev, Test & Eval Accounts	0.0	36.3	39.6
Procurement Accounts	0.0	0.0	0.0
Defense Emergency Relief Fund	0.0	0.0	0.0
DOD Other	0.0	0.0	0.0
b. Orders from other Fund Activity Groups	7.3	7.4	8.1
c. Total DoD	2,999.4	2,626.6	2,866.8
d. Other Orders:	0.0	0.0	0.0
Other Federal Agencies	0.0	0.0	0.0
Foreign Military Sales	0.0	0.0	0.0
Non Federal Agencies	0.0	0.0	0.0
2. Carry-In Orders	280.0	225.9	225.9
3. Total Gross Orders	3,279.4	2,852.5	3,092.7
a. Funded Carry-Over before Exclusions	225.9	225.9	225.9
4. Revenue(-)	3,053.5	2,626.6	2,866.8
5. End of Year Work-In-Process (-)	0.0	0.0	0.0
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	0.0	0.0	0.0
7. Funded Carryover	221.1	221.1	221.1

Note: Line 5 (End of Year Work-In-Process) is adjusted for Non-DOD BRAC, FMS, and Institutional MRTFB

CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
TRANSPORTATION- MILITARY SEALIFT COMMAND
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(DOLLARS IN MILLIONS)

	Costs
FY 2017 Estimated Actuals	**2,868.3**
FY 2018 President's Budget:	**2,831.8**
Estimated Impact in FY 2018 of Actual FY 2017 Experience:	**0.0**
Pricing Adjustments:	**-4.1**
Civilian Personnel	0.0
Fuel Price	0.0
General Inflation	-4.1
Program Changes:	**-11.6**
Decrease for the operational costs of the EPF-10 & EPF-11 due to delay in delivery	-13.1
Increase in pre-delivery costs EPF-10 due to delay in delivery and PSA costs	0.8
Increase ESB-4 Delivery schedule adjustment +38 days and pre-delivery	0.7
Other Changes:	**0.0**
Capital Investment Recovery	0.0
Facilities Sustainment, Restoration & Modernization	0.0
FY 2018 Current Estimate:	**2,816.1**
Pricing Adjustments:	**47.9**
Annualization of Prior Year Pay Raises	**15.4**
Civilian Personnel	15.3
Military Personnel	0.1
FY 2019 Pay Raise	**0.3**
Civilian Personnel	0.0
Military Personnel	0.3
Fuel Price Changes	**-1.4**
General Purchase Inflation	**33.6**
Program Changes:	**-7.0**
Increase due to the T-AH COMFORT ROS-5 Activation	22.5
MSC Cybersecurity Command	1.6
Reduced fuel barrels and steaming days for the EPF	-20.1
Decrease ESB-5 Labor to correct funding level	-11.0
Other Changes:	**0.0**
Capital Investment Recovery	0.0
Facilities Sustainment, Restoration & Modernization	0.0
Change in work days	0.0
Civilian Equivalency Rate Changes	0.0
Indirect Costs	0.0
G&A Costs	0.0
FY 2019 Estimate:	**2,857.0**

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CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
TRANSPORTATION- MILITARY SEALIFT COMMAND
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

		FY 2017		FY 2018		FY 2019	
Line #	Description	Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	**Non-ADPE and Telecom Equipment >= $.250M**	**0**	**$0.000**	**0**	**$0.000**	**0**	**$0.000**
	- Vehicles	0	$0.000	0	$0.000	0	$0.000
	- Material Handling	0	$0.000	0	$0.000	0	$0.000
	- Installation Security	0	$0.000	0	$0.000	0	$0.000
	- Quality Control/Testing	0	$0.000	0	$0.000	0	$0.000
	- Medical Equipment	0	$0.000	0	$0.000	0	$0.000
	- Machinery	0	$0.000	0	$0.000	0	$0.000
	- Support Equipment	0	$0.000	0	$0.000	0	$0.000
2	**ADPE and Telecom Equipment >= $.250M**	**1**	**$5.164**	**1**	**$10.200**	**0**	**$4.000**
	- Computer Hardware (Production)	1	$5.164	1	$10.200	0	$4.000
	- Computer Hardware (Network)	0	$0.000	0	$0.000	0	$0.000
	- Computer Software (Operating)	0	$0.000	0	$0.000	0	$0.000
	- Telecommunications	0	$0.000	0	$0.000	0	$0.000
	- Other Support Equipment	0	$0.000	0	$0.000	0	$0.000
3	**Software Development >= $.250M**	**0**	**$0.000**	**0**	**$0.000**	**0**	**$0.000**
	- Internally Developed	0	$0.000	0	$0.000	0	$0.000
	- Externally Developed	0	$0.000	0	$0.000	0	$0.000
4	**Minor Construction (>= $.250M and <= $1.000M)**	**3**	**$2.756**	**0**	**$0.000**	**0**	**$1.424**
	- Replacement Capability	0	$0.000	0	$0.000	0	$0.000
	- New Construction	3	$2.756	0	$0.000	0	$1.424
	- Environmental Capability	0	$0.000	0	$0.000	0	$0.000
	Grand Total	**4**	**$7.920**	**1**	**$10.200**	**0**	**$5.424**
	Total Capital Outlays		**$2.448**		**$8.000**		**$5.424**
	Total Capital Investment Recovery		**$12.180**		**$10.120**		**$5.247**

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
Department of the Navy/ Transportation	#002 - ADPE						Military Sealift Command		
	FY 2017			FY 2018			FY 2019		
ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	1	5,164	$5,164	1	10,200	$10	1	4,000	$4,000
Computer Hardware (Network)	0	-	$0	0	-	$0	0	-	$0
Computer Software (Operating System)	0	-	$0	0	-	$0	0	-	$0
Telecommunications	0	-	$0	0	-	$0	0	-	$0
Other Support Equipment	0	-	$0	0	-	$0	0	-	$0
Total	1	5,164	$5,164	1	10	$10	1	4,000	$4,000

Justification:

FY17, FY18, 19

Consolidated Afloat Network Enterprise Services (CANES)

CANES represents MSC requirements to implement unclassified and classified LANS at all ships, offices, area command, and headquarters world-wide.

DoD and DoN CIO have directed the eradication of Windows XP on all networks. Consolidated Afloat Network Enterprise Services (CANES) is the Navy's next generation Windows 7 (WIN7) based Afloat tactical network for all enclaves which will replace the Integrated Shipboard Network Systems (ISNS) Program of Record (POR). To ensure compliance for MSC's ISNS-based platforms, SPAWAR has been enlisted to develop a MSC specific variant of CANES. This will be a permanent solution that provides network infrastructure, basic network information distribution services, access to the DISN Wide Area Network (SIPRNET and NIPRNET) and hosted Command and Control (C2) applications.

Starting in FY17 the Windows XP eradication plan will span over a 5 years going into FY2021. A life span financial plan is being worked on and can be furnished when complete upon request.

CAPITAL INVESTMENT JUSTIFICATION	FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
(DOLLARS IN THOUSANDS)	FEBRUARY 2018

Department of the Navy/ Transportation	#004 - Minor Construction	Military Sealift Command

	FY 2017			FY 2018			FY 2019		
Minor Construction	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement	0	-	$0	0	-	$0	0	-	$0
New Construction	3	919	$2,756	0	-	$0	2	712	$1,424
Environmental Capability	0	-	$0	0	-	$0	0	-	$0
Total	3	919	$2,756	0	-	$0	2	712	$1,424

Justification:

FY17
BLDG SP47 $904K
Building addition to add office space for seating employees.
Construction: $0.824
SIOH: $0.066
PCAS: $0.014

BLDG SP48 $855K
Building addition to add office space for seating employees.
Construction: $0.779
SIOH: $0.063
PCAS: $0.013

BLDG SP64 $
Building addition to add office space for seating employees.
Construction: $0.910
SIOH: $0.073
PCAS: $0.015

FY19
BLDG. R52 Addition (new construction) $924K
Project was previously approved in fY18 however timeline has been pushed back to FY19. Build single story addition on rear of Building R52 (approx. 2800 sq ft). Addition will permit seating for 25 personnel and additionally house a 15 person computer-based training facility.
Design 47,000

PCAS	74,000
SIOH	40,000
Direct Costs	15,000
Construction	800,000

FY19

SP 15/16 Parking Lot (New Construction) $500K

Create 35 space parking area by paving undeveloped area between SP 15 and SP 16. Manage storm water runoff and light entire parking area. The project will support the relocation of the MSC Legal Staff (33 personnel) from the Washington Navy Yard. Personnel are currently parking on grassy areas in front of the buildings in violation of base regulations.

CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
TRANSPORTATION- MILITARY SEALIFT COMMAND
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	**1**	**Non ADP**		**$0.000**	**$0.000**	**$0.000**	
			Vehicles	$0.000	$0.000	$0.000	
			Material Handling	$0.000	$0.000	$0.000	
			Quality Control/Testing	$0.000	$0.000	$0.000	
			Machinery	$0.000	$0.000	$0.000	
			Support Equipment	$0.000	$0.000	$0.000	
	2	**ADP**		**$9.437**	**$5.164**	**($4.273)**	
			Computer Hardware (Production)	$9.437	$5.164	($4.273)	Actual Exectution Data
			Computer Hardware (Network)	$0.000	$0.000	$0.000	
			Computer Software (Operating)	$0.000	$0.000	$0.000	
			Telecommunications	$0.000	$0.000	$0.000	
			Other Support Equipment	$0.000	$0.000	$0.000	
	3	**Software**		**$3.550**	**$0.000**	**($3.550)**	
			Internally Developed	$3.550	$0.000	($3.550)	Actual Exectution Data
			Externally Developed	$0.000	$0.000	$0.000	
	4	**Minor Construction**		**$2.772**	**$2.756**	**($0.016)**	
			Replacement	$0.000	$0.000	$0.000	
			New Construction	$2.772	$2.756	($0.016)	Actual Exectution Data
			Environmental Capability	$0.000	$0.000	$0.000	
TOTAL FY 2017 CIP Program				**$15.759**	**$7.920**	**($7.839)**	

FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2018	**1**	**Non ADP**		**$0.000**	**$0.000**	**$0.000**	
			Vehicles	$0.000	$0.000	$0.000	
			Material Handling	$0.000	$0.000	$0.000	
			Quality Control/Testing	$0.000	$0.000	$0.000	
			Machinery	$0.000	$0.000	$0.000	
			Support Equipment	$0.000	$0.000	$0.000	
	2	**ADP**		**$8.000**	**$10.200**	**$2.200**	
			Computer Hardware (Production)	$8.000	$10.200	$2.200	Projects were reprioritized.
			Computer Hardware (Network)	$0.000	$0.000	$0.000	
			Computer Software (Operating)	$0.000	$0.000	$0.000	
			Telecommunications	$0.000	$0.000	$0.000	
			Other Support Equipment	$0.000	$0.000	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
			Internally Developed	$0.000	$0.000	$0.000	
			Externally Developed	$0.000	$0.000	$0.000	
	4	**Minor Construction**		**$0.000**	**$0.000**	**$0.000**	
			Replacement	$0.000	$0.000	$0.000	
			New Construction	$0.000	$0.000	$0.000	
			Environmental Capability	$0.000	$0.000	$0.000	
TOTAL FY 2018 CIP Program				**$8.000**	**$10.200**	**$2.200**	

FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2019	**1**	**Non ADP**		**$0.000**	**$0.000**	**$0.000**	
			Vehicles	$0.000	$0.000	$0.000	
			Material Handling	$0.000	$0.000	$0.000	
			Quality Control/Testing	$0.000	$0.000	$0.000	
			Machinery	$0.000	$0.000	$0.000	
			Support Equipment	$0.000	$0.000	$0.000	
	2	**ADP**		**$0.000**	**$0.000**	**$0.000**	
			Computer Hardware (Production)	$0.000	$0.000	$0.000	
			Computer Hardware (Network)	$0.000	$0.000	$0.000	
			Computer Software (Operating)	$0.000	$0.000	$0.000	
			Telecommunications	$0.000	$0.000	$0.000	
			Other Support Equipment	$0.000	$0.000	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
			Internally Developed	$0.000	$0.000	$0.000	
			Externally Developed	$0.000	$0.000	$0.000	
	4	**Minor Construction**		**$1.424**	**$1.424**	**$0.000**	
			Replacement	$0.000	$0.000	$0.000	
			New Construction	$1.424	$1.424	$0.000	
			Environmental Capability	$0.000	$0.000	$0.000	
TOTAL FY 2019 CIP Program				**$1.424**	**$1.424**	**$0.000**	

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
TRANSPORTATION - MILITARY SEALIFT COMMAND
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Part 1			
1. Net Carry-In	280.0	225.9	225.9
2. Revenue	3,053.5	2,626.6	2,866.8
3. New Orders	2,999.4	2,626.6	2,866.8
4. Exclusions:			
Foreign Military Sales	0.0	0.0	0.0
Base Realignment and Closure	0.0	0.0	0.0
Other Federal Department and Agencies	0.0	0.0	0.0
Non-Federal and Others	0.0	0.0	0.0
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
5. Orders for Carryover Calculation	2,999.4	2,626.6	2,866.8
6. Weighted Average Outlay Rate	71.1%	70.7%	70.7%
7. Carryover Rate	28.9%	29.3%	29.3%
8. Allowable Carryover	866.8	773.4	843.2
Allowable Carryover(First Year)	866.8	769.6	840.0
Allowable Carryover (Second Year Procurement-funded Orders)	0.0	3.8	3.2
Part II			
9. Balance of Customer Order at Year End	225.9	225.9	225.9
10. Work-in-progress	0.0	0.0	0.0
11. Exclusions:			
Foreign Military Sales	4.8	4.8	4.8
Base Realignment and Closure	0.0	0.0	0.0
Other Federal Department and Agencies	0.0	0.0	0.0
Non-Federal and Others	0.0	0.0	0.0
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
12. Calculated Actuals Carryover	221.1	221.1	221.1

Some totals may not add due to rounding.
EXWC,NSWC,NUWC,NAWCDIV,SPAWAR,NRL use RDTEN rates.

9. Facilities Engineering Commands

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NARRATIVE
DEPARTMENT OF THE NAVY
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Mission Statement / Overview:
The mission of the Facilities Engineering Commands (FECs) is to provide utility services, facilities sustainment, transportation support, engineering services and environmental services required by afloat, ashore operating forces and other activities. As a member of the Naval Facilities Engineering Command (NAVFAC), the FECs strengthen the Navy and Marine Corps readiness through work across the facility lifecycle while providing quality public works support services to the Navy, Department of Defense (DoD), and other federal and non-federal clients. The FECs strive to reduce total cost for services, increase productivity, improve quality/client satisfaction, and provide a safe and productive work environment. Investments in key components of the FECs' infrastructure help achieve energy goals and enable the FECs to operate in the most effective and efficient way possible.

Activity Group Composition:

Activity	Location
FEC Europe - Africa - Southwest Asia	Naples, Italy
FEC Far East	Yokosuka, Japan
FEC Marianas	Agana, Guam, Marianas Islands
FEC Hawaii	Pearl Harbor, Hawaii
FEC Mid-Atlantic	Norfolk, Virginia
FEC Northwest	Silverdale, Washington
FEC Southeast	Jacksonville, Florida
FEC Southwest	San Diego, California
FEC Washington	Washington, D.C.

Base Support Products and Services:

Utilities and Energy Management: Utilities and energy management represents 66% of the Base Support budget and changes in purchased utility costs are the primary driver of the cost of operations. In order to manage these costs, the FECs are implementing energy conservation measures that are reducing the quantities of electricity and natural gas consumed. These initiatives include managing the kinds of fuel purchased; implementing efficient ways of using fuel to produce steam; aggressive energy management and system recap based on linear segments and consistent system condition information; maximizing the use of energy projects; where feasible, increasing the use of alternative sources of energy such as geothermal, ocean thermal, wind, solar, and wave; and deploying information assured industrial control systems. There are four (4) Restoration and Modernization (RMe) projects in FY 2019. These projects primarily involve replacement or upgrades to utility distribution systems at the shipyards that will reduce or eliminate line loss and provide for more efficient operations. The RMe projects included in FY 2019:

- Repair approximately 1700 linear feet of degraded steam and condensate piping along Goodrich Avenue on Portsmouth Naval Shipyard (PNSY).
- Repair the steam and condensate distribution lines to building 99 on PNSY.
- Modernize building 6400 Central Steam Plant on Naval Submarine Base Bangor with smaller, modular, more efficient boilers and feed water systems.
- Replace deteriorated steam and condensate piping between buildings one and two on Naval Support Activity (NSA) Philadelphia.

Utilities Operations and Sustainment: Utilities operations and sustainment results in increased reliability and decreased loss of service frequency/duration involving utility systems, reducing impacts to Navy missions. Operational services include preventative maintenance, replacement of components at the end of their useful life, and repair of critical utility infrastructure, equipment, and distribution networks. Sustainment investments help prevent increased environmental violations for system operations, accelerated rates of deterioration, shortened service lives of utility systems, and increased restoration costs as systems and equipment degrade.

Maintenance and Repair: Maintenance and repair or facilities sustainment addresses minor maintenance repairs, preventative maintenance, and repairs and upgrades of buildings and other non-utilities infrastructure. It corrects decreased reliability and increased loss of service frequency/duration involving buildings and other critical infrastructure, reducing impacts to Navy missions.

Transportation: Budgeted initiatives to standardize and lower vehicles and equipment operating costs include:

- Central management of Transportation NWCF rates and recapitalization
- Management of Transportation across product lines at all FECs
- Lease passenger carrying vehicles from General Services Administration
- Institutionalize Vehicle Allocation Methodology across all FECs
- Downsize vehicles and equipment to minimum requirements, including neighborhood electric vehicles and other slow moving vehicles to reduce the per mile cost including fuel
- Reduce number of vehicles based on usage and consideration of other Fleet Management decisions (e.g. car share, vehicle pooling, etc.)
- Standardize vehicle and equipment type, sizes, and configurations
- Optimize use of lease and short term rentals for vehicles and heavy equipment

NARRATIVE
DEPARTMENT OF THE NAVY
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Facility Support Contract Management and Facility Services (FMFS): The cost of facility sustainment, utility, and Transportation facility support contracts is trending down slightly due to market forces and economies of scale through maximizing the use of regional contracts. Continued investment in facility support contracts program management and acquisition enables leveraging best practices and process initiatives that have a potential for large return on investment by improving contract performance and reducing procurement costs. Recent rule changes will allow for longer-term limits for Base Operating Support (BOS) contracts which will reduce the frequency and, therefore, cost of re-procurement.

In order to create efficiencies for BOS contract specification writers, FMFS developed a facility support contract template that standardizes required performance levels across the Navy for each of the shore installation service areas (janitorial, facility maintenance, port operations, galley operations, utility system operations and maintenance, Transportation operations and maintenance, grounds maintenance). The FEC or Public Works Department (PWD) uses these templates when renewing service contracts. Each template has the current list of Commander, Naval Installations (CNIC) Common Output Levels (COL), which are defined as differing levels of service for a particular shore installation service area. In addition, these support contract templates are formatted to attain contractor proposals in a clear and concise manner that allows the government to understand cost changes associated with different COLs, which have a range of COL1 through COL4. This initiative will minimize the amount of tailoring required by the NAVFAC contracting workforce when defining customer requirements.

Significant Changes Since the FY 2018 President's Budget:

Civilian labor estimates in FY 2018 are higher than previously budgeted due to continued success in filling positions vacated during the hiring freeze and sequestration. This has allowed more work to be restored to in-house performance in those instances where it had been diverted to contractor.

As the Smart Grid and Cyber Security initiatives evolve, and technical solutions are developed to address the changing issues, the scope of the initiatives are moving away from direct utility commodity distribution. Therefore, the costs for Smart Grid and Cyber Security requirements were aligned to productive costs from direct costs.

A reduction for the impact of the Euro and Yen budget exchange rate adjustment in FY 2019 is reflected in the budget.

NARRATIVE
DEPARTMENT OF THE NAVY
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Productivity Initiatives and Other Efficiencies:

The FY 2019 budget reflects cost reductions made possible by a baseline review of units and cost. This review resulted in a net reduction primarily in Utilities commodities, which includes a -$80.6M reduction due to lower purchased utility costs. The lower purchased utility costs are mainly attributable to the continued low cost of oil per barrel, which has reduced the megawatt hour (MWH) cost of utility providers who use fossil fuel to generate electricity. These baseline review results were used to offset a Capital Investment Program (CIP) rate surcharge in FY 2019 of $8.2M to support key projects to modernize facilities and equipment, while preserving cash levels.

Additional efficiencies/initiatives include:
Decentralization of Public Works Department (PWD) San Diego and Coronado Steam Operations, and privatization of chilled water at North Island, FEC Southwest -$23.3M
Savings for Prior Year Energy Restoration & Modernization (RM e) Efficiency projects -$1.9M
Reduction to the Industrial Control System (ICS) Smart Grid Initiative -$6.9M

Financial Profile:

Revenue/Expense/Operating Results ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Orders	$2,948.0	$2,980.4	$2,927.5
Revenue	$3,009.8	$2,973.4	$2,915.3
Expense	$2,939.8	$3,176.7	$3,063.1
Operating Results	$70.0	($203.3)	($147.8)
Other Changes Affecting NOR (Capital Surcharge)	$0.0	$0.0	($8.2)
Net Operating Results (NOR)	$70.0	($203.3)	($156.0)
Prior Year AOR	$297.0	$359.3	$156.0
Other Changes Affecting AOR	($7.7)	$0.0	$0.0
Accumulated Operating Results (AOR)	$359.3	$156.0	($0.0)

Some totals may not add due to rounding.

Orders, Revenue and Expense: The downward profile in orders and revenue between FY 2018 and FY 2019 is primarily due to customer demand for utility services reducing energy consumption. The FY 2018 to FY 2019 decrease in cost is attributable to reduced purchased utility cost, adjustments to Sustainment requirements cost, decentralization of PWD San Diego and Coronado steam operations at FEC Southwest, fewer RMe projects, and the foreign currency adjustments.

In addition, the $8.2 million capital surcharge in FY 2019 is to fund vital Capital Investment Program (CIP) increases to support key projects and preserve cash levels.

Collections/Disbursements/Outlays ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Collections	$2,918.7	$2,967.3	$2,895.1
Disbursements	$2,950.7	$3,082.8	$3,001.9
Outlays	$32.0	$115.5	$106.8

Some totals may not add due to rounding.

Collections: FY 2017 reflects actual execution, and FY 2018 and FY 2019 reflect expected revenue based on current estimates.

Disbursements: FY 2017 reflects actual execution, and FY 2018 and FY 2019 represent budgeted expenses and CIP outlays adjusted for changes in accounts payable.

Foreign Currency Issues: Foreign currency exchange rates impact FEC Europe Africa Southwest Asia and FEC Far East's operating and outlay results. The table below shows the estimated value of FEC costs that are subject to payment in foreign currency:

Costs Subject to Foreign Currency ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Costs to be Paid in EUROS	$66.0	$64.3	$73.5
Costs to be Paid in YEN	$176.8	$206.3	$180.7
Total Costs to be Paid in Foreign Currency	$242.8	$270.5	$254.2

Some totals may not add due to rounding.

Workload:

Direct Labor Hours (000):	**FY 2017**	**FY 2018**	**FY 2019**
Current Estimate	13,248	12,758	12,726

Direct labor hours are driven by workload and mission requirements, as such, the workforce continues to be sized in accordance with funded workload. The changes in direct labor hours are estimated based on supporting customer workload, and efforts in filling positions vacated during the hiring freeze and sequestration. There is a slight decrease from FY 2018 to FY 2019 due to fewer over time hours.

NARRATIVE
DEPARTMENT OF THE NAVY
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Unit Cost: The FEC's specific outputs and associated unit costs are identified in the following table.

PRODUCT/SERVICE	UNIT OF MEASURE	UNIT COST FY 2017	UNIT COST FY 2018	UNIT COST FY 2019
UTILITY SERVICES				
ELECTRICITY	MWH	142.22	178.84	161.62
POTABLE WATER	KGAL	13.59	10.34	10.65
SALT/RIVER WATER	KGAL	0.60	1.60	2.37
STEAM	MBTU	44.86	48.52	47.54
SEWAGE	KGAL	12.33	11.22	11.87
NATURAL GAS	MBTU	7.03	10.21	9.97
COMPRESSED AIR	KCF	1.52	2.46	1.93
SANITATION SERVICES				
REFUSE COLL & DISPOSAL I	CUYD	14.91	21.66	15.29
REFUSE COLL & DISPOSAL II	TONS	351.70	381.20	387.51
PEST CONTROL	HOURS	54.54	61.43	58.00
HAZ WASTE I	GAL	0.77	1.96	2.40
HAZ WASTE II	LBS	1.66	1.77	1.75
INDUST WASTE	KGAL	117.47	72.66	94.28
ENVIRONMENTAL ENG	HOURS	102.35	117.57	117.72
ENVIRONMENTAL LAB	TEST	72.29	56.16	61.68
TRANSPORTATION SERVICES				
EQUIP RENTAL	HOURS	5.27	3.61	3.67
VEHICLE OPS	HOURS	66.39	68.37	65.00
VEHICLE MAINTENANCE	SRO	192.60	180.32	164.04
MAINTENANCE & REPAIR	DLH	83.19	84.31	84.44

Units of Measure Acronym List

MBTU	Million British Thermal Units	MWH	Mega Watt Hour
CUYD	Cubic Yard	SRO	Shop Repair Order
KCF	Thousand Cubic Feet	LBS	Pounds
KGAL	Thousand Gallons	TONS	Tons
DLH	Direct Labor Hours		

NARRATIVE
DEPARTMENT OF THE NAVY
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

The FEC's units used in determining unit cost above are identified in the following table.

PRODUCT/SERVICE	UNIT OF MEASURE	UNITS FY 2017	UNITS FY 2018	UNITS FY 2019
UTILITY SERVICES				
ELECTRICITY	MWH	7,021,558	7,194,834	7,207,841
POTABLE WATER	KGAL	18,840,643	22,227,789	22,183,467
SALT/RIVER WATER	KGAL	10,270,208	7,792,654	7,908,964
STEAM	MBTU	5,373,496	5,938,545	5,626,437
SEWAGE	KGAL	15,321,082	16,751,316	16,624,911
NATURAL GAS	MBTU	3,731,648	4,045,904	3,977,742
COMPRESSED AIR	KCF	19,118,964	12,339,261	15,143,478
SANITATION SERVICES				
REFUSE COLL & DISPOSAL I	CUYD	837,176	799,974	813,374
REFUSE COLL & DISPOSAL II	TONS	34,544	29,547	29,608
PEST CONTROL	HOURS	76,328	67,889	64,115
HAZ WASTE I	GAL	51,765	72,000	60,000
HAZ WASTE II	LBS	20,299,491	18,204,181	20,773,341
INDUST WASTE	KGAL	205,798	227,367	225,724
ENVIRONMENTAL ENG	HOURS	41,491	37,358	37,731
ENVIRONMENTAL LAB	TEST	92,939	98,832	89,275
TRANSPORTATION SERVICES				
EQUIP RENTAL	HOURS	38,580,332	57,559,019	57,403,546
VEHICLE OPS	HOURS	914,386	955,137	959,264
VEHICLE MAINTENANCE	SRO	73,577	83,442	84,411
MAINTENANCE & REPAIR	DLH	5,425,812	5,389,938	5,549,236

Note: The FY18 increase to Equipment Rental units reflects a standardization of all FECs to an 8 hour rental day. This change did not impact total revenue or cost.

Units of Measure Acronym List

MBTU Million British Thermal Units
CUYD Cubic Yard
KCF Thousand Cubic Feet
KGAL Thousand Gallons
DLH Direct Labor Hours
MWH Mega Watt Hour
SRO Shop Repair Order
LBS Pounds
TONS Tons

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Stabilized/Composite Rates:	**FY 2017**	**FY 2018**	**FY 2019**
Composite Rate	-4.33%	0.35%	-1.96%
Utilities	-6.05%	-2.07%	-0.46%
Sanitation Services and Other Base Support	-0.77%	5.08%	1.65%

Rate Changes	**FY 2017**	**FY 2018**	**FY 2019**
East Coast Utilities	-0.42%	-7.24%	1.52%
West Coast Utilities	-11.31%	3.35%	-5.05%
East Coast Other	5.08%	5.34%	-3.43%
West Cost Other	-6.30%	4.80%	-0.73%

Performance Indicators: Among the key financial indicators for the FECs are operating results, annual rate changes, and unit costs. Other key corporate performance measures include timeliness, workforce safety, and client satisfaction. Timeliness is an extremely important client satisfaction indicator in the area of facilities sustainment. The Emergency Work Response Time – Schedule Adherence metric represents the percent of time that emergency work crews arrive on-scene within prescribed timelines. Another metric, Service/Minor/Specific Work Completion Date – Schedule Adherence, reflects the percent of time that work is completed on schedule. The minimum goal in either case is 90% as identified in the measures below.

Performance Measures (Schedule Adherence):	**FY 2017**	**FY 2018**	**FY 2019**
Emergency Work Response Time	90.0%	90.0%	90.0%
Service/Minor/Specific Work Completion Date	90.0%	90.0%	90.0%

Staffing:

Civilian/Military ES & Workyears:	**FY 2017**	**FY 2018**	**FY 2019**
Civilian End Strength	9,564	9,506	9,506
Civilian Workyears (straight time)	9,474	9,449	9,451
Military End Strength	80	78	78
Military Workyears	78	78	78

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Civilian Personnel: Personnel resources are one of the most valuable assets to the FEC organization. The FEC management team continues to focus on the optimal mix and quantity of personnel required to ensure effectiveness in providing quality products and services to our customers. Ultimately, the FECs continue to size the civilian workforce in response to mission and regulatory requirements.

FY 2018 accounts for the functional transfer of 13 of 15 FTEs associated with the mission realignment of rail operations at Naval Support Activity – Crane from Naval Facilities Engineering Command, Mid-Atlantic to Crane Army Ammunition Activity.

Military Personnel: Military end strength remains stable.

Capital Investment Program (CIP): Capital investments for the FECs are a modest, but important element of successful operations that reflect required investments in facilities and infrastructure. FEC's CIP will acquire affordable and efficient capabilities to support customer requirements.

CIP Authority ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Equipment, Non-ADP / Telecom	$8.7	$9.9	$11.3
Equipment, ADPE / Telecom	$0.0	$0.0	$0.0
Software Development	$0.0	$0.0	$0.0
Minor Construction	$3.4	$8.8	$11.9
Total CIP Authority	$12.0	$18.6	$23.2

Some totals may not add due to rounding.

Carryover Compliance ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Net Carry-In	$208.2	$146.4	$153.4
Allowable Carryover	$785.5	$796.1	$791.0
Calculated Actual Carryover	$95.2	$101.4	$119.4
Delta (Actual-Allowable): Above Ceiling (+)/Below Ceiling (-)	($690.3)	($694.7)	($671.6)

Some totals may not add due to rounding.

Budgeted carryover is within the allowable ceiling target amounts.

REVENUE AND EXPENSES
DEPARTMENT OF THE NAVY
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Revenue:			
Gross Sales			
Operations	2,993.8	2,957.8	2,890.6
Capital Surcharges	0.0	0.0	8.2
Capital Investment Recovery	16.0	15.6	16.5
Other Income			
Total Income	3,009.8	2,973.4	2,915.3
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	9.6	9.6	10.0
Civilian Personnel Compensation & Benefits	793.8	803.4	811.5
Travel and Transportation of Personnel	9.3	6.7	7.3
Material & Supplies (Internal Operations)	253.8	278.5	265.6
Equipment	71.8	68.2	69.7
Other Purchases from NWCF	66.7	22.9	23.5
Transportation of Things	1.0	1.6	1.3
Capital Investment Recovery	16.0	15.6	16.5
Printing and Reproduction	0.9	1.3	1.3
Advisory and Assistance Services	0.0	0.1	0.1
Rent, Communication, Utilities & Misc Charges	983.7	1,218.1	1,123.7
Other Purchased Services	733.1	750.8	732.6
Total Expenses	2,939.7	3,176.7	3,063.1
Work in Process Adjustment	0.0	0.0	0.0
Comp Work for Activity Retention Adjustment	0.0	0.0	0.0
Cost of Goods Sold	2,939.7	3,176.7	3,063.1
Operating Result	70.0	-203.3	-147.8
Adjustments Affecting NOR	0.0	0.0	-8.2
Capital Surcharges	0.0	0.0	-8.2
Extraordinary Expenses Unmatched	0.0	0.0	0.0
Other Changes Affecting NOR (All Others)	0.0	0.0	0.0
Net Operating Result	70.0	-203.3	-156.0
PY AOR	297.0	359.3	156.0
TOTAL AOR	367.0	156.0	0.0
Non-Recoverable Adjustments impacting AOR	-7.7	0.0	0.0
AOR for budget purposes	359.3	156.0	0.0

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
1. New Orders	2,948.0	2,980.4	2,927.5
a. Orders from DoD Components:	2,180.7	2,251.8	2,189.2
Department of the Navy	1,978.2	2,014.8	1,924.6
O & M, Navy	1,860.2	1,861.7	1,768.5
O & M, Marine Corps	36.9	44.3	39.4
O & M, Navy Reserve	12.9	24.4	24.7
O & M, Marine Corp Reserve	1.4	3.7	3.4
Aircraft Procurement, Navy	0.0	0.2	0.2
Weapons Procurement, Navy	0.0	0.0	0.0
Ammunition Procurement, Navy/MC	0.0	0.0	0.0
Shipbuilding & Conversion, Navy	1.3	3.5	3.4
Other Procurement, Navy	0.0	0.5	0.6
Procurement, Marine Corps	0.0	0.0	0.0
Family Housing, Navy/MC	63.5	71.6	78.5
Research, Dev., Test, & Eval., Navy	0.2	3.0	4.3
Military Construction, Navy	0.7	1.7	1.4
National Defense Sealift Fund	0.0	0.0	0.0
Other Navy Appropriations	1.0	0.3	0.2
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	27.4	48.2	54.2
Army Operation & Maintenance	24.4	19.3	28.2
Army Res, Dev, Test, Eval	0.1	1.4	2.2
Army Procurement	0.0	0.1	0.1
Army Other	2.9	27.5	23.7
Department of the Air Force	15.5	16.1	15.3
Air Force Operation & Maintenance	9.6	12.5	11.6
Air Force Res, Dev, Test, Eval	0.1	0.1	0.0
Air Force Procurement	0.1	0.0	0.0
Air Force Other	5.8	3.5	3.7
DOD Appropriation Accounts	159.6	172.8	195.1
Base Closure & Realignment	0.4	7.4	9.6
Operation & Maintenance Accounts	93.5	97.5	106.2
Res, Dev, Test & Eval Accounts	2.4	2.9	4.0
Procurement Accounts	0.0	0.7	13.2
Defense Emergency Relief Fund	0.0	0.0	0.0
DOD Other	63.3	64.3	62.1
b. Orders from other Fund Activity Groups	464.4	425.5	442.2
c. Total DoD	2,645.1	2,677.3	2,631.5
d. Other Orders:	302.8	303.1	296.0
Other Federal Agencies	23.3	25.8	24.9
Foreign Military Sales	0.4	0.3	0.4
Non Federal Agencies	279.1	277.0	270.7
2. Carry-In Orders	208.2	146.4	153.4
3. Total Gross Orders	3,156.2	3,126.8	3,080.9
a. Funded Carry-Over before Exclusions	146.4	153.4	165.6
4. Revenue(-)	3,009.8	2,973.4	2,915.3
5. End of Year Work-In-Process (-)	0.0	0.0	0.0
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	51.2	52.0	46.2
7. Funded Carryover	95.2	101.4	119.4

Note: Line 5 (End of Year Work-In-Process) is adjusted for Non-DOD BRAC, FMS, and Institutional MRTFB

CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	Costs
FY 2017 Estimated Actuals	**2,939.7**
FY 2018 President's Budget:	**3,183.3**
Estimated Impact in FY 2018 of Actual FY 2017 Experience:	**0.0**
Pricing Adjustments:	**-6.6**
Civilian Personnel	0.0
General Purchase Inflation◎	-6.6
Program Changes:	**0.0**
Increase in GS; WG; and FNDH employees to accommodate customer workload	22.9
Decrease in Federal Employees' Compensation Act (FECA) charges	-1.7
Increase in WG overtime at FECs Southwest & Northwest due to vacancies	0.3
Decrease in benefits to former employees	-0.1
Reduction in contract costs as work is returned to in-house	-21.4
FY 2018 Current Estimate:	**3,176.7**
FY 2018 Current Estimate:	**3,176.7**
Pricing Adjustments:	**40.0**
Annualization of Prior Year Pay Raises	**4.1**
Civilian Personnel	4.0
Military Personnel	0.1
FY 2019 Pay Raise	**0.2**
Civilian Personnel	0.0
Military Personnel	0.2
Fuel Price Changes	-0.1
General Purchase Inflation	35.8
Other Price Changes	**0.0**
Productivity Initiatives and Other Efficiencies:	**-25.2**
Decentralization of Public Works Department (PWD) San Diego and Coronado Steam Operations, and privatization of chilled water at North Island, FEC Southwest	-23.3
Savings associated with prior year Energy Restoration & Modernization (RMe)	-1.9
Program Changes:	**-78.1**
Reduction in fuel consumption	-10.3
Increase in costs associated with a baseline review resulting in an overall net increase in budgeted units due to customer demand	31.4
Decrease in cost for one-time FY18 Energy Restoration and Modernization (RMe) projects	-16.7
Decrease in cost for the Industrial Control System (ICS) Smart Grid Initiative◎	-6.9
Decrease in purchased utility cost primarily due to continued low cost of oil per barrel, which reduced the megawatt hour (MWH) cost of utility providers who use fossil fuel to generate electricity	-80.6

FY 2019 Energy Restoration and Modernization (RMe) projects	5.1
Other Changes:◎	**-50.4**
Impact of Euro and Yen Budget Exchange rate	-9.8
Facilities Sustainment, Restoration & Modernization; Adjust to FSM v19.3	-43.7
Change in work days due to one more paid day	3.2
FY 2019 Estimate:	**3,063.1**

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CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

		FY 2017		FY 2018		FY 2019	
Line #	Description	Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	**Non-ADPE and Telecom Equipment >= $.250M**	**11**	**$8.663**	**15**	**$9.886**	**15**	**$11.299**
	- Vehicles	2	$1.048	3	$0.885	4	$1.280
	- Material Handling	6	$6.186	8	$7.351	8	$8.470
	- Installation Security	0	$0.000	0	$0.000	0	$0.000
	- Quality Control/Testing	0	$0.000	0	$0.000	0	$0.000
	- Medical Equipment	0	$0.000	0	$0.000	0	$0.000
	- Machinery	0	$0.000	0	$0.000	0	$0.000
	- Support Equipment	3	$1.429	4	$1.650	3	$1.549
2	**ADPE and Telecom Equipment >= $.250M**	**0**	**$0.000**	**0**	**$0.000**	**0**	**$0.000**
	- Computer Hardware (Production)	0	$0.000	0	$0.000	0	$0.000
	- Computer Hardware (Network)	0	$0.000	0	$0.000	0	$0.000
	- Computer Software (Operating)	0	$0.000	0	$0.000	0	$0.000
	- Telecommunications	0	$0.000	0	$0.000	0	$0.000
	- Other Support Equipment	0	$0.000	0	$0.000	0	$0.000
3	**Software Development >= $.250M**	**0**	**$0.000**	**0**	**$0.000**	**0**	**$0.000**
	- Internally Developed	0	$0.000	0	$0.000	0	$0.000
	- Externally Developed	0	$0.000	0	$0.000	0	$0.000
4	**Minor Construction (>= $.250M and <= $1.000M)**	**9**	**$3.357**	**11**	**$8.754**	**17**	**$11.931**
	- Replacement Capability	1	$0.378	2	$1.516	3	$2.267
	- New Construction	8	$2.979	8	$6.788	13	$9.084
	- Environmental Capability	0	$0.000	1	$0.450	1	$0.580
	Grand Total	**20**	**$12.020**	**26**	**$18.640**	**32**	**$23.230**
	Total Capital Outlays		**$22.327**		**$22.693**		**$22.693**
	Total Capital Investment Recovery		**$15.983**		**$15.599**		**$16.509**

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
Department of the Navy/ Base Support	#001 - Non-ADPE						Facilities Engineering Commands		
	FY 2017			FY 2018			FY 2019		
Non-ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	2	524	$1,048	3	295	$885	4	320	$1,280
Material Handling	6	1,031	$6,186	8	919	$7,351	8	1,059	$8,470
Installation Security	0	-	$0	0	-	$0	0	-	$0
Quality Control/ Testing	0	-	$0	0	-	$0	0	-	$0
Medical Equipment	0	-	$0	0	-	$0	0	-	$0
Machinery	0	-	$0	0	-	$0	0	-	$0
Support Equipment	3	476	$1,429	4	413	$1,650	3	516	$1,549
Total	11	788	$8,663	15	659	$9,886	15	753	$11,299

Justification:

As the Department of the Navy's provider of public works support and services, the Facilities Engineering Commands (FECs) depend heavily on Civil Engineering Support Equipment (CESE) to accomplish its mission. In the broadest sense, CESE encompasses automotive vehicles, construction equipment, railway equipment, fire-fighting equipment, and mobile weight handling equipment. Investments in Industrial Plant Equipment (IPE), to include items such as metal lathes and other heavy shop machinery may also be required to accomplish shop fabrications at the FECs.

Requested CESE and IPE will replace over-aged, deteriorated, or obsolete inventory covering the full range of public works functions, e.g., utilities and maintenance. All budgeted CESE and IPE have been determined to meet activity allowances and replacement economic criteria. All requested replacements are in support of public works workload. The age of existing equipment frequently contributes to downtime and deteriorating output. In particular, inventories of large equipment such as crawling cranes and/or truck cranes have critical safety lift requirements to meet workload needs.

Operational delays for repair or safety downtimes are offset by leasing where and when available. However, leasing equipment frequently ranges from 30% to 60% higher in cost per hour than in-house equipment. Replacements provide for more efficient and safe operations. Additionally, replacements offer the latest technology in public works support capabilities.

The timing of placement of these new assets into operation varies depending on the size, complexity, vendor availability, and shipping. Generally, equipment cost avoidance begins within 30-60 days from receipt of item.

Each FEC has conducted a comprehensive review of equipment inventories and determined an optimal economic approach to containing costs as well as maintaining minimum interruption to services. Proposed investments are essential to this strategy. If the proposed equipment is not purchased, substantial opportunity to provide safe and reliable services at the least cost to the Navy will be lost.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
Department of the Navy/ Base Support	#004 - Minor Construction						Facilities Engineering Commands		
	FY 2017			FY 2018			FY 2019		
Minor Construction	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement	1	378	$378	2	758	$1,516	3	756	$2,267
New Construction	8	372	$2,979	8	849	$6,788	13	699	$9,084
Environmental Capability	0	-	$0	1	450	$450	1	580	$580
Total	9	373	$3,357	11	796	$8,754	17	702	$11,931

Justification:

FEC minor construction projects represent the full range of public works facilities requirements for transportation, utilities, storage and maintenance. The proposed projects are limited to and strictly controlled by the Capital Investment Program (CIP) thresholds. None of the projects in this budget exceed current MILCON thresholds. Budgeted projects are for construction, expansion, or improvement of a complete and useable building, structure, or other real property.

Each FEC has conducted a comprehensive business review of its facilities needs and determined an optimal economic approach to cost containment, while ensuring that health and safety requirements are met and minimizing service interruptions. The proposed project priorities are determined by economic analyses which are based on cost effective payback solutions which produce the fastest return on investment. Generally, FEC projects have a payback on the initial investment of 5 years or less. Completion of health/safety and environmental compliance projects will provide for cost avoidance resulting from elimination of potential hazmat situations.

The proposed budget is essential to providing planned cost control and service reliability of the FEC plant account. If proposed projects are not approved, substantial opportunity to provide safe, environmentally compliant, and effective services at the least cost to the Navy will be lost.

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CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	**1**	**Non ADP**		**$8.935**	**$8.663**	**($0.272)**	
			Vehicles	$1.050	$1.048	($0.002)	The authority was adjusted and projects were reprioritized.
			Material Handling	$7.100	$6.186	($0.914)	The authority was adjusted and projects were reprioritized.
			Quality Control/Testing	$0.000	$0.000	$0.000	
			Machinery	$0.000	$0.000	$0.000	
			Support Equipment	$0.785	$1.429	$0.644	The authority was adjusted and projects were reprioritized.
	2	**ADP**		**$0.000**	**$0.000**	**$0.000**	
			Computer Hardware (Production)	$0.000	$0.000	$0.000	
			Computer Hardware (Network)	$0.000	$0.000	$0.000	
			Computer Software (Operating)	$0.000	$0.000	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
			Internally Developed	$0.000	$0.000	$0.000	
			Externally Developed	$0.000	$0.000	$0.000	
	4	**Minor Construction**		**$6.428**	**$3.357**	**($3.071)**	
			Replacement	$1.167	$0.378	($0.789)	The authority was adjusted and projects were reprioritized.
			New Construction	$4.696	$2.979	($1.717)	The authority was adjusted and projects were reprioritized.
			Environmental Capability	$0.565	$0.000	($0.565)	The authority was adjusted and projects were reprioritized.
TOTAL FY 2017 CIP Program				**$15.363**	**$12.020**	**($3.343)**	

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2018	**1**	**Non ADP**		**$7.826**	**$8.236**	**$0.410**	
			Vehicles	$0.875	$0.885	**$0.010**	The authority was adjusted and projects were reprioritized.
			Material Handling	$6.951	$7.351	$0.400	The authority was adjusted and projects were reprioritized.
			Quality Control/Testing	$0.000	$0.000	$0.000	
			Machinery	$0.000	$0.000	$0.000	
	2	**ADP**		**$0.000**	**$0.000**	**$0.000**	
			Computer Hardware (Production)	$0.000	$0.000	$0.000	
			Computer Hardware (Network)	$0.000	$0.000	$0.000	
			Computer Software (Operating)	$0.000	$0.000	$0.000	
			Telecommunications	$0.000	$0.000	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
			Internally Developed	$0.000	$0.000	$0.000	
			Externally Developed	$0.000	$0.000	$0.000	
	4	**Minor Construction**		**$11.401**	**$8.754**	**($2.647)**	
			Replacement	$1.516	$1.516	$0.000	
			New Construction	$9.435	$6.788	($2.647)	The authority was adjusted and projects were reprioritized.
			Environmental Capability	$0.450	$0.450	$0.000	
TOTAL FY 2018 CIP Program				**$19.227**	**$16.990**	**($2.237)**	

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2019	**1**	**Non ADP**		**$6.438**	**$9.750**	**$3.312**	
			Vehicles	$0.750	$1.280	$0.530	
			Material Handling	$5.688	$8.470	$2.782	
			Quality Control/Testing	$0.000	$0.000	$0.000	
			Machinery	$0.000	$0.000	$0.000	
	2	**ADP**		**$0.000**	**$0.000**	**$0.000**	
			Computer Hardware (Production)	$0.000	$0.000	$0.000	
			Computer Hardware (Network)	$0.000	$0.000	$0.000	
			Computer Software (Operating)	$0.000	$0.000	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
			Internally Developed	$0.000	$0.000	$0.000	
			Externally Developed	$0.000	$0.000	$0.000	
	4	**Minor Construction**		**$7.565**	**$11.931**	**$4.366**	
			Replacement	$2.267	$2.267	$0.000	
			New Construction	$4.718	$9.084	$4.366	
			Environmental Capability	$0.580	$0.580	$0.000	
TOTAL FY 2019 CIP Program				**$14.003**	**$21.681**	**$7.678**	

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Part 1			
1. Net Carry-In	208.2	146.4	153.4
2. Revenue	3,009.8	2,973.4	2,915.3
3. New Orders	2,948.0	2,980.4	2,927.5
4. Exclusions:			
Foreign Military Sales	0.4	0.3	0.4
Base Realignment and Closure	0.4	7.4	9.6
Other Federal Department and Agencies	23.3	25.8	24.9
Non-Federal and Others	279.1	277.0	270.7
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
5. Orders for Carryover Calculation	2,644.7	2,669.9	2,621.9
6. Weighted Average Outlay Rate	70.5%	70.2%	69.9%
7. Carryover Rate	29.5%	29.8%	30.1%
8. Allowable Carryover	785.5	796.2	791.0
Allowable Carryover(First Year)	780.2	795.6	789.2
Allowable Carryover (Second Year Procurement-funded Orders)	5.3	0.5	1.8
Part II			
9. Balance of Customer Order at Year End	146.4	153.4	165.6
10. Work-in-progress	0.0	0.0	0.0
11. Exclusions:			
Foreign Military Sales	0.1	0.2	0.3
Base Realignment and Closure	0.4	1.7	0.8
Other Federal Department and Agencies	6.9	7.3	8.5
Non-Federal and Others	43.8	42.9	36.6
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
12. Calculated Actuals Carryover	95.2	101.4	119.4

Some totals may not add due to rounding.

10. Expeditionary Warfare Center

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NARRATIVE
DEPARTMENT OF THE NAVY
BASE SUPPORT
NAVAL FACILITIES ENGINEERING AND EXPEDITIONARY WARFARE CENTER (EXWC)
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Mission Statement / Overview:
The mission of the Naval Facilities Engineering and Expeditionary Warfare Center (EXWC) is to support combatant capabilities and sustainable facilities through specialized engineering, technology development, and lifecycle logistics services. The EXWC is a Navy-wide technical center, delivering quality products and services in:

- Energy and Utilities
- Amphibious and Expeditionary Systems
- Environmental
- Ocean Facilities
- Shore, and Waterfront Facilities

As a member of the Naval Facilities Engineering Command (NAVFAC), EXWC provides worldwide support services to the Navy, Marine Corps and other Department of Defense (DoD) agencies. These support services provide solutions to problems through engineering; design; construction; consultation; test and evaluation; technology demonstration; implementation, and program management support. In accomplishing these services the center leverages technology to enhance customer effectiveness and efficiency. The EXWC uses existing technology where possible, identifies and adapts breakthrough technology when appropriate, and performs technology development when required.

Executive Summary:
The EXWC is the principal Navy provider of specialized engineering services and products for shore and offshore facilities, energy and utilities, environmental support, and amphibious and expeditionary systems. The work performed is accomplished by mobilizing the proper mix of personnel expertise and other technological resources to address customer requirements. The center provides a synergism of expertise and practical experience to solve field activity and fleet needs. As such, the center supports a very broad range of Navy and Marine Corps customers with focus on delivering quality products and services.

The energy and utilities mission focuses on the Navy's ashore establishment energy program. Efforts focus on utilities and energy management, conservation systems, data management, technology transfer, utility control systems, utility systems engineering, and thermal and power plant engineering. The EXWC is able to partner with other DoD and government agencies to leverage best value technologies and business practices to save energy and reduce utility costs.

Some examples include:

- Performance testing of photo-voltaic energy producing systems in harsh climate areas such as Djibouti
- Demonstration and validation of micro grid energy management technology
- Demonstration of advanced lighting and sustainable building technologies
- Improved energy storage systems

The amphibious and expeditionary systems mission involves developing and providing support and enhancements to Naval Construction Battalions and Marine Corps advanced base construction and operations, amphibious force operations, and combat engineer operations. Efforts focus on amphibious systems, combat engineer systems, expeditionary facilities, and logistics engineering. A recent undertaking focuses on Expeditionary Environmental Control Unit development, which will reduce heating and air-conditioning fuel consumption for expeditionary force camp shelters by fifty percent; thereby, reducing the requirement for fuel transport convoys.

The environmental mission entails planning, reviewing, and analyzing Navy-wide functions, and assembling and deploying customized technology to meet the environmental requirements of the naval shore establishment. Efforts focus on environmental restoration, compliance, data management, technology transfer, waste management, pollution prevention, indoor air management, and the oil spill program. The EXWC also conducts marine mammal research that focuses on the development of planning, monitoring, and mitigating tools to aid the fleet in minimizing contact with and the potential harassment of protected marine wildlife during operations. In addition, EXWC has also established a climate change initiative to evaluate technology-based solutions to problems arising from increasing greenhouse gas concentrations in the atmosphere. Preliminary efforts are underway in the following areas:

- The impact of the rise in sea level on shore facilities
- Carbon sequestration at power and heating plants
- Hurricane abatement

The ocean facilities mission is to develop, implement, and improve the Navy's capabilities for the design, construction, maintenance, and repair of fixed ocean facilities. Efforts focus on marine geo-techniques, anchor systems, ocean structures, undersea warfare, underwater cable facilities, hyperbaric facilities, mooring systems, magnetic silencing facilities, underwater inspection, ocean construction equipment inventory, coastal facilities, and pipeline integrity assessment. The EXWC also maintains technical diving and consultation services to facilitate

and streamline planning and accomplishment of military at sea testing and training requirements as well as new construction for supported commands.

The shore and waterfront facilities mission is to provide innovative engineering solutions, designs, technological tools and field services to support a viable naval shore establishment. Efforts focus on waterfront facilities, aviation facilities, physical security, ordnance facilities, materials and coatings, computer aided design, facilities life cycle management, base survivability electronics, and thermal and power plant engineering. This includes specialized engineering in pier and wharf condition assessment, marine and offshore structures, seafloor surveys, and ocean construction.

The EXWC efforts also include reducing the Navy's total facility ownership costs by standardizing best technical practices, solutions, material and processes while meeting operational and readiness requirements. A few areas that EXWC delivers naval facilities life cycle technical solutions are aircraft engine test facilities; airfield pavements; corrosion prevention and control; explosion effects and consequences; physical security technologies; and oversight for maintenance and repair projects administered by NAVFAC such as the Ford Island Bridge project in Hawaii.

The EXWC is a dual funded organization, with NWCF and appropriated (mission-funded) efforts remaining separate and distinct. The above overview reflects the NWCF operations.

Activity Group Composition:

Activity	Location
EXWC Headquarters	Port Hueneme, CA
East Coast Detachment	Navy Yard, Washington, DC

Significant Changes Since the FY 2018 President's Budget:

The most significant change since the FY 2018 President's Budget is significant development in EXWC's business for the FY 2019 budget is the ramp up of Energy, Prototyping, and Technology Development, Testing, Transition, and Integration. This work is primarily occurring in the Public Works (PW) and Chief Information Office (CIO) shops, working jointly to address warfighter requirements. The customer base forecast for Capital Improvements, Ocean Facilities Engineering and Expeditionary Over-the-Shore Logistics and Engineering is strong and forecasted to provide opportunities for greater support. Specifically, the Ocean Facilities Engineering efforts are in support of Naval Sea Systems Command (NAVEA) for the offshore test bed program, which is ramping up for a 20-year acquisition cycle.

NARRATIVE
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BASE SUPPORT
NAVAL FACILITIES ENGINEERING AND EXPEDITIONARY WARFARE CENTER (EXWC)
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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Productivity Initiatives and Other Efficiencies:
The EXWC Project Initiation and Pre-planning Process, implemented in FY 2017, is anticipated to improve execution performance through more timely work classification and environmental permitting requirements identification. The command's Continuous Process / Performance Improvement (CPI) program conducted eleven efficiency efforts over twelve months resulting in realized benefits that include cost avoidance, reduction in labor hours, and improved quality, productivity, energy, security, and safety.

An example of a recent CPI event is the Technical Capabilities Health Assessment (TCHA), which identified 15 unique Technical Capabilities (TC) in the command. Each TC was then evaluated and given a health rating. Mitigation plans were developed for TCs with health assessments that identified areas of potential risk. Similar process improvement events are planned for the future, including streamlining the process for procuring Information Technology/Operational Technology and streamlining the process used when accounting for Personal Property/Inventory.

Financial Profile:

Revenue/Expense/Operating Result ($Millions):	**FY 2017**	**FY 2018**	**FY2019**
Orders	$78.9	$77.8	$76.7
Revenue	$85.2	$80.1	$77.3
Expense	$82.5	$77.4	$79.9
Operating Results	$2.7	$2.6	($2.6)
Other Changes Affecting NOR	$0.0	$0.0	$0.0
Net Operating Results (NOR)	$2.7	$2.6	($2.6)
Prior Year AOR	($2.7)	$0.0	$2.6
Other Changes Affecting AOR	$0.0	$0.0	$0.0
Accumulated Operating Results (AOR)	($0.0)	$2.6	$0.0

Some totals may not add due to rounding.

Orders, Revenue and Expense: The changes in orders from FY 2018 to FY 2019 primarily reflect workload projections based on updated new orders estimates of customers' workload projections. The increases in revenue and expense between FY 2018 and FY 2019 are a result of economic assumptions for inflation/pricing, and research and development contract requirements in direct support of customer workload.

NARRATIVE
DEPARTMENT OF THE NAVY
BASE SUPPORT
NAVAL FACILITIES ENGINEERING AND EXPEDITIONARY WARFARE CENTER (EXWC)
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Collections/Disbursements/Outlays ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Collections	$84.4	$84.4	$79.8
Disbursements	$79.7	$80.7	$81.1
Outlays	($4.7)	($3.7)	$1.3

Some totals may not add due to rounding.

Collections and disbursements reflect expected revenue and expenses based on anticipated changes in accounts receivable and accounts payable/accrued labor expenses. Net Outlays are projected to remain relatively stable from FY 2018 to FY 2019.

Workload:

Direct Labor Hours (000):	**FY 2017**	**FY 2018**	**FY 2019**
Current Estimate	532	517	521

Direct labor hours reflect demand for the EXWC specialized, engineering services. Each year, customer demand and required services are estimated and reviewed to ensure the command is correctly resourcing and leveraging engineering expertise needed to provide the right mix of engineering services and to maintain the correct level of organic capability to meet recurring customer demand.

Performance Indicators: The primary performance indicator is unit cost, which represents the average cost of delivering goods and services to our customers.

Unit Cost:	**FY 2017**	**FY 2018**	**FY 2019**
Total Stabilized Cost ($Millions)	$63.2	$60.1	$60.5
Workload (DLHs) (000)	532	517	521
Unit cost (per DLH)	$118.7	$116.2	$116.2

Unit cost is the method established to authorize and control costs (expenses rate). Unit cost goals allow activities to respond to workload changes in execution by encouraging reduced costs when workload declines and allowing appropriate increases in costs when customers request additional services.

NARRATIVE
DEPARTMENT OF THE NAVY
BASE SUPPORT
NAVAL FACILITIES ENGINEERING AND EXPEDITIONARY WARFARE CENTER (EXWC)
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Stabilized / Composite Rates:	**FY 2017**	**FY 2018**	**FY 2019**
Stabilized Rate	$125.43	$121.61	$107.18
Change from Prior Year		-3.05%	-11.86%
Composite Rate Change		-1.50%	-7.42%

The stabilized rate consists of direct labor and applied overhead. Unique direct non-labor costs are billed on a reimbursable basis to the customer (revenue rate). The composite rate change incorporates both the stabilized costs and the reimbursable costs.

Staffing:

Civilian/Military ES & Workyears:	**FY 2017**	**FY 2018**	**FY 2019**
Civilian End Strength	416	403	403
Civilian Workyears (straight time)	402	398	398
Military End Strength	3	3	3
Military Workyears	3	3	3

Civilian Personnel: The EXWC management team maintains an optimal mix and quantity of personnel required to ensure effectiveness in providing quality products and services to our customers. Ultimately, EXWC continues to size the civilian workforce in response to mission and/or regulatory requirements.

Military Personnel: Military end strength and workyears remain unchanged.

Capital Investment Program (CIP): The EXWC is requesting CIP authority in FY 2019.

CIP Authority ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Equipment, Non-ADP / Telecom	$0.0	$0.0	$1.4
Equipment, ADPE / Telecom	$0.0	$0.0	$0.0
Software Development	$0.0	$0.0	$0.0
Minor Construction	$0.0	$0.0	$0.0
Total	$0.0	$0.0	$1.4

NARRATIVE
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The capital investment program for EXWC is an important element of Cyber security testing and evaluation requirements of real-world Industrial Control Systems (ICS) and operational technology (OT) deployed at Navy shore installations worldwide.

Carryover Compliance ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Net Carry-In	$35.3	$29.0	$26.8
Allowable Carryover	$30.8	$31.2	$31.9
Calculated Actual Carryover	$25.8	$23.6	$23.1
Delta (Actual-Allowable): Above Ceiling (+)/Below Ceiling (-)	($5.0)	($7.6)	($8.8)

Some totals may not add due to rounding.

Actual and budgeted carryover is within the allowable ceiling based on appropriation outlay rates.

REVENUE AND EXPENSES
DEPARTMENT OF THE NAVY
BASE SUPPORT - NAVAL FACILITIES ENGINEERING AND EXPEDITIONARY WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Revenue:			
Gross Sales			
Operations	85.1	80.0	77.3
Capital Surcharges	0.0	0.0	0.0
Capital Investment Recovery	0.0	0.0	0.0
Other Income			
Total Income	85.2	80.1	77.3
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	0.4	0.4	0.4
Civilian Personnel Compensation & Benefits	56.9	57.1	57.6
Travel and Transportation of Personnel	4.9	4.8	4.8
Material & Supplies (Internal Operations)	1.6	2.0	2.0
Equipment	2.3	1.0	1.0
Other Purchases from NWCF	0.6	2.0	2.1
Transportation of Things	0.2	0.3	0.3
Capital Investment Recovery	0.0	0.0	0.0
Printing and Reproduction	0.0	0.0	0.0
Advisory and Assistance Services	0.2	0.0	0.0
Rent, Communication, Utilities & Misc Charges	0.9	0.6	0.6
Other Purchased Services	14.5	9.1	11.0
Total Expenses	82.5	77.4	79.9
Work in Process Adjustment	0.0	0.0	0.0
Comp Work for Activity Retention Adjustment	0.0	0.0	0.0
Cost of Goods Sold	82.5	77.4	79.9
Operating Result	2.7	2.6	-2.6
Adjustments Affecting NOR	0.0	0.0	0.0
Capital Surcharges	0.0	0.0	0.0
Extraordinary Expenses Unmatched	0.0	0.0	0.0
Other Changes Affecting NOR (All Others)	0.0	0.0	0.0
Net Operating Result	2.7	2.6	-2.6
PY AOR	-2.7	0.0	2.6
TOTAL AOR	0.0	2.6	0.0
Non-Recoverable Adjustments impacting AOR	0.0	0.0	0.0
AOR for budget purposes	0.0	2.6	0.0

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
BASE SUPPORT - NAVAL FACILITIES ENGINEERING AND EXPEDITIONARY WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
1. New Orders	78.9	77.8	76.7
a. Orders from DoD Components:	71.2	69.8	68.2
Department of the Navy	60.7	62.6	60.7
O & M, Navy	35.8	36.7	32.9
O & M, Marine Corps	1.3	0.7	0.9
O & M, Navy Reserve	0.0	0.1	0.3
O & M, Marine Corp Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	0.0	0.0	0.0
Weapons Procurement, Navy	0.0	0.0	0.0
Ammunition Procurement, Navy/MC	0.0	0.0	0.0
Shipbuilding & Conversion, Navy	0.0	0.0	0.0
Other Procurement, Navy	3.6	4.9	3.8
Procurement, Marine Corps	0.3	0.0	0.0
Family Housing, Navy/MC	0.0	0.0	0.0
Research, Dev., Test, & Eval., Navy	15.5	16.1	17.3
Military Construction, Navy	4.2	3.7	5.1
National Defense Sealift Fund	0.0	0.0	0.0
Other Navy Appropriations	0.0	0.0	0.0
Other Marine Corps Appropriations	0.0	0.3	0.4
Department of the Army	2.6	1.5	2.6
Army Operation & Maintenance	1.9	1.3	1.5
Army Res, Dev, Test, Eval	0.6	0.2	1.1
Army Procurement	0.1	0.0	0.0
Army Other	0.0	0.0	0.0
Department of the Air Force	3.0	2.8	1.6
Air Force Operation & Maintenance	0.2	2.0	1.0
Air Force Res, Dev, Test, Eval	2.0	0.8	0.6
Air Force Procurement	0.0	0.0	0.0
Air Force Other	0.8	0.0	0.0
DOD Appropriation Accounts	4.8	2.9	3.4
Base Closure & Realignment	1.1	0.9	1.0
Operation & Maintenance Accounts	0.3	0.2	0.6
Res, Dev, Test & Eval Accounts	2.8	1.8	1.8
Procurement Accounts	0.2	0.0	0.0
Defense Emergency Relief Fund	0.0	0.0	0.0
DOD Other	0.4	0.0	0.0
b. Orders from other Fund Activity Groups	3.8	6.9	6.8
c. Total DoD	75.0	76.7	75.1
d. Other Orders:	3.9	1.1	1.7
Other Federal Agencies	3.3	0.8	1.5
Foreign Military Sales	0.1	0.0	0.0
Non Federal Agencies	0.5	0.3	0.2
2. Carry-In Orders	35.3	29.0	26.8
3. Total Gross Orders	114.2	106.8	103.5
a. Funded Carry-Over before Exclusions	29.0	26.8	26.2
4. Revenue(-)	85.2	80.1	77.3
5. End of Year Work-In-Process (-)	0.0	0.0	0.0
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	3.2	3.2	3.1
7. Funded Carryover	25.8	23.6	23.1

Note: Line 5 (End of Year Work-In-Process) is adjusted for Non-DOD BRAC, FMS, and Institutional MRTFB

CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
BASE SUPPORT - NAVAL FACILITIES ENGINEERING AND EXPEDITIONARY WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	Costs
FY 2017 Estimated Actuals	**76.2**
FY 2018 President's Budget:	**77.4**
Estimated Impact in FY 2018 of Actual FY 2017 Experience:	**0.0**
Pricing Adjustments:	**0.0**
Civilian Personnel	0.0
Fuel Price	0.0
Program Changes:	**0.0**
Other Changes:	**0.0**
Increase in Federal Employees' Compensation Act (FECA) charges	0.2
Increase of 8 ES and 10 WYs for positions vacated during the hiring freeze.	1.6
Reduction in contract costs as work is accomplished in-house	-1.8
FY 2018 Current Estimate:	**77.4**
FY 2018 Current Estimate:	**77.4**
Pricing Adjustments:	**0.5**
Annualization of Prior Year Pay Raises	**0.3**
Civilian Personnel	0.3
Military Personnel	0.0
FY 2019 Pay Raise	**0.0**
Civilian Personnel	0.0
Military Personnel	0.0
Fuel Price Changes	0.0
General Purchase Inflation	0.2
Other Price Changes (list)	**0.0**
Working Capital Fund Price Changes	0.0
Productivity Initiatives and Other Efficiencies:	**0.0**
Program Changes:	1.8
Other Changes:	**0.2**
Capital Investment Recovery	0.0
Facilities Sustainment, Restoration & Modernization	0.0
Increase in civilian personnel cost due to one more paid day	0.2
FY 2019 Estimate:	**79.9**

CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
BASE SUPPORT - NAVAL FACILITIES ENGINEERING AND EXPEDITIONARY WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

		FY 2017		FY 2018		FY 2019	
Line #	Description	Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	**Non-ADPE and Telecom Equipment >= $.250M**	**0**	**$0.000**	**0**	**$0.000**	**1**	**$1.400**
	- Vehicles	0	$0.000	0	$0.000	0	$0.000
	- Material Handling	0	$0.000	0	$0.000	0	$0.000
	- Installation Security	0	$0.000	0	$0.000	0	$0.000
	- Quality Control/Testing	0	$0.000	0	$0.000	1	$1.400
	- Medical Equipment	0	$0.000	0	$0.000	0	$0.000
	- Machinery	0	$0.000	0	$0.000	0	$0.000
	- Support Equipment	0	$0.000	0	$0.000	0	$0.000
2	**ADPE and Telecom Equipment >= $.250M**	**0**	**$0.000**	**0**	**$0.000**	**0**	**$0.000**
	- Computer Hardware (Production)	0	$0.000	0	$0.000	0	$0.000
	- Computer Hardware (Network)	0	$0.000	0	$0.000	0	$0.000
	- Computer Software (Operating)	0	$0.000	0	$0.000	0	$0.000
	- Telecommunications	0	$0.000	0	$0.000	0	$0.000
	- Other Support Equipment	0	$0.000	0	$0.000	0	$0.000
3	**Software Development >= $.250M**	**0**	**$0.000**	**0**	**$0.000**	**0**	**$0.000**
	- Internally Developed	0	$0.000	0	$0.000	0	$0.000
	- Externally Developed	0	$0.000	0	$0.000	0	$0.000
4	**Minor Construction (>= $.250M and <= $1.000M)**	**0**	**$0.000**	**0**	**$0.000**	**0**	**$0.000**
	- Replacement Capability	0	$0.000	0	$0.000	0	$0.000
	- New Construction	0	$0.000	0	$0.000	0	$0.000
	- Environmental Capability	0	$0.000	0	$0.000	0	$0.000
	Grand Total	**0**	**$0.000**	**0**	**$0.000**	**1**	**$1.400**
	Total Capital Outlays		**$0.000**		**$0.000**		**$0.000**
	Total Capital Investment Recovery		**$0.036**		**$0.038**		**$0.038**

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2019 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				JANUARY 2018					
Department of the Navy/ Base Support	#001 - Non-ADPE						Naval Facilities Engineering and Expeditionary Warfare Center		
	FY 2017			FY 2018			FY 2019		
Non-ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	0	-	$0	0	-	$0	0	-	$0
Material Handling	0	-	$0	0	-	$0	0	-	$0
Installation Security	0	-	$0	0	-	$0	0	-	$0
Quality Control/ Testing	0	-	$0	0	-	$0	1	1,400	$1,400
Medical Equipment	0	-	$0	0	-	$0	0	-	$0
Machinery	0	-	$0	0	-	$0	0	-	$0
Support Equipment	0	-	$0	0	-	$0	0	-	$0
Total	0	-	$0	0	-	$0	1	1,400	$1,400

Justification:

FY 2019 - Control Systems Test Bed (CSTB) - Infrastructure - Platform IT (PIT)/Operational Technology (OT) [$1,400K]

Purchase the infrastructure for the CSTB's Computing, Network, and Storage to include the Operating System, Chassis, Server, Uninterrupted Power Supply, Routers, Firewall, and Software Licenses to be used to test and evaluate the function and cybersecurity of PIT/OT field equipment.

The CSTB will provide system integration and test capabilities of real-world Control Systems (CS) infrastructures combined with sophisticated computer simulation support. This combination will provide a unique platform to assess CS configuration and change management, establish appropriate security metrics, examine exploitation scenarios, and evaluate potential threat responses and outcomes.

The NAVFAC Engineering & Expeditionary Warfare Center (EXWC) (Ech III) has the task to establish a Control Systems Test Bed (CSTB) to demonstrate and enhance the reliability, integrity and cyber security of Industrial Control Systems (ICS) and operational technology (OT) deployed at Navy shore installations worldwide. This CSTB will enable test and evaluation of current and future installation technology for safe and secure introduction and use in the field.

Workload for the CSTB is expected to respond to cyber security risk in the Navy shore and facilities infrastructure. Initial workload at EXWC will include the systematic analysis of deployed ashore building and utility control systems, and configuration/patch management of control system components. Future workload would include evaluating proposed control system functional and communication architectures, hosting DoD distributed cybersecurity exercises and identifying/mitigating vulnerabilities.

CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
BASE SUPPORT - NAVAL FACILITIES ENGINEERING AND EXPEDITIONARY WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	**1**	**Non ADP**		**$0.000**	**$0.000**	**$0.000**	
			Vehicles	$0.000	$0.000	$0.000	
			Material Handling	$0.000	$0.000	$0.000	
			Quality Control/Testing	$0.000	$0.000	$0.000	
			Machinery	$0.000	$0.000	$0.000	
			Support Equipment	$0.000	$0.000	$0.000	
	2	**ADP**		**$0.000**	**$0.000**	**$0.000**	
			Computer Hardware (Production)	$0.000	$0.000	$0.000	
			Computer Hardware (Network)	$0.000	$0.000	$0.000	
			Computer Software (Operating)	$0.000	$0.000	$0.000	
			Telecommunications	$0.000	$0.000	$0.000	
			Other Support Equipment	$0.000	$0.000	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
			Internally Developed	$0.000	$0.000	$0.000	
			Externally Developed	$0.000	$0.000	$0.000	
	4	**Minor Construction**		**$0.000**	**$0.000**	**$0.000**	
			Replacement	$0.000	$0.000	$0.000	
			New Construction	$0.000	$0.000	$0.000	
			Environmental Capability	$0.000	$0.000	$0.000	
TOTAL FY 2017 CIP Program				**$0.000**	**$0.000**	**$0.000**	

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2018	**1**	**Non ADP**		**$0.000**	**$0.000**	**$0.000**	
			Vehicles	$0.000	$0.000	**$0.000**	
			Material Handling	$0.000	$0.000	$0.000	
			Quality Control/Testing	$0.000	$0.000	$0.000	
			Machinery	$0.000	$0.000	$0.000	
			Support Equipment	$0.000	$0.000	$0.000	
	2	**ADP**		**$0.000**	**$0.000**	**$0.000**	
			Computer Hardware (Production)	$0.000	$0.000	$0.000	
			Computer Hardware (Network)	$0.000	$0.000	$0.000	
			Computer Software (Operating)	$0.000	$0.000	$0.000	
			Telecommunications	$0.000	$0.000	$0.000	
			Other Support Equipment	$0.000	$0.000	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
			Internally Developed	$0.000	$0.000	$0.000	
			Externally Developed	$0.000	$0.000	$0.000	
	4	**Minor Construction**		**$0.000**	**$0.000**	**$0.000**	
			Replacement	$0.000	$0.000	$0.000	
			New Construction	$0.000	$0.000	$0.000	
			Environmental Capability	$0.000	$0.000	$0.000	
TOTAL FY 2018 CIP Program				**$0.000**	**$0.000**	**$0.000**	

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2019	**1**	**Non ADP**		**$1.400**	**$1.400**	**$0.000**	
			Vehicles	$0.000	$0.000	$0.000	
			Material Handling	$0.000	$0.000	$0.000	
			Quality Control/Testing	$1.400	$1.400	$0.000	
			Machinery	$0.000	$0.000	$0.000	
			Support Equipment	$0.000	$0.000	$0.000	
	2	**ADP**		**$0.000**	**$0.000**	**$0.000**	
			Computer Hardware (Production)	$0.000	$0.000	$0.000	
			Computer Hardware (Network)	$0.000	$0.000	$0.000	
			Computer Software (Operating)	$0.000	$0.000	$0.000	
			Telecommunications	$0.000	$0.000	$0.000	
			Other Support Equipment	$0.000	$0.000	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
			Internally Developed	$0.000	$0.000	$0.000	
			Externally Developed	$0.000	$0.000	$0.000	
	4	**Minor Construction**		**$0.000**	**$0.000**	**$0.000**	
			Replacement	$0.000	$0.000	$0.000	
			New Construction	$0.000	$0.000	$0.000	
			Environmental Capability	$0.000	$0.000	$0.000	
TOTAL FY 2019 CIP Program				**$1.400**	**$1.400**	**$0.000**	

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
BASE SUPPORT - NAVAL FACILITIES ENGINEERING AND EXPEDITIONARY WARFARE CENTER
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Part 1			
1. Net Carry-In	35.3	29.0	26.8
2. Revenue	85.2	80.1	77.3
3. New Orders	78.9	77.8	76.7
4. Exclusions:			
Foreign Military Sales	0.1	0.0	0.0
Base Realignment and Closure	1.1	0.9	1.0
Other Federal Department and Agencies	3.3	0.8	1.5
Non-Federal and Others	0.5	0.3	0.2
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
5. Orders for Carryover Calculation	73.9	75.8	74.1
6. Weighted Average Outlay Rate	58.7%	59.9%	58.2%
7. Carryover Rate	41.3%	40.1%	41.8%
8. Allowable Carryover	30.8	31.2	31.9
Allowable Carryover(First Year)	30.5	30.4	31.0
Allowable Carryover (Second Year Procurement-funded Orders)	0.3	0.8	0.9
Part II			
9. Balance of Customer Order at Year End	29.0	26.8	26.2
10. Work-in-progress	0.0	0.0	0.0
11. Exclusions:			
Foreign Military Sales	0.0	0.0	0.0
Base Realignment and Closure	1.6	1.7	1.7
Other Federal Department and Agencies	1.0	1.0	1.0
Non-Federal and Others	0.5	0.5	0.3
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	0.0	0.0	0.0
12. Calculated Actuals Carryover	25.8	23.6	23.1

Some totals may not add due to rounding.

11. Navy Supply Management

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DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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Mission Statement/Overview:

The mission of Navy Supply Management (SM) is to perform supply chain management functions resulting in the sale of aviation and maritime components, ship's store stock, and consumables to a wide variety of customers. Navy SM ensures the right material is provided where required, when needed, at the best cost, which is vital to arming and sustaining the Navy and Marine Corps warfighting units. Other major customers include: Department of the Navy (DoN) shore activities, Army, Air Force, Defense Agencies, other government agencies, and foreign governments. Navy SM also provides strong sailor and family support through contracting, resale, transportation, food service, and other quality of life programs. As a fleet focused organization, Naval Supply Systems Command (NAVSUP) maintains a worldwide presence to provide supplies, services, & quality-of-life support to the Navy and Joint warfighter.

Contract authority given to NAVSUP allows obligations to occur prior to customer demand. Through planning and modeling the SM budget aligns with the anticipated demands resulting in collections through the sale of material. What makes SM unique is the outlay or payment resulting from obligations does not occur until material is delivered in the future, sometimes several years later. In addition to the cost of material, other costs related to supplying material, products and services to customers are recovered through stabilized rate recovery elements such as prior year gains/losses, repair costs including attrition, distribution, and operating costs. The NAVSUP SM budget submissions ensure cash remains solvent by accounting for all execution plans that impact total net outlay projections and cash balances through the budget horizon.

NAVSUP manages the following Budget Projects (BP) in order to organize the financial operations of Navy Working Capital Fund – Supply Management (NWCF-SM):

	Budget Project
Wholesale	
Aviation Consumables	BP34
Ship Repairables and Consumables	BP81
Aviation Repairables	BP85
Retail	
Ship's Store	BP21
General Consumables	BP28
Operations	
Operations and Reimbursables	BP91

NARRATIVE
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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Activity Group Composition:	**Location**
NAVSUP Weapon Systems Support (Maritime)	Mechanicsburg, Pennsylvania
NAVSUP Weapon Systems Support (Aviation)	Philadelphia, Pennsylvania
NAVSUP Global Logistics Center	San Diego, California
NAVSUP Fleet Logistics Center	San Diego, California
NAVSUP Fleet Logistics Center	Jacksonville, Florida
NAVSUP Fleet Logistics Center	Norfolk, Virginia
NAVSUP Fleet Logistics Center	Pearl Harbor, Hawaii
NAVSUP Fleet Logistics Center	Puget Sound, Washington
NAVSUP Fleet Logistics Center	Yokosuka, Japan
NAVSUP Fleet Logistics Center	Sigonella, Italy
NAVSUP Fleet Logistics Center	Manama, Bahrain
NAVSUP Business Systems Center	Mechanicsburg, Pennsylvania

Significant Changes Since the FY 2018 President's Budget:
FY 2017 saw a renewed focus on restoration of U.S. Navy readiness throughout the Future Years Defense Program (FYDP) driving the expectation of higher levels of demand than historical data presents. In accordance with Secretary of Defense Guidance, the Navy SM budget depicts the full requirements profile in order to reach adequate range and depth of parts into the wholesale system that aligns with commensurate customer funding increases. NAVSUP's budget estimates reflect requirements supporting life-cycle extensions for legacy systems/platforms and new systems/platforms, presenting a significant level of support required in the wholesale budget profile. Requirements are planned on a schedule to meet enterprise, service, and defense-wide mission objectives supporting operational commanders.

The Obligation Authority (OA) requested in this budget submission are closely linked to a future demand signal from the customer and placed on contract an acquisition lead-time in advance of the warfighter requirement. As a general rule-of-thumb, NAVSUP uses a lead-time of one year for maritime delivery and two years for aviation. A nuance driving longer than normal lead-times is the legacy life-extension production lines. Much of the longer than expected lead-time issues experienced is in relation to the F/A-18 A-D Hornet Flight Control Surface contracts. After being out of production for about 20 years, the need to remanufacture tooling, train the workforce, and restart cold production lines has lengthened lead-times with deliveries phased over a three to five year timeframe. A secondary impact of longer lead-times is a planned significant increase in Undelivered Orders (UDOs) in the near-term.

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SUPPLY MANAGEMENT - NAVY
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Cost Reductions:
No significant changes are noted from NAVSUP's FY 2018 President's budget reflecting the impact of Navy Enterprise Resource Planning (ERP) implementation, including legacy Information Technology (IT) system retirement and inventory savings. The impact of these initiatives on customer pricing in this budget was a reduction of $76 million in FY 2017.

Logistics Reassignment / Consumable Item Transfer:
Logistics Reassignment (LR) occurs when the DON transfers management of consumable material from within DON to Defense Logistics Agency (DLA) upon stabilization of design. In accordance with the Financial Management Regulation (FMR), the Services may request reimbursement from DLA for the value of inventory due-in from procurement at the time of each LR transfer. NAVSUP collected $27.9 million in FY 2017. The FY 2018 and FY 2019 projected reimbursements are $45.8 million and $6 million, respectively.

Financial Profile:

Net Revenue	$7,078.8	$7,927.9	$7,851.4
Expense	$6,883.7	$7,691.9	$8,148.2
Operating Results	$195.1	$236.0	($296.8)
Capital Surcharge	($1.0)	($1.7)	($1.8)
Net Operating Results (NOR)	$194.1	$234.3	($298.6)
Prior Year AOR	($129.8)	$64.3	$298.6
Other Changes Affecting AOR	$0.0	$0.0	$0.0
Accumulated Operating Results (AOR)	$64.3	$298.6	$0.0

Note: Amounts may not add due to rounding

Revenue and Expense: Revenue is directly tied to NAVSUP Net Sales from wholesale and retail material. Revenue from operations (BP91) includes direct reimbursable income and Capital Investment Program (CIP) costs. For SM activities, wholesale and retail expenses do not represent required budgetary resources (obligations). Material expense is cost of material sold from inventory, which is calculated based on gross sales. BP91 expenses tie to obligations.

FY 2017 reflects end-of-year revenue and expenses. FY 2018 revenue reflects a $621.4 million increase from the FY 2018 President's Budget due to wholesale and retail projected sales increases; expense reflects a commensurate increase. FY 2019 revenue is lower than expense due to incorporating the prior year Accumulated Operating Result (AOR) benefit as a price decrease in FY 2019 pricing; FY 2019 expense is driven by further wholesale sales increases.

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SUPPLY MANAGEMENT - NAVY
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Obligation Authority ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Wholesale	$5,771.0	$8,108.7	$7,251.3
Retail	$780.7	$847.2	$864.8
Operating	$1,246.1	$1,369.1	$1,416.6
Capital Improvement Program (CIP)	$7.3	$8.2	$8.3
Total	$7,805.1	$10,333.2	$9,540.9

Note: Amounts may not add due to rounding

Wholesale: Procurement and repair of wholesale material constitutes the majority of NAVSUP's business. Wholesale material consists of repairable and design un-stable consumables with lead-times averaging greater than 12 months. Repairable material typically consists of critical weapon systems and propulsion plant components that DLA does not manage. The current outline for wholesale obligations will support a mix of both new and legacy systems and platforms. Life-cycle extensions and further investment in Aviation Consolidated Allowance List (AVCAL) and Consolidated Shipboard Allowance List (COSAL) levels are included to support fleet and warfighter readiness. Examples of the platforms affected include: P-8A Poseidon, F/A-18 series, Gerald R. Ford Class carriers, Littoral Combat Ships (LCS), DDG-51 and DDG-1000 Class destroyers, C-2A Greyhounds, and Patrol Coastal and Mine Countermeasure ships. These combined efforts ultimately sustain the Optimized Fleet Response Plan (OFRP) and the Navy's ability to provide the required capabilities to assigned missions and readiness supported by the Secretary of Defense's Guidance. Wholesale supply is a key component to "strengthen our foundation" and to ensure ships and aircraft are maintained and modernized so they provide a "full measure of combat power."

The FY 2017 obligations reflect the total value of contracts awarded, fully executing the OA provided. $898.8 million worth of material requirements remain valid and were carried over into the FY 2018 budget request to ensure continued alignment and support of warfighter readiness as discussed above.

FY 2018 has a total increase of $1,757.6 million from the FY 2018 President's Budget. In addition to the impact of FY 2017 carryover requirements, FY 2018 also has an additional increase of $858.8 million included as an increased investment of wholesale stock levels to better align the SM budget with the Secretary of Defense's top three priorities: improve warfighting readiness; address inventory shortfalls; and build a larger, more capable and lethal joint force. This increased level of inventory will allow additional coverage in the event of future demand surges.

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Retail: The FY 2017 obligations reflect end-of-year actuals. There are no significant changes in obligations forecasted from FY 2018 to FY 2019.

Operating: The FY 2017 obligations reflect end-of-year actuals. The $47.5 million increase in obligations from FY 2018 to FY 2019 is a result of additional civilian personnel for projected workload associated with supply support services at NAVSUP Weapons Systems Support (WSS), NAVSUP Global Logistics Support (GLS), and NAVSUP Business System Center (BSC).

Collections/Disbursements/Outlays ($Millions):	FY 2017	FY 2018	FY 2019
Collections	$7,096.9	$7,917.0	$7,843.0
Disbursements	$6,772.2	$7,053.3	$7,954.4
Transfers (CIT Reimbursement)	$27.9	$45.8	$6.0
Outlays (Incorporates Transfers)	($352.6)	($909.5)	$105.4

Note: Amounts may not add due to rounding.

As a primary consideration of this budget, NAVSUP has carefully balanced cash concerns, impacts of potential changes to customer rates, and customer support effectiveness. This balance includes recognition of proven financial lead-times between obligations and disbursements, ensuring the lowest possible risk to cash solvency. Current net outlay projections reflect changes in workload and updated operating estimates.

Gross Sales ($Millions):	FY 2017	FY 2018	FY 2019
Wholesale	$6,146.9	$6,917.7	$6,826.1
Retail	$861.3	$846.5	$864.0
Total	$7,008.2	$7,764.2	$7,690.1

Note: Amounts may not add due to rounding

Wholesale: Gross Sales are tied to customer funding and NAVSUP Weapon Systems Support's ability to fill orders by having material on the shelf when the anticipated demand is received. The main drivers of FY 2018 wholesale sales increase from the FY 2018 President's Budget are Flying Hour Program (FHP) and Aviation Outfitting Allowancing (AOA) funding projections. Wholesale demand increases extend into FY 2019 however the impact on the sales value is largely offset by an AOR gain returned to the customer through lower FY 2019 prices.

Retail: The main driver of FY 2018 retail sales increases from the FY 2018 President's Budget is an increase in the FHP projections.

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Metrics: Metrics provide information on the scope of work performed by NWCF-SM. Adjustments have been made to align future metrics with current obligations and sales projections.

	FY 2017	FY 2018	FY 2019
Items Managed	381,205	385,258	387,977
Requisitions Received	424,226	594,769	585,789
Receipts	558,830	624,609	696,645
Issues	781,351	872,907	872,577
Contracts Executed	20,032	30,180	26,745

Undelivered Orders ($Millions): This represents contracts or orders for goods in which a liability has not accrued. The liability is reported to the NWCF-SM account until the material delivers from a vendor. The accrual of liability creates an outlay requirement which has been accounted for in NWCF-SM cash projections. The delivery of material creates the liability and the related disbursement from NWCF-SM cash account. Significant increases in FY 2018 and FY 2019 are driven by growth in obligation requirements with disbursements projected beyond the budget horizon due to aviation special program long lead-time deliveries. As these materials deliver throughout the FYDP, undelivered orders will trend back down to more typical levels.

	FY 2017	FY 2018	FY 2019
Undelivered Orders ($Millions):	$7,548.2	$10,829.2	$12,426.6

War Reserve Material (WRM): War Reserve funding supports the procurement, replenishment, reconstitution, stock, and contracted asset availability guarantee of consumable and repairable items deemed necessary for war reserve. No obligation authority is anticipated during this budget cycle.

Performance Indicators: Performance indicators establish the expected level of performance for supply management. A Casualty Report (CASREP C-3/4) is a requisition for emergency requirements for weapons, equipment or material for immediate use. The system is unable to perform assigned primary operation missions without this material. The requested material is required to eliminate the work stoppage or anticipated work stoppage.

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	FY 2017	FY 2018	FY 2019
Customer Wait Time in days	13	16	16
Ship Operating Time w/C3/C4 CASREP			
Deployed	39%	25%	25%
Non-deployed	37%	28%	28%
Aircraft Non Mission Capable Supply			
Deployed	6%	10%	10%
Non-Deployed	6%	10%	10%
Supply Material Availability	82%	85%	85%

Unit Cost: The cost per unit sold is based on total cost and total anticipated gross sales. FY 2017 wholesale unit cost decreased due to withheld OA. FY 2018 unit cost increased due to the FY 2017 carryover plus additional wholesale obligation requirements.

Unit Cost	FY 2017	FY 2018	FY 2019
Wholesale	$ 1.129	$ 1.346	$ 1.246
Retail	$ 0.906	$ 1.001	$ 1.001

Composite Rates	FY 2017	FY 2018	FY 2019
Annual Price Change (APC)	4.945%	-0.500%	-0.337%
Composite Cost Recovery Rate (CRR)	18.694%	17.420%	10.878%

Staffing:

Civilian/Military End Strength & Workyears:	FY 2017	FY 2018	FY 2019
Civilian End Strength	6,929	7,104	7,197
Civilian Workyears	6,939	7,099	7,192
Military End Strength	364	364	364
Military Workyears	364	364	364

Civilian Personnel: End Strength (ES) and Full Time Equivalents (FTEs) were adjusted to reflect FY 2017 actuals. FY 2018 and FY 2019 Full-Time Equivalent (FTE) were adjusted to reflect anticipated workload demand and realignment efficiencies, reflected in NAVSUP's hiring plan.

Military Personnel: No change.

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Capital Investment Program (CIP): The Capital Investment Program sustains NAVSUP in mission achievement by reinvesting in plant equipment, cranes and facilities. Included in the capital budget are the following types of assets: automated data processing equipment (ADPE); non-ADPE equipment; and minor construction.

CIP Authority ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Equipment, Non-ADPE* / Telecom	$4.9	$3.3	$3.5
Equipment, ADPE / Telecom	$2.5	$4.1	$3.8
Software Development	$0.0	$0.0	$0.0
Minor Construction	$0.0	$0.8	$1.0
Total	$7.3	$8.2	$8.3

*Automatic Data Processing Equipment (ADPE)
Note: Amounts may not add due to rounding.

REVENUE AND EXPENSE SUMMARY
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Revenue:			
Gross Sales			
Operations	7,000.8	7,756.0	7,681.9
Capital Surcharge	1.0	1.7	1.8
Capital Investment Recovery except Maj Const	6.3	6.5	6.5
Total Gross Sales	7,008.2	7,764.2	7,690.1
Major Construction Dep	0.0	0.0	0.0
Other Income	407.3	459.9	456.5
Refunds/Discounts (- Credit Sales)	(336.6)	(296.2)	(295.3)
TOTAL INCOME	7,078.8	7,927.9	7,851.4
Expenses:			
Cost of Material Sold from Inventory	5,638.6	6,316.3	6,725.1
Salaries and Wages:			
Military Personnel	31.4	31.7	32.8
Civilian Personnel	602.8	631.3	647.9
Travel & Transportation of Personnel	11.4	12.9	13.1
Materials & Supplies	2.2	5.3	5.4
Equipment	0.0	0.0	0.0
Other Purchases from Revolving Funds	239.9	192.2	218.1
Transportation of Things	110.0	168.0	151.1
Depreciation - Capital	6.3	6.5	6.5
Printing and Reproduction	2.6	4.4	4.5
Advisory and Assistance Services	0.0	0.0	0.0
Rent, Communication, Utilities & Misc	77.5	74.6	76.0
Other Purchased Services	161.1	248.6	267.7
TOTAL EXPENSES	6,883.7	7,691.9	8,148.2
Operating Result	195.1	236.0	(296.8)
Less Capital Surcharge reservation	1.0	1.7	1.8
Plus Appro Affecting NOR/AOR	0.0	0.0	0.0
Plus Other Changes Affecting NOR	0.0	0.0	0.0
Net Operating Result	194.1	234.3	(298.6)
Prior Year AOR	(129.8)	64.3	298.6
Other Changes Affecting AOR	0.0	0.0	0.0
Accumulated Operating Result	64.3	298.6	(0.0)
Non-Recoverable Adjustments impacting AOR	0.0	0.0	0.0
AOR for budget purposes	64.3	298.6	(0.0)

SOURCES OF REVENUE
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
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(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
1. New Orders			
a. Orders from DoD Components:			
Dept. of Navy			
Military Personnel, M.C.	-	-	-
O&M Marine Corps	3.1	3.6	3.4
Reserve Personnel, M.C.	-	-	-
Procurement, M.C.	10.8	12.5	11.8
Military Construction, Navy	-	-	-
RDT & E, Navy	2.3	2.7	2.6
Reserve Personnel, Navy	-	-	-
Military Personnel, Navy	-	-	-
Aircraft Procurement, Navy	775.1	973.8	790.9
Weapons Procurement, Navy	4.3	2.0	2.3
Shipbuilding & Conv. Navy	45.6	30.8	30.8
O&M, Navy	5,057.7	5,831.3	5,601.5
O&M, Navy Reserve	88.6	102.2	98.1
Other Procurement, Navy	63.2	51.7	61.6
Navy Working Capital Fund	201.9	232.8	223.6
	6,252.7	7,243.6	6,826.7
Orders from other DoD Components			
Army	4.8	5.5	5.2
Air Force	315.2	365.2	344.2
Other DoD	34.0	39.4	37.2
	354.0	410.1	386.5
b. Orders from other Fund Business Areas:			
Distribution Depots, Navy	-	-	-
Logistics Support, Navy	-	-	-
	-	-	-
c. Total DoD	6,606.8	7,653.7	7,213.2
d. Other Orders:			
Other Federal Agencies	17.9	20.7	19.5
Trust Fund	-	-	-
Non-Federal Agencies *	113.5	143.3	136.5
Foreign Military Sales (FMS)	105.3	122.0	115.0
	236.7	286.0	271.0
Total New Orders	6,843.5	7,939.7	7,484.2
2. Carry-In Orders	1,631.8	1,467.1	1,642.6
3. Total Gross Orders	8,475.3	9,406.8	9,126.8
4. Carry-Out Orders (-)	1,467.1	1,642.6	1,436.7
5. Gross Sales	7,008.2	7,764.2	7,690.1
Reimbursable Orders (BP 91)	407.3	459.9	456.5
6. Credit (-)	336.6	296.2	295.3
7. Net Sales	7,078.8	7,927.9	7,851.4

* Non-federal agencies line includes cash sales

CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

		FY 2017		FY 2018		FY 2019	
Line #	Description	Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	**Non-ADPE and Telecom Equipment >= $.250M**	**0**	**$4.871**	**0**	**$3.300**	**0**	**$3.500**
	- Vehicles	0	$0.200	0	$0.300	0	$0.500
	- Material Handling	0	$0.973	0	$2.500	0	$2.500
	- Installation Security	0	$0.000	0	$0.000	0	$0.000
	- Quality Control/Testing	0	$0.000	0	$0.000	0	$0.000
	- Medical Equipment	0	$0.000	0	$0.000	0	$0.000
	- Machinery	0	$3.698	0	$0.500	0	$0.500
	- Support Equipment	0	$0.000	0	$0.000	0	$0.000
2	**ADPE and Telecom Equipment >= $.250M**	**0**	**$2.465**	**0**	**$4.100**	**0**	**$3.750**
	- Computer Hardware (Production)	0	$2.465	0	$4.100	0	$3.750
	- Computer Hardware (Network)	0	$0.000	0	$0.000	0	$0.000
	- Computer Software (Operating)	0	$0.000	0	$0.000	0	$0.000
	- Telecommunications	0	$0.000	0	$0.000	0	$0.000
	- Other Support Equipment	0	$0.000	0	$0.000	0	$0.000
3	**Software Development >= $.250M**	**0**	**$0.000**	**0**	**$0.000**	**0**	**$0.000**
	- Internally Developed	0	$0.000	0	$0.000	0	$0.000
	- Externally Developed	0	$0.000	0	$0.000	0	$0.000
4	**Minor Construction (>= $.250M and <= $1.000M)**	**0**	**$0.000**	**0**	**$0.800**	**0**	**$1.000**
	- Replacement Capability	0	$0.000	0	$0.800	0	$1.000
	- New Construction	0	$0.000	0	$0.000	0	$0.000
	- Environmental Capability	0	$0.000	0	$0.000	0	$0.000
	Grand Total	**0**	**$7.336**	**0**	**$8.200**	**0**	**$8.250**
	Total Capital Outlays		**$4.593**		**$5.500**		**$6.000**
	Total Capital Investment Recovery		**$6.293**		**$6.527**		**$6.472**

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
Department of the Navy/ Supply	#001 - Non-ADP Equipment						Supply Management - Navy		
	FY 2017			FY 2018			FY 2019		
Non-ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	0	0	$200	0	0	$300	0	0	$500
Material Handling	0	0	$973	0	0	$2,500	0	0	$2,500
Installation Security	0	0	$0	0	0	$0	0	0	$0
Quality Control/ Testing	0	0	$0	0	0	$0	0	0	$0
Medical Equipment	0	0	$0	0	0	$0	0	0	$0
Machinery	0	0	$3,698	0	0	$500	0	0	$500
Support Equipment	0	0	$0	0	0	$0	0	0	$0
Total	0	0	$4,871	0	0	$3,300	0	0	$3,500

Justification:

This program funds the procurement of new/initial outfitting and replacement of Material Handling Equipment (MHE) and Automated Material Handling Systems (AMHS) to satisfy operational requirements within the Navy Supply System. Replacement MHE is for over aged non-repairable equipment used in material handling operations at various activities. With a large inventory of equipment at the various Fleet Logistics Centers (FLCs) there will always be units eligible for replacement through procurement. Supply readiness and logistical support are dependent upon the availability of reliable MHE. Replacement of non-repairable equipment with new and more efficient models will reduce costs attributed to repair/overhaul, downtime and maintenance. New equipment will enhance productivity and enable users to meet handling and logistics requirements in an efficient and effective manner.

Naval Supply Systems Command (NAVSUP) is also responsible for replacing and maintaining aging Civil Engineering Support Equipment (CESE) necessary for fuel depot operations throughout the Navy. This equipment is necessary to maintain and improve the working conditions and assist NAVSUP operations employees. Safety, reliability, maintenance cost and customer support are directly impacted by age and condition of this equipment

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
Department of the Navy/ Supply	#002 - ADP Equipment						Supply Management - Navy		
	FY 2017			FY 2018			FY 2019		
ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	0	0	$2,465	0	0	$4,100	0	0	$3,750
Computer Hardware (Network)	0	0	$0	0	0	$0	0	0	$0
Computer Software (Operating System)	0	0	$0	0	0	$0	0	0	$0
Telecommunications	0	0	$0	0	0	$0	0	0	$0
Other Support Equipment	0	0	$0	0	0	$0	0	0	$0
Total	0	0	$2,465	0	0	$4,100	0	0	$3,750

Justification:

NAVSUP Business Systems Center (BSC) - Funds provide support to the BSC Legacy/Non-Navy/Marine Corps Intranet (NMCI) Network Plan. As part of the plan, NAVSUP BSC is upgrading its NETWARCOM approved legacy network, which will replace obsolete non-NMCI ADP equipment to provide an environment for client/server development. A variety of PC hardware platforms currently exists in NAVSUP BSC that prevents deployment of the development tools needed to maintain its competitiveness. Upgrading and standardizing hardware infrastructure will allow NAVSUP BSC to use the network to deploy the latest legacy/non-NMCI software products. As NAVSUP moves forward with reducing system and Information Technology (IT) costs and improving business processes, a critical area identified for analysis is Allowancing. In order to optimize the allowance systems and align with key Enterprise efforts such as Navy ERP and Single Supply Baseline (SSB), NAVSUP will be streamlining current Readiness Suite and Re-Engineering Maritime Allowance Development (ReMAD) systems via merging the associated databases, standardizing data validations rules and leveraging synergies resulting from combining the platforms. This effort will position NAVSUP to respond to future Enterprise integration/transition requirements.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				FEBRUARY 2018					
Department of the Navy/ Supply	#004 - Minor Construction ($250K - $1 M)						Supply Management - Navy		
	FY 2017			FY 2018			FY 2019		
Minor Construction	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement	0	0	$0	0	0	$800	0	0	$1,000
New Construction	0	0	$0	0	0	$0	0	0	$0
Environmental Capability	0	0	$0	0	0	$0	0	0	$0
Total	0	0	$0	0	0	$800	0	0	$1,000

Justification:

Minor Construction: NAVSUP, as the maintenance UIC for all facilities occupied and operated by NAVSUP employees, is responsible for Real Property Maintenance (Minor Construction portion) of facilities occupied and operated. These NWCF Supply Management projects are necessary to maintain and improve the working conditions for NAVSUP claimancy employees. Projects include Minor Construction requirements of facilities as well as Quality of Life and correction of Safety deficiencies. Minor Construction funding requested supports the overall RPM objectives of the NAVFAC recommended spending limits of between 2% to 4% annually based on the associated property values. Economic analysis are not performed since Minor Construction funding limits keep investment percentage to such a small percentage of the total facility value. Cost savings if identified are provided as part of the project documentation developed. No minor construction project exceeds the current MILCON threshold.

CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	**1**	**Non ADP**		**$6.300**	**$4.871**	**($1.429)**	
			Vehicles	$0.300	$0.200	($0.100)	Actual Execution
			Material Handling	$1.000	$0.973	($0.027)	Actual Execution
			Machinery	$5.000	$3.698	($1.302)	Actual Execution
	2	**ADP**		**$0.900**	**$2.465**	**$1.565**	
			Computer Hardware (Production)	$0.900	$2.465	$1.565	Actual Execution
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
	4	**Minor Construction**		**$0.800**	**$0.000**	**($0.800)**	
			Replacement	$0.800	$0.000	($0.800)	Actual Execution
TOTAL FY 2017 CIP Program				**$8.000**	**$7.336**	**($0.664)**	

FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2018	**1**	**Non ADP**		**$3.300**	**$3.300**	**$0.000**	
			Vehicles	$0.300	$0.300	$0.000	
			Material Handling	$2.500	$2.500	$0.000	
			Machinery	$0.500	$0.500	$0.000	
	2	**ADP**		**$2.100**	**$4.100**	**$2.000**	
			Computer Hardware (Production)	$2.100	$4.100	$2.000	Emergent requirements
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
	4	**Minor Construction**		**$0.800**	**$0.800**	**$0.000**	
			Replacement	$0.800	$0.800	$0.000	
TOTAL FY 2018 CIP Program				**$6.200**	**$8.200**	**$2.000**	

FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2019	**1**	**Non ADP**		**$3.500**	**$3.500**	**$0.000**	
			Vehicles	$0.500	$0.500	$0.000	
			Material Handling	$2.500	$2.500	$0.000	
			Machinery	$0.500	$0.500	$0.000	
	2	**ADP**		**$3.750**	**$3.750**	**$0.000**	
			Computer Hardware (Production)	$3.750	$3.750	$0.000	
	3	**Software**		**$0.000**	**$0.000**	**$0.000**	
	4	**Minor Construction**		**$1.000**	**$1.000**	**$0.000**	
			Replacement	$1.000	$1.000	$0.000	
TOTAL FY 2019 CIP Program				**$8.250**	**$8.250**	**$0.000**	

SUPPLY MANAGEMENT SUMMARY

DEPARTMENT OF THE NAVY

SUPPLY MANAGEMENT - NAVY

FISCAL YEAR (FY) 2019 BUDGET ESTIMATES

FEBRUARY 2018

(DOLLARS IN MILLIONS)

DIVISION	NET CUSTOMER ORDERS	NET SALES	OPERATING	MOBILIZATION	TOTAL OBLIGATIONS	VARIABILITY TARGET	TARGET TOTAL	CAPITAL IMRPROVEMENT PROGRAM	CREDIT SALES
BP21									
FY17	60.6	60.6	63.2	0.0	63.2	0.0	63.2	0.0	0.0
FY18	65.2	65.2	65.9	0.0	65.9	0.0	65.9	0.0	0.0
FY19	65.2	65.2	65.9	0.0	65.9	0.0	65.9	0.0	0.0
BP25									
FY17	0.0	0.0	(0.8)	0.0	(0.8)	0.0	(0.8)	0.0	0.0
BP28									
FY17	800.7	800.7	718.3	0.0	718.3	0.0	718.3	0.0	0.0
FY18	781.3	781.3	781.3	0.0	781.3	0.0	781.3	0.0	0.0
FY19	798.9	798.9	798.9	0.0	798.9	0.0	798.9	0.0	0.0
BP34									
FY17	200.4	216.4	76.7	0.0	76.7	0.0	76.7	0.0	0.2
FY18	202.0	202.3	83.7	0.0	83.7	13.0	96.7	0.0	0.1
FY19	170.3	171.3	83.4	0.0	83.4	13.0	96.4	0.0	0.2
BP81									
FY17	1,226.9	1,244.6	1,140.3	0.0	1,140.3	0.0	1,140.3	0.0	6.9
FY18	1,392.1	1,414.2	1,263.4	0.0	1,263.4	176.0	1,439.4	0.0	10.0
FY19	1,197.5	1,206.9	1,200.8	0.0	1,200.8	176.0	1,376.8	0.0	10.0
BP85									
FY17	4,219.1	4,349.3	4,554.1	0.0	4,554.1	0.0	4,554.1	0.0	329.6
FY18	5,202.8	5,005.0	6,761.7	0.0	6,761.7	636.0	7,397.7	0.0	286.0
FY19	4,956.9	5,152.5	5,967.2	0.0	5,967.2	636.0	6,603.2	0.0	285.2
BP91									
FY17	0.0	407.3	1,238.7	0.0	1,246.1	0.0	1,246.1	7.3	0.0
FY18	0.0	459.9	1,369.1	0.0	1,369.1	0.0	1,369.1	8.2	0.0
FY19	0.0	456.5	1,416.6	0.0	1,416.6	0.0	1,416.6	8.3	0.0
TOTAL									
FY17	6,507.6	7,078.8	7,790.4	0.0	7,797.8	0.0	7,797.8	7.3	336.6
FY18	7,643.4	7,927.9	10,325.0	0.0	10,325.0	825.0	11,150.0	8.2	296.2
FY19	7,188.7	7,851.4	9,532.7	0.0	9,532.7	825.0	10,357.7	8.3	295.3

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BP 34
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2017

Weapon System	NMCS Rates[1]	Buy-in Outfitting	Special Programs	Basic Replen	Total
F/A-18 / EA-18G	6.7 / 9.2	1.9	0.0	12.1	13.9
AV-8B / T-45	7.5 / 4.6	0.0	0.0	1.8	1.8
E-2 / C-2	7.2 / 7.7	4.2	0.0	3.4	7.6
EA-6B	6.3	0.0	0.0	0.5	0.5
RQ-21 UASI	n/a	0.3	0.0	0.0	0.3
V-22	8.9	1.3	0.0	6.6	7.9
C-130	7.4	0.1	0.0	0.7	0.8
P-3	5.2	0.0	0.0	(0.0)	0.0
P-8	7.3	6.3	0.0	1.3	7.7
H-1	10.0	2.8	0.0	(2.3)	0.5
H-53	5.3	0.0	0.0	0.4	0.4
H-60	4.9	0.8	0.0	2.6	3.4
VTUAV	n/a	1.2	0.0	(0.3)	1.0
Common Systems	n/a	3.7	0.0	15.8	19.5
Aircraft Engines	n/a	0.0	0.0	6.3	6.3
Aviation Support Systems	n/a	0.0	0.0	5.1	5.1
Total		22.6	0.0	54.1	76.7

[1]Not Mission Capable Supply (NMCS) - Percentage of time aircraft are Not Mission Capable due to a supply shortage. Used in conjunction with Not Mission Capable Maintenance (NMCM) to determine total Not Mission Capable rate (inverse of MC). NMCS is computed only for weapon systems. NMCS is not computed for weapon system parts, such as engines.

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BP 34
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2018

Weapon System	NMCS Rates[1]	Buy-in Outfitting	Special Programs	Basic Replen	Total
F/A-18 / EA-18G	6.7 / 9.2	2.3	0.0	7.7	10.0
AV-8B / T-45	7.5 / 4.6	0.0	0.0	2.3	2.3
E-2 / C-2	7.2 / 7.7	2.5	0.0	6.5	9.0
EA-6B	6.3	0.0	0.0	0.5	0.5
RQ-21 UASI	n/a	0.0	0.0	0.0	0.0
V-22	8.9	3.5	0.0	5.4	8.9
C-130	7.4	1.5	0.0	1.2	2.7
P-3	5.2	0.0	0.0	0.0	0.1
P-8	7.3	2.1	0.0	4.1	6.2
H-1	10.0	1.7	0.0	0.6	2.3
H-53	5.3	0.0	0.0	0.5	0.5
H-60	4.9	3.5	0.0	3.5	7.0
VTUAV	n/a	0.9	0.0	0.8	1.7
Common Systems	n/a	0.6	0.0	20.5	21.2
Aircraft Engines	n/a	0.0	0.0	6.4	6.4
Aviation Support Systems	n/a	0.0	0.0	4.9	4.9
Total		18.6	0.0	65.1	83.7

[1]Not Mission Capable Supply (NMCS) - Percentage of time aircraft are Not Mission Capable due to a supply shortage. Used in conjunction with Not Mission Capable Maintenance (NMCM) to determine total Not Mission Capable rate (inverse of MC). NMCS is computed only for weapon systems. NMCS is not computed for weapon system parts, such as engines.

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BP 34
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2019

Weapon System	NMCS Rates[1]	Buy-in Outfitting	Special Programs	Basic Replen	Total
F/A-18 / EA-18G	6.7 / 9.2	4.0	0.0	7.6	11.7
AV-8B / T-45	7.5 / 4.6	0.0	0.0	2.2	2.2
E-2 / C-2	7.2 / 7.7	2.5	0.0	6.2	8.6
EA-6B	6.3	0.0	0.0	0.5	0.5
RQ-21 UASI	n/a	0.0	0.0	0.0	0.0
V-22	8.9	1.7	0.0	4.7	6.4
C-130	7.4	0.1	0.0	0.9	1.0
P-3	5.2	0.0	0.0	0.0	0.0
P-8	7.3	3.7	0.0	4.2	7.9
H-1	10.0	1.9	0.0	0.7	2.6
H-53	5.3	0.0	0.0	0.5	0.5
H-60	4.9	1.9	0.0	3.0	4.8
VTUAV	n/a	4.2	0.0	1.4	5.6
Common Systems	n/a	0.7	0.0	20.3	21.1
Aircraft Engines	n/a	0.0	0.0	5.9	5.9
Aviation Support Systems	n/a	0.0	0.0	4.6	4.6
Total		20.7	0.0	62.6	83.4

[1]Not Mission Capable Supply (NMCS) - Percentage of time aircraft are Not Mission Capable due to a supply shortage. Used in conjunction with Not Mission Capable Maintenance (NMCM) to determine total Not Mission Capable rate (inverse of MC). NMCS is computed only for weapon systems. NMCS is not computed for weapon system parts, such as engines.

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BP 81
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2017

Weapon System Name	Basic Replen	Outfitting	Special Programs	Rework	Total
AMPHIBIOUS	5.5	0.5	1.9	0.8	8.7
NUCLEAR	104.5	11.1	7.4	4.9	128.0
SUBSAFE LI/ASDS/DSSP	11.3	0.5	39.9	10.7	62.4
EXPEDITIONARY	4.9	0.0	4.6	(1.0)	8.5
COMMON ELECTRONIC	43.0	14.1	73.1	62.0	192.2
COMMON HM&E	76.8	2.5	106.3	77.0	262.5
CRUDES	74.9	8.4	41.2	132.5	257.0
LITTORAL	0.6	1.5	14.3	6.4	22.7
SUBMARINE	19.2	4.8	73.2	61.5	158.7
CVN	0.5	0.1	24.9	14.0	39.6
Gross Requirement	341.3	43.5	386.8	368.8	1,140.3

Platform	FY17 POTF *
AIRCRAFT CARRIERS	76%
AMPHIBIOUS WARFARE	32%
COMBAT LOGISTICS SHIPS	N/A
MINE WARFARE SHIPS	16%
SUBMARINES (SSN)	93%
SUBMARINES (SSBN)	100%
SUBMARINES (SSGN)	95%
LITTORAL	34%
SURFACE COMBATANTS	43%
MISCELLANEOUS	73%
ACROSS ALL PLATFORMS	58%

* POTF (Percentage of Time Free) is an accepted Department of Defense readiness metric and is used in assessing ship and submarine readiness vice NMCS (aviation metric). It measures the percentage of operating time free of mission-degrading casualties for active ships in all fleets (i.e. the percentage of operating time that a platform has no C3/C4 casualty reports (CASREPs). POTF is measured by platform. There is no means of obtaining POTF data at the Weapon System level.

FY17 POTF is based on Actuals.

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BP 81
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2018

Weapon System Name	Basic Replen	Outfitting	Special Programs	Rework	Total
AMPHIBIOUS	4.6	3.5	2.2	3.9	14.1
NUCLEAR	81.6	11.3	6.5	4.2	103.6
SUBSAFE LI/ASDS/DSSP	28.4	0.8	23.4	10.9	63.5
EXPEDITIONARY	2.9	0.0	1.3	4.1	8.3
COMMON ELECTRONIC	61.1	22.3	65.5	96.5	245.4
COMMON HM&E	109.7	4.0	82.2	89.7	285.5
CRUDES	61.8	11.9	20.6	156.8	251.1
LITTORAL	15.4	17.5	17.3	9.8	60.0
SUBMARINE	71.2	1.8	36.9	73.7	183.6
CVN	13.8	0.2	23.1	11.0	48.2
Gross Requirement	450.5	73.3	279.1	460.5	1,263.4

Platform	FY18 POTF *
AIRCRAFT CARRIERS	76%
AMPHIBIOUS WARFARE	32%
COMBAT LOGISTICS SHIPS	N/A
MINE WARFARE SHIPS	16%
SUBMARINES (SSN)	93%
SUBMARINES (SSBN)	100%
SUBMARINES (SSGN)	95%
LITTORAL	34%
SURFACE COMBATANTS	43%
MISCELLANEOUS	73%
ACROSS ALL PLATFORMS	58%

* POTF (Percentage of Time Free) is an accepted Department of Defense readiness metric and is used in assessing ship and submarine readiness vice NMCS (aviation metric). It measures the percentage of operating time free of mission-degrading casualties for active ships in all fleets (i.e. the percentage of operating time that a platform has no C3/C4 casualty reports (CASREPs). POTF is measured by platform. There is no means of obtaining POTF data at the Weapon System level.

FY18 POTF projections are carried forward from FY17.

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BP 81
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2019

Weapon System Name	Basic Replen	Outfitting	Special Programs	Rework	Total
AMPHIBIOUS	3.3	3.9	2.2	3.5	12.8
NUCLEAR	81.1	11.5	0.0	6.6	99.2
SUBSAFE LI/ASDS/DSSP	29.9	0.5	22.1	11.1	63.6
EXPEDITIONARY	2.4	0.0	1.4	10.3	14.1
COMMON ELECTRONIC	55.3	22.8	63.8	114.7	256.6
COMMON HM&E	118.3	2.7	56.3	102.6	280.0
CRUDES	48.3	18.8	21.7	142.9	231.7
LITTORAL	37.4	7.5	2.0	6.5	53.4
SUBMARINE	43.1	4.2	45.7	53.2	146.2
CVN	9.2	0.4	21.6	12.1	43.3
Gross Requirement	428.1	72.4	236.8	463.5	1,200.8

Platform	FY19 POTF *
AIRCRAFT CARRIERS	76%
AMPHIBIOUS WARFARE	32%
COMBAT LOGISTICS SHIPS	N/A
MINE WARFARE SHIPS	16%
SUBMARINES (SSN)	93%
SUBMARINES (SSBN)	100%
SUBMARINES (SSGN)	95%
LITTORAL	34%
SURFACE COMBATANTS	43%
MISCELLANEOUS	73%
ACROSS ALL PLATFORMS	58%

* POTF (Percentage of Time Free) is an accepted Department of Defense readiness metric and is used in assessing ship and submarine readiness vice NMCS (aviation metric). It measures the percentage of operating time free of mission-degrading casualties for active ships in all fleets (i.e. the percentage of operating time that a platform has no C3/C4 casualty reports (CASREPs). POTF is measured by platform. There is no means of obtaining POTF data at the Weapon System level.

FY19 POTF projections are carried forward from FY17.

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BP 85
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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Weapon System	NMCS Rates[1]	Buy-in Outfitting	Special Programs	Basic Replen	Repair	Total
F/A-18 / EA-18G	6.7 / 9.2	36.0	535.4	315.5	533.6	1,420.4
AV-8B / T-45	7.5 / 4.6	0.0	6.8	5.7	90.3	102.8
E-2 / C-2	7.2 / 7.7	96.6	14.7	47.5	67.4	226.3
EA-6B	6.3	0.0	0.0	3.5	12.3	15.8
RQ-21 UASI	n/a	4.9	0.0	0.0	0.0	4.9
V-22	8.9	23.4	25.8	72.8	592.4	714.3
C-130	7.4	1.3	0.0	49.7	20.2	71.1
P-3	5.2	0.7	0.0	5.0	74.2	80.0
P-8	7.3	115.6	0.0	(37.5)	52.6	130.6
H-1	10.0	51.4	0.0	(16.0)	110.9	146.3
H-53	5.3	0.0	0.0	40.1	239.2	279.3
H-60	4.9	14.3	0.0	86.0	228.4	328.7
VTUAV	n/a	22.0	0.0	(21.3)	2.8	3.5
Common Systems	n/a	14.0	0.0	69.8	138.3	222.1
Aircraft Engines	n/a	0.0	17.1	22.3	635.2	674.5
Aviation Support Systems	n/a	18.0	0.0	3.8	111.6	133.4
Total		398.2	599.7	646.8	2,909.3	4,554.1

[1]Not Mission Capable Supply (NMCS) - Percentage of time aircraft are Not Mission Capable due to a supply shortage. Used in conjunction with Not Mission Capable Maintenance (NMCM) to determine total Not Mission Capable rate (inverse of MC). NMCS is computed only for weapon systems. NMCS is not computed for weapon system parts, such as engines.

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BP 85
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2018

Weapon System	NMCS Rates[1]	Buy-in Outfitting	Special Programs	Basic Replen	Repair	Total
F/A-18 / EA-18G	6.7 / 9.2	40.0	1,479.8	535.1	609.0	2,663.9
AV-8B / T-45	7.5 / 4.6	0.0	6.5	20.8	112.4	139.8
E-2 / C-2	7.2 / 7.7	48.4	0.0	96.2	90.8	235.4
EA-6B	6.3	0.0	0.0	95.2	15.1	110.2
RQ-21 UASI	n/a	0.0	0.0	0.0	0.0	0.0
V-22	8.9	62.5	12.9	80.8	531.3	687.6
C-130	7.4	25.9	0.0	21.7	23.8	71.4
P-3	5.2	0.7	0.0	27.8	73.2	101.7
P-8	7.3	37.1	0.0	80.8	60.8	178.7
H-1	10.0	29.6	0.0	96.7	141.7	267.9
H-53	5.3	0.0	0.0	224.4	302.9	527.3
H-60	4.9	62.7	0.0	51.5	340.6	454.8
VTUAV	n/a	15.8	0.0	0.0	1.5	17.3
Common Systems	n/a	13.6	0.0	65.1	154.6	233.2
Aircraft Engines	n/a	0.0	0.0	248.8	677.9	926.7
Aviation Support Systems	n/a	0.0	0.0	31.7	114.1	145.8
Total		336.3	1,499.3	1,676.5	3,249.7	6,761.7

[1]Not Mission Capable Supply (NMCS) - Percentage of time aircraft are Not Mission Capable due to a supply shortage. Used in conjunction with Not Mission Capable Maintenance (NMCM) to determine total Not Mission Capable rate (inverse of MC). NMCS is computed only for weapon systems. NMCS is not computed for weapon system parts, such as engines.

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BP 85
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FY 2019

Weapon System	NMCS Rates[1]	Buy-in Outfitting	Special Programs	Basic Replen	Repair	Total
F/A-18 / EA-18G	6.7 / 9.2	78.6	1,338.9	246.1	612.7	2,276.4
AV-8B / T-45	7.5 / 4.6	0.0	0.0	16.0	112.5	128.5
E-2 / C-2	7.2 / 7.7	51.9	0.0	62.4	90.9	205.2
EA-6B	6.3	0.0	0.0	42.9	14.9	57.8
RQ-21 UASI	n/a	0.0	0.0	0.0	0.0	0.0
V-22	8.9	33.5	13.0	36.4	635.6	718.5
C-130	7.4	1.4	0.0	10.0	23.8	35.2
P-3	5.2	0.4	0.0	19.6	69.4	89.3
P-8	7.3	71.5	0.0	60.4	60.9	192.8
H-1	10.0	37.5	0.0	43.5	141.8	222.9
H-53	5.3	0.0	0.0	101.1	303.3	404.3
H-60	4.9	35.9	0.0	23.2	366.3	425.4
VTUAV	n/a	82.0	0.0	0.0	1.5	83.5
Common Systems	n/a	17.3	0.0	29.3	155.4	202.0
Aircraft Engines	n/a	0.0	0.0	112.1	684.9	797.0
Aviation Support Systems	n/a	0.0	0.0	14.3	114.2	128.5
Total		410.0	1,352.0	817.2	3,388.1	5,967.2

[1]Not Mission Capable Supply (NMCS) - Percentage of time aircraft are Not Mission Capable due to a supply shortage. Used in conjunction with Not Mission Capable Maintenance (NMCM) to determine total Not Mission Capable rate (inverse of MC). NMCS is computed only for weapon systems. NMCS is not computed for weapon system parts, such as engines.

INVENTORY STATUS
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BUDGET PROJECT SUMMARY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2017

			---Peacetime---	
	Total	Mobilization	Operating	Other
1. INVENTORY BOP	56,994.5	0.0	26,642.5	30,352.0
2. BOP INVENTORY ADJUSTMENTS	2,796.0	0.0	5,690.9	(2,895.0)
A. RECLASSIFICATION CHANGE (memo)	0.0	0.0	4,200.8	(4,200.8)
B. PRICE CHANGE AMOUNT (memo)	2,796.0	0.0	1,490.2	1,305.8
C. INVENTORY RECLASSIFIED AND REPRICED	59,790.4	0.0	32,333.4	27,457.0
3. RECEIPTS AT STANDARD	3,357.9	0.0	3,300.2	57.7
4. SALES AT STANDARD	7,008.2	0.0	7,008.2	0.0
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	2,048.8	0.0	1,809.9	238.9
B. RETURNS FROM CUSTOMERS FOR CREDIT	336.6	0.0	320.0	16.6
C. RETURNS FROM CUSTOMERS, NO CREDIT	15,717.5	0.0	7,794.4	7,923.0
D. RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.0
E. TRANSFERS TO PROP. DISPOSAL (-)	(2,356.4)	0.0	0.0	(2,356.4)
F. ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	(193.2)	0.0	(33.4)	(159.8)
G. OTHER (listed in Section 9)	(11,668.1)	0.0	(7,353.9)	(4,314.2)
H. TOTAL ADJUSTMENTS	3,885.2	0.0	2,537.0	1,348.1
6. INVENTORY EOP	60,025.3	0.0	31,162.4	28,862.9
7. INVENTORY EOP (REVALUED)	36,631.2	0.0	19,923.3	16,707.9
A. APPROVED ACQUISITION OBJECTIVE (memo)				13,116.0
B. ECONOMIC RETENTION (memo)				1,505.9
C. CONTINGENCY RETENTION (memo)				2,049.3
D. POTENTIAL DOD REUTILIZATION (memo)				36.7
8. INVENTORY ON ORDER EOP (memo)	2,875.2	0.0	2,875.2	0.0
9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	1,371.2	0.0	1,173.1	198.0
Strata Transfers	0.0	0.0	4,512.3	(4,512.3)
Net/Standard Difference	(13,039.3)	0.0	(13,039.3)	0.0
Total	(11,668.1)	0.0	(7,353.9)	(4,314.2)

INVENTORY STATUS
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SUPPLY MANAGEMENT - NAVY
BUDGET PROJECT SUMMARY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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			---Peacetime---	
	Total	Mobilization	Operating	Other
1. INVENTORY BOP	60,025.3	0.0	31,162.4	28,862.9
2. BOP INVENTORY ADJUSTMENTS	79.3	0.0	3,532.3	(3,452.9)
A. RECLASSIFICATION CHANGE (memo)	0.0	0.0	4,200.8	(4,200.8)
B. PRICE CHANGE AMOUNT (memo)	79.3	0.0	(668.5)	747.8
C. INVENTORY RECLASSIFIED AND REPRICED	60,104.6	0.0	34,694.7	25,409.9
3. RECEIPTS AT STANDARD	3,526.2	0.0	3,521.8	4.4
4. SALES AT STANDARD	7,764.2	0.0	7,764.2	0.0
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	101.4	0.0	39.9	61.5
B. RETURNS FROM CUSTOMERS FOR CREDIT	296.2	0.0	271.7	24.5
C. RETURNS FROM CUSTOMERS, NO CREDIT	21,790.4	0.0	11,953.4	9,836.9
D. RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.0
E. TRANSFERS TO PROP. DISPOSAL (-)	(3,275.4)	0.0	0.0	(3,275.4)
F. ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	(33.6)	0.0	(33.7)	0.2
G. OTHER (listed in Section 9)	(14,564.0)	0.0	(11,369.9)	(3,194.1)
H. TOTAL ADJUSTMENTS	4,315.0	0.0	861.4	3,453.6
6. INVENTORY EOP	60,181.7	0.0	31,313.7	28,868.0
7. INVENTORY EOP (REVALUED)	36,251.8	0.0	19,778.4	16,473.4
A. APPROVED ACQUISITION OBJECTIVE (memo)				12,964.1
B. ECONOMIC RETENTION (memo)				1,460.9
C. CONTINGENCY RETENTION (memo)				2,011.4
D. POTENTIAL DOD REUTILIZATION (memo)				36.9
8. INVENTORY ON ORDER EOP (memo)	5,037.8	0.0	5,037.8	0.0

9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	(164.0)	0.0	(142.2)	(21.8)
Strata Transfers	0.0	0.0	3,172.3	(3,172.3)
Net/Standard Difference	(14,399.9)	0.0	(14,399.9)	0.0
Total	(14,564.0)	0.0	(11,369.9)	(3,194.1)

INVENTORY STATUS
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
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FY 2019

			---Peacetime---	
	Total	Mobilization	Operating	Other
1. INVENTORY BOP	60,181.7	0.0	31,313.7	28,868.0
2. BOP INVENTORY ADJUSTMENTS	13.8	0.0	3,015.6	(3,001.8)
A. RECLASSIFICATION CHANGE (memo)	0.0	0.0	4,200.8	(4,200.8)
B. PRICE CHANGE AMOUNT (memo)	13.8	0.0	(1,185.2)	1,199.0
C. INVENTORY RECLASSIFIED AND REPRICED	60,195.4	0.0	34,329.3	25,866.2
3. RECEIPTS AT STANDARD	3,414.4	0.0	3,410.4	4.0
4. SALES AT STANDARD	7,690.1	0.0	7,690.1	0.0
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	100.3	0.0	37.4	62.9
B. RETURNS FROM CUSTOMERS FOR CREDIT	295.3	0.0	270.9	24.5
C. RETURNS FROM CUSTOMERS, NO CREDIT	19,992.4	0.0	11,028.1	8,964.3
D. RETURNS TO SUPPLIERS (-)	0.0	0.0	0.0	0.0
E. TRANSFERS TO PROP. DISPOSAL (-)	(3,269.5)	0.0	0.0	(3,269.5)
F. ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	(34.3)	0.0	(34.5)	0.1
G. OTHER (listed in Section 9)	(13,032.0)	0.0	(10,027.0)	(3,005.0)
H. TOTAL ADJUSTMENTS	4,052.2	0.0	1,274.9	2,777.3
6. INVENTORY EOP	59,971.9	0.0	31,324.4	28,647.5
7. INVENTORY EOP (REVALUED)	37,158.1	0.0	20,364.2	16,793.9
A. APPROVED ACQUISITION OBJECTIVE (memo)				13,243.0
B. ECONOMIC RETENTION (memo)				1,470.8
C. CONTINGENCY RETENTION (memo)				2,042.1
D. POTENTIAL DOD REUTILIZATION (memo)				38.0
8. INVENTORY ON ORDER EOP (memo)	5,143.1	0.0	5,061.1	82.0
9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	(183.0)	0.0	(155.9)	(27.1)
Strata Transfers	0.0	0.0	2,977.9	(2,977.9)
Net/Standard Difference	(12,849.0)	0.0	(12,849.0)	0.0
Total	(13,032.0)	0.0	(10,027.0)	(3,005.0)

12. Marine Corps Supply

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NARRATIVE
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT – MARINE CORPS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018

Mission Statement/Overview:

The Marine Corps, Supply Management Activity Group (MC SMAG) performs inventory management functions that result in the sale of consumable and reparable items to support Department of Defense (DoD), federal, and non-federal war fighting weapon systems supply needs. Costs related to providing such inventory (material) support to customers are recouped through the application of stabilized rates that include recovery for cost elements such as oversight/inventory management and cost required to stock, store, receive, and issue such assets. MC SMAG is divided into three Budget Projects to organize the financial operation of the fund.

	Budget Project
Wholesale	
Depot Level Reparables	BP84
Retail	BP28
Consumable Retail Centrally Managed/Direct Support Stock Control	
Operations	BP91
Cost of Operations	

Activity Group Composition:	**Location**
Weapon System Management Center	Albany, GA
Direct Support Stock Control	Barstow, CA

Significant Changes Since the FY 2018 President's Budget:

The MC SMAG retail operations gross sales and obligations declined in Fiscal Year (FY) 2017 through FY 2018 due to the Marine Corps transitioning the majority of it retail supply operation functions to the General Services Administration (GSA) via the Fourth Party Logistics (4PL) process. This process aims to preserve all capabilities previously provided by the Marine Corps while utilizing GSA's knowledge and expertise in supply management. The transition has significantly reduced MC SMAG's future retail Obligation Authority (OA) requirement leaving only the Retail Centrally Managed (RCM) program.

NARRATIVE
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT – MARINE CORPS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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Financial Profile:

Net Revenue	$138.8	$106.9	$105.5
Expense	$135.3	$107.1	$109.4
Operating Results	$3.5	($0.2)	($3.8)
Capital Surcharge	$0.0	$0.0	$0.0
Net Operating Results (NOR)	$3.5	($0.2)	($3.8)
Prior Year AOR	$0.5	$4.0	$3.8
Accumulated Operating Results (AOR)	$4.0	$3.8	$0.0

Note: Amounts may not add due to rounding.

Revenue and Expenses: Annual revenue and expenses decrease from FY 2017 to FY 2019 based on projected demand from the operating forces. This is primarily due to SMAG's unfilled orders declining from FY 2017 to FY 2018 along with recouping prior year losses in FY 2019. This is a result of the planned right sizing of Authorized Acquisition Objectives (AAOs) and Tables of Equipment (T/Es), and a decrease in operating tempo resulting from planned drawdown of Overseas Contingency Operations (OCO) funded Reset workload.

Operating Results: Net Operating Result fluctuates across the budget years due to changes in operating tempo and the projected demand pattern from our customers. The net result is a balanced budget that achieves a zero AOR in FY 2019.

Obligation Authority ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Wholesale	$85.1	$96.1	$89.1
Retail	-$2.0	$1.1	$1.1
Total	$83.1	$97.2	$90.2

Note: Amounts may not add due to rounding.

Wholesale: Obligation Authority (OA) supports the acquisition and repair of reparable spare parts as well as the cost of operating the SMAG wholesale enterprise. In FY 2019, the budget declines due to projected trends in demand from operating forces.

Retail: OA for retail operations reflects a negative balance in FY 2017 due to receipt of credits from excess material returned to the Source of Supply (SOS). In FY 2018 and FY 2019, the budget remains stable, as the transition to GSA was completed.

NARRATIVE
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SUPPLY MANAGEMENT – MARINE CORPS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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Collections/Disbursement/Outlays ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Collections	$133.7	$105.8	$88.0
Disbursements	$59.4	$73.8	$73.6
Transfers (CIT Reimbursement)	$0.0	$0.0	$0.0
Outlays (Incorporates CIT)	$74.3	$32.1	$14.4

Note: Amounts may not add due to rounding.

Collections: Collections are based on revenue projections. In FY 2017, collection includes a high volume of demands for the Amphibious Assault Vehicle secondary depot reparables (SDRs) assets in support of the Foreign Military Sales (FMS) project. The collections decline through the budget years due to completion of the FMS project, projected customer demands from the operating forces, and declining cost recovery rates.

Disbursements: FY 2017 disbursements reflect actual expenditures supporting the operating forces for material, supplies, and DLA transportation cost. FY 2018 and FY 2019 disbursements remain steady and commensurate with reduced demand.

Sales ($Millions):	**FY 2017**	**FY 2018**	**FY 2019**
Wholesale	$134.9	$108.4	$90.5
Retail	$4.5	$1.1	$1.1
Total (Less Provisioning)	$139.4	$109.5	$91.6

Note: Amounts may not add due to rounding.

Wholesale: Gross sales declines across the budget due to changes in operating tempo, projected customer demands, and the recouping of operating gains.

Retail: Sales from retail operations decline across the budget due to completion of the GSA transition. In FY 2018 and FY 2019, the sales reflect only the RCM program anticipated demands.

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DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT – MARINE CORPS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
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Metrics: Metrics provide information on the scope of work performed by USMC-SM. Adjustments have been made to align metrics with current obligations and sales projections.

	FY 2017	FY 2018	FY 2019
Items Managed	4,758	4,792	4,873
Requisitions Received	3,615	3,513	3,423
Receipts	1,298	1,114	1,089
Issues	4,211	4,023	3,918
Contracts Executed	162	158	152

Undelivered Orders: Undelivered orders represent contracts or orders for goods for which a liability has not yet accrued. The accrual of the liability creates an outlay requirement.

	FY 2017	FY 2018	FY 2019
Undelivered Orders ($Millions):	$57.4	$56.0	$54.4

War Reserve Material (WRM): WRM funding supports the procurement, replenishment, stock and contracted asset availability guarantee of consumable and reparable items deemed necessary for war reserve. No OA or direct appropriations are required during this budget cycle.

Performance Indicators: In addition to core metrics such as net and accumulated operating results, Supply Chain Channel Fill Rates measures the capacity of the supply chain to respond to customer demand.

	FY 2017	FY 2018	FY 2019
Supply Material Availability	60%	65%	70%
Report of Discrepancy Processing Time	55	55	55

Unit Cost: The cost per unit sold is based on total cost and total anticipated gross sales. Unit cost can change in the year of execution based on the relationship between obligations and sales.

Unit Cost:	FY 2017	FY 2018	FY 2019
Wholesale	0.622	0.915	1.023
Retail	-0.437	0.999	1.000

NARRATIVE
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SUPPLY MANAGEMENT – MARINE CORPS
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Composite Rates:	**FY 2017**	**FY 2018**	**FY 2019**
Annual Price Change (APC)	-3.890%	-2.250%	-9.460%
Composite Cost Recovery Rate (CRR)	20.150%	17.170%	12.930%

Cost categories within the CRR include civilian pay, distribution depot costs, transportation costs, other Department of Defense bills associated with supply operations, and costs to recoup Accumulated Operating Results (AOR) gains or losses. The FY 2019 CRR decreases due to returning a gain to the customers and achieving a zero AOR. The CRR is tied to customer funding and Marine Corps Weapons Systems Support's ability to fill customer orders.

Staffing:

Civilian/Military ES & Workyears:	**FY 2017**	**FY 2018**	**FY 2019**
Civilian End Strength	21	26	26
Civilian Workyears (straight time)	21	22	22
Military End Strength	0	0	0
Military Workyears	0	0	0

Civilian staffing remains stable and provides continuous support.

Capital Investment Program (CIP):
MC SMAG does not have a CIP budget request.

SOURCES OF REVENUE
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
1. New Orders			
a. Orders from DoD Components:			
Depr of the Navy			
Military Personnel, M.C.	-	-	
O&M Marine Corps	126.1	62.5	69.9
Reserve Personnel, M.C.	-	-	-
Procurement, M.C.	-	-	-
Military Construction, Navy	-	-	-
RDT & E, Navy	-	-	-
Reserve Personnel, Navy	-	-	-
Military Personnel, Navy	-	-	-
Aircraft Procurement, Navy	-	-	-
Weapons Procurement, Navy	-	-	-
Shipbuilding & Conv. Navy	-	-	-
O&M, Navy	0.4	0.0	0.0
O&M, Navy Reserve	-	-	-
Other Procurement, Navy	-	-	-
Navy Working Capital Fund	31.2	3.9	11.1
	157.7	66.5	81.1
Orders from other DoD Components			
Army	11.0	1.3	3.4
Air Force	1.4	0.3	0.3
Other DoD	-	-	-
	12.4	1.6	3.7
b. Orders from other Fund Business Areas:			-
Distribution Depots, Navy	-	-	-
Logistics Support, Navy	-	-	-
	-	-	-
			-
c. Total DoD	170.1	68.1	84.7
			-
d. Other Orders:			-
Other Federal Agencies	-	-	-
Trust Fund	-	-	-
Non-Federal Agencies *	-	-	-
Foreign Military Sales (FMS)	16.0	1.4	2.5
	-	-	-
Total New Orders	186.2	69.5	87.2
2. Carry-In Orders	28.1	74.8	34.9
3. Total Gross Orders	214.2	144.3	122.1
4. Carry-Out Orders (-)	74.8	34.9	30.5
5. Gross Sales	139.4	109.5	91.6
Reimbursable Orders (BP 91)	13.7	14.1	14.1
6. Credit (-)	0.5	2.6	2.6
7. Net Sales	138.8	106.9	89.0

* Non-federal agencies line includes cash sales

REVENUE AND EXPENSES
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	FY 2017	FY 2018	FY 2019
Revenue:			
Gross Sales			
Operations	139.4	109.5	108.1
Capital Surcharges	0.0	0.0	0.0
Capital Investment Recovery except Maj Const	0.0	0.0	0.0
Total Gross Sales	139.4	109.5	108.1
Major Construction Dep	0.0	0.0	0.0
Other Income	0.0	0.0	0.0
Refunds/Discounts (- Credit Sales)	-0.5	-2.6	-2.6
Total Income	138.8	106.9	105.5
Expenses:			
Cost of Materiel Sold from Inventory	121.6	93.0	93.9
Military Personnel Compensation & Benefits	0.0	0.0	0.0
Civilian Personnel Compensation & Benefits	2.0	2.2	2.2
Travel and Transportation of Personnel	0.0	0.1	0.1
Material & Supplies (Internal Operations)	0.0	0.0	0.0
Equipment	0.0	0.0	0.0
Other Purchases from NWCF	10.0	10.2	11.5
Transportation of Things	0.0	0.1	0.1
Capital Investment Recovery	0.0	0.0	0.0
Printing and Reproduction	0.0	0.0	0.0
Advisory and Assistance Services	0.0	0.0	0.0
Rent, Communication, Utilities & Misc Charges	0.0	0.0	0.0
Other Purchased Services	1.6	1.6	1.6
Total Expenses	135.3	107.1	109.4
Operating Result	3.5	-0.2	-3.8
Less Capital Surcharge reservation	0.0	0.0	0.0
Plus Appro Affecting NOR/AOR	0.0	0.0	0.0
Plus Other Changes Affecting NOR	0.0	0.0	0.0
Net Operating Result	3.5	-0.2	-3.8
Prior Year AOR	0.5	4.0	3.8
Other Changes Affecting AOR	0.0	0.0	0.0
Accumulated Operating Result	4.0	3.8	0.0
Non-Recoverable Adjustments impacting AOR	0.0	0.0	0.0
AOR for budget purposes	4.0	3.8	0.0

SUPPLY MANAGEMENT SUMMARY

DEPARTMENT OF THE NAVY

SUPPLY MANAGEMENT - MARINE CORPS

FISCAL YEAR (FY) 2019 BUDGET ESTIMATES

FEBRUARY 2018

(DOLLARS IN MILLIONS)

DIVISION	NET CUSTOMER ORDERS	NET SALES	OPERATING	MOBILIZATION	TOTAL OBLIGATIONS	VARIABILITY TARGET	TARGET TOTAL	CAPITAL IMRPROVEMENT PROGRAM	CREDIT SALES
BP 28 RCM									
FY17	4.2	4.5	-2.0	0.0	-2.0	0.0	-2.0	0.0	0.0
FY18	0.6	1.1	1.1	0.0	1.1	0.0	1.1	0.0	0.0
FY19	1.1	1.1	1.1	0.0	1.1	0.0	1.1	0.0	0.0
BP 28 DSSC									
FY17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FY18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FY19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BP 38									
FY17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FY18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FY19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BP 84									
FY17	181.4	134.3	69.7	0.0	71.4	14.5	85.9	0.0	0.5
FY18	66.3	105.8	82.4	0.0	82.0	13.8	95.8	0.0	2.6
FY19	83.6	88.0	75.9	0.0	75.0	13.8	88.8	0.0	2.6
BP 91									
FY17	0.0	0.0	13.7	0.0	13.7	0.0	13.7	0.0	0.0
FY18	0.0	0.0	14.1	0.0	14.1	0.0	14.1	0.0	0.0
FY19	0.0	0.0	14.1	0.0	14.1	0.0	14.1	0.0	0.0
TOTAL									
FY17	185.7	136.8	81.4	0.0	83.1	14.5	97.6	0.0	0.0
FY18	66.9	106.9	97.6	0.0	97.2	13.8	111.0	0.0	2.6
FY19	84.7	89.1	91.1	0.0	90.2	13.8	104.0	0.0	2.6

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
BP 84
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2017

Weapon System Name	NMCRS Rates*	Buy-in Outfitting	Special Programs	Basic Replen	Repair	Total
TOTAL COMMUNICATION AND ELECTRONICS	0.003	0.0	0.0	17.2	20.4	37.6
TOTAL ORDNANCE TANK AUTOMOTIVE	0.003	0.0	0.0	2.6	14.8	17.4
TOTAL GUIDED MISSILES AND EQUIPMENT	0.000	0.0	0.0	(0.1)	(0.0)	(0.1)
TOTAL ENGINEER SUPPORT AND CONSTRUCTION	0.000	0.0	0.0	2.3	0.1	2.4
TOTAL GENERAL PROPERTY	0.000	0.0	0.0	7.4	6.7	14.1
TOTAL		0.0	0.0	29.4	42.0	71.4

*Not Mission Capable Supply (NMCS) - Percentage of time aircraft are Not Mission Capable due to a supply shortage. Used in conjunction with Not Mission Capable Maintenance (NMCM) to determine total Not Mission Capable rate (inverse of MC). NMCS is computed only for weapon systems. NMCS is not computed for weapon system parts, such as engines.

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
BP 84
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2018

Weapon System Name	NMCRS Rates*	Buy-in Outfitting	Special Programs	Basic Replen	Repair	Total
TOTAL COMMUNICATION AND ELECTRONICS	0.003	0.0	0.0	8.7	42.6	51.3
TOTAL ORDNANCE TANK AUTOMOTIVE	0.003	0.0	0.0	1.9	13.2	15.1
TOTAL GUIDED MISSILES AND EQUIPMENT		0.0	0.0	1.8	0.4	2.2
TOTAL ENGINEER SUPPORT AND CONSTRUCTION		0.0	0.0	1.8	0.6	2.4
TOTAL GENERAL PROPERTY		0.0	0.0	5.7	5.3	11.0
TOTAL		0.0	0.0	19.9	62.1	82.0

*Not Mission Capable Supply (NMCS) - Percentage of time aircraft are Not Mission Capable due to a supply shortage. Used in conjunction with Not Mission Capable Maintenance (NMCM) to determine total Not Mission Capable rate (inverse of MC). NMCS is computed only for weapon systems. NMCS is not computed for weapon system parts, such as engines.

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
BP 84
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2019

Weapon System Name	NMCRS Rates*	Buy-in Outfitting	Special Programs	Basic Replen	Repair	Total
TOTAL COMMUNICATION AND ELECTRONICS	0.003	0.0	0.0	9.3	35.9	45.2
TOTAL ORDNANCE TANK AUTOMOTIVE	0.003	0.0	0.0	1.9	13.1	15.0
TOTAL GUIDED MISSILES AND EQUIPMENT		0.0	0.0	1.9	0.2	2.1
TOTAL ENGINEER SUPPORT AND CONSTRUCTION		0.0	0.0	1.7	0.6	2.3
TOTAL GENERAL PROPERTY		0.0	0.0	5.3	5.1	10.4
TOTAL		0.0	0.0	20.1	54.9	75.0

*Not Mission Capable Supply (NMCS) - Percentage of time aircraft are Not Mission Capable due to a supply shortage. Used in conjunction with Not Mission Capable Maintenance (NMCM) to determine total Not Mission Capable rate (inverse of MC). NMCS is computed only for weapon systems. NMCS is not computed for weapon system parts, such as engines.

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
BP 28 - RCM
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2017

Weapon System Name	NMCRS Rates*	Buy-in Outfitting	Special Programs	Basic Replen	Repair	Total
TOTAL COMMUNICATION AND ELECTRONICS	0.002	0.0	0.0	(0.2)	0.0	(0.2)
TOTAL ORDNANCE TANK AUTOMOTIVE	1.200	0.0	0.0	(1.9)	0.0	(1.9)
TOTAL GUIDED MISSILES AND EQUIPMENT	0.001	0.0	0.0	0.0	0.0	0.0
TOTAL ENGINEER SUPPORT AND CONSTRUCTION	0.000	0.0	0.0	0.0	0.0	0.0
TOTAL GENERAL PROPERTY	0.001	0.0	0.0	0.1	0.0	0.1
		0.0	0.0	0.0	0.0	0.0
TOTAL		0.0	0.0	(2.0)	0.0	(2.0)

*Not Mission Capable Supply (NMCS) - Percentage of time aircraft are Not Mission Capable due to a supply shortage. Used in conjunction with Not Mission Capable Maintenance (NMCM) to determine total Not Mission Capable rate (inverse of MC). NMCS is computed only for weapon systems. NMCS is not computed for weapon system parts, such as engines.

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
BP 28 - RCM
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2018

Weapon System Name	NMCRS Rates*	Buy-in Outfitting	Special Programs	Basic Replen	Repair	Total
TOTAL COMMUNICATION AND ELECTRONICS	0.002	0.0	0.0	0.1	0.0	0.1
TOTAL ORDNANCE TANK AUTOMOTIVE	0.009	0.0	0.0	0.7	0.0	0.7
TOTAL GUIDED MISSILES AND EQUIPMENT	0.002	0.0	0.0	0.1	0.0	0.1
TOTAL ENGINEER SUPPORT AND CONSTRUCTION	0.002	0.0	0.0	0.1	0.0	0.1
TOTAL GENERAL PROPERTY		0.0	0.0	0.1	0.0	0.1
		0.0	0.0	0.0	0.0	0.0
TOTAL		0.0	0.0	1.1	0.0	1.1

*Not Mission Capable Supply (NMCS) - Percentage of time aircraft are Not Mission Capable due to a supply shortage. Used in conjunction with Not Mission Capable Maintenance (NMCM) to determine total Not Mission Capable rate (inverse of MC). NMCS is computed only for weapon systems. NMCS is not computed for weapon system parts, such as engines.

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
BP 28 - RCM
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2019

Weapon System Name	NMCRS Rates*	Buy-in Outfitting	Special Programs	Basic Replen	Repair	Total
TOTAL COMMUNICATION AND ELECTRONICS	0.004	0.0	0.0	0.1	0.0	0.1
TOTAL ORDNANCE TANK AUTOMOTIVE	0.005	0.0	0.0	0.7	0.0	0.7
TOTAL GUIDED MISSILES AND EQUIPMENT	0.000	0.0	0.0	0.1	0.0	0.1
TOTAL ENGINEER SUPPORT AND CONSTRUCTION	0.001	0.0	0.0	0.1	0.0	0.1
TOTAL GENERAL PROPERTY	0.001	0.0	0.0	0.1	0.0	0.1
		0.0	0.0	0.0	0.0	0.0
TOTAL		0.0	0.0	1.1	0.0	1.1

*Not Mission Capable Supply (NMCS) - Percentage of time aircraft are Not Mission Capable due to a supply shortage. Used in conjunction with Not Mission Capable Maintenance (NMCM) to determine total Not Mission Capable rate (inverse of MC). NMCS is computed only for weapon systems. NMCS is not computed for weapon system parts, such as engines.

INVENTORY STATUS
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2017

		---Peacetime---		
	Total	Mobilization	Operating	Other
1. INVENTORY BOP	1,332.4	35.2	1,297.2	0.0
2. BOP INVENTORY ADJUSTMENTS	1.9	0.5	1.3	0.0
A. RECLASSIFICATION CHANGE (memo)	0.0	0.0	(562.2)	562.2
B. PRICE CHANGE AMOUNT (memo)	(29.1)	0.4	(29.4)	0.0
C. INVENTORY RECLASSIFIED AND REPRICED	1,303.3	35.6	705.6	562.2
3. RECEIPTS AT STANDARD	18.3	0.0	18.3	0.0
4. SALES AT STANDARD	112.8	0.0	112.8	0.0
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	18.8	(0.0)	18.9	0.0
B. RETURNS FROM CUSTOMERS FOR CREDIT	2.4	0.0	2.4	0.0
C. RETURNS FROM CUSTOMERS, NO CREDIT	287.6	0.0	287.6	0.0
D. RETURNS TO SUPPLIERS (-)	(108.7)	0.0	0.0	(108.7)
E. TRANSFERS TO PROP. DISPOSAL (-)	(155.7)	0.0	(88.8)	(66.9)
F. ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	(2.5)	(0.9)	(1.6)	0.0
G. OTHER (listed in Section 9)	(9.2)	0.8	(9.9)	0.0
H. TOTAL ADJUSTMENTS	31.8	(0.1)	207.5	(175.6)
6. INVENTORY EOP	1,240.5	35.4	818.5	386.6
7. INVENTORY EOP (REVALUED)	1,046.5	34.0	692.5	320.1
A. APPROVED ACQUISITION OBJECTIVE (memo)				0.0
B. ECONOMIC RETENTION (memo)				152.6
C. CONTINGENCY RETENTION (memo)				167.5
D. POTENTIAL DOD REUTILIZATION (memo)				0.0
8. INVENTORY ON ORDER EOP (memo)	57.4	0.0	57.4	0.0
9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	48.7	0.8	47.9	0.0
Strata Transfers	0.0	0.0	0.0	0.0
Net/Standard Difference	(57.9)	0.0	(57.9)	0.0
Total	(9.2)	0.8	(10.0)	0.0

INVENTORY STATUS
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2018

			---Peacetime---	
	Total	Mobilization	Operating	Other
1. INVENTORY BOP	1,240.5	35.4	818.5	386.6
	0.0	0.0	0.0	0.0
2. BOP INVENTORY ADJUSTMENTS	2.2	0.5	1.3	0.3
A. RECLASSIFICATION CHANGE (memo)	0.0	0.0	0.0	0.0
B. PRICE CHANGE AMOUNT (memo)	(23.7)	0.3	(15.9)	(8.2)
C. INVENTORY RECLASSIFIED AND REPRICED	1,216.8	35.8	802.7	378.4
	0.0	0.0	0.0	0.0
3. RECEIPTS AT STANDARD	15.3	0.0	15.3	0.0
4. SALES AT STANDARD	109.5	0.0	109.5	0.0
	0.0	0.0	0.0	0.0
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	(20.6)	(0.1)	(20.6)	0.0
B. RETURNS FROM CUSTOMERS FOR CREDIT	2.6	0.0	2.6	0.0
C. RETURNS FROM CUSTOMERS, NO CREDIT	350.4	0.0	350.4	0.0
D. RETURNS TO SUPPLIERS (-)	(94.4)	0.0	(94.4)	0.0
E. TRANSFERS TO PROP. DISPOSAL (-)	(138.1)	0.0	(109.5)	(28.6)
F. ISSUES/RECEIPTS WITHOUT	0.0	0.0	0.0	0.0
REIMBURSEMENT + or (-)	(2.0)	(2.5)	0.5	0.0
G. OTHER (listed in Section 9)	10.3	(0.6)	10.9	0.0
H. TOTAL ADJUSTMENTS	108.1	(3.2)	139.9	(28.6)
6. INVENTORY EOP	1,230.8	32.6	848.4	349.8
7. INVENTORY EOP (REVALUED)	1,066.6	31.4	735.4	299.8
A. APPROVED ACQUISITION OBJECTIVE (memo)				0.0
B. ECONOMIC RETENTION (memo)				160.6
C. CONTINGENCY RETENTION (memo)				139.2
D. POTENTIAL DOD REUTILIZATION (memo)				0.0
8. INVENTORY ON ORDER EOP (memo)	56.0	0.0	56.0	0.0
9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	61.8	(0.6)	62.5	0.0
Strata Transfers	0.0	0.0	0.0	0.0
Net/Standard Difference	(51.6)	0.0	(51.6)	0.0
Total	10.3	(0.6)	10.9	0.0

INVENTORY STATUS
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2019

		---Peacetime---		
	Total	Mobilization	Operating	Other
1. INVENTORY BOP	1,230.8	32.6	848.4	349.8
	0.0	0.0	0.0	0.0
2. BOP INVENTORY ADJUSTMENTS	2.3	0.5	1.6	0.2
A. RECLASSIFICATION CHANGE (memo)	0.0	0.0	0.0	0.0
B. PRICE CHANGE AMOUNT (memo)	(21.2)	0.4	(14.6)	(7.0)
C. INVENTORY RECLASSIFIED AND REPRICED	1,209.5	32.9	833.8	342.8
	0.0	0.0	0.0	0.0
3. RECEIPTS AT STANDARD	10.3	0.0	10.3	0.0
	0.0	0.0	0.0	0.0
4. SALES AT STANDARD	92.3	0.0	92.3	0.0
	0.0	0.0	0.0	0.0
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	(22.7)	(0.0)	(22.7)	0.0
B. RETURNS FROM CUSTOMERS FOR CREDIT	2.6	0.0	2.6	0.0
C. RETURNS FROM CUSTOMERS, NO CREDIT	248.6	0.0	248.6	0.0
D. RETURNS TO SUPPLIERS (-)	(94.3)	0.0	(94.3)	0.0
E. TRANSFERS TO PROP. DISPOSAL (-)	(152.2)	0.0	(124.6)	(27.6)
F. ISSUES/RECEIPTS WITHOUT	0.0	0.0	0.0	0.0
REIMBURSEMENT + or (-)	(12.1)	(2.6)	(9.5)	0.0
G. OTHER (listed in Section 9)	0.3	0.0	0.3	0.0
H. TOTAL ADJUSTMENTS	(29.8)	(2.6)	0.4	(27.6)
6. INVENTORY EOP	1,097.7	30.3	752.2	315.3
7. INVENTORY EOP (REVALUED)	973.2	29.4	667.6	276.2
A. APPROVED ACQUISITION OBJECTIVE (memo)				
B. ECONOMIC RETENTION (memo)				163.4
C. CONTINGENCY RETENTION (memo)				112.9
D. POTENTIAL DOD REUTILIZATION (memo)				0.0
8. INVENTORY ON ORDER EOP (memo)	54.4	0.0	54.4	0.0
9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	55.1	0.0	55.1	0.0
Strata Transfers	0.0	0.0	0.0	0.0
Net/Standard Difference	(54.8)	0.0	(54.8)	0.0
Total	0.3	0.0	0.3	0.0

WAR RESERVE MATERIAL
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2017

Stockpile Status			
	Total	WRM Protected	WRM Other
1. Inventory BOP @ std	35.2	35.2	0.0
2. Price Change	0.0	0.0	0.0
3. Reclassification	35.2	35.2	0.0
Inventory Changes			
a. Receipts @ std	0.0	0.0	0.0
(1). Purchases	0.0	0.0	0.0
(2). Returns from customers	0.0	0.0	0.0
b. Issues @ std	0.0	0.0	0.0
(1). Sales	0.0	0.0	0.0
(2). Returns to suppliers	0.0	0.0	0.0
(3). Disposals	0.0	0.0	0.0
c. Adjustments @ std	-2.2	-2.2	0.0
(1). Capitalizations	0.0	0.0	0.0
(2). Gains and losses	0.0	0.0	0.0
(3). Other	-2.3	-2.3	0.0
Inventory EOP	33.0	33.0	0.0
Stockpile Costs			
1. Storage	0.0	0.0	0.0
2. Management	0.0	0.0	0.0
3. Maintenance/Other	0.0	0.0	0.0
Total Cost	0.0	0.0	0.0
WRM Budget Request			
1. Obligations @ cost			
a. Additional WRM Investment	0.0	0.0	0.0
b. Replen./Repair WRM Reinvest.	0.0	0.0	0.0
c. Stock Rotation/Obsolescence	0.0	0.0	0.0
d. Assemble/Disassemble	0.0	0.0	0.0
e. Other	0.0	0.0	0.0
Total Request	0.0	0.0	0.0

WAR RESERVE MATERIAL
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2018

Stockpile Status			
	Total	WRM Protected	WRM Other
1. Inventory BOP @ std	33.0	33.0	0.0
2. Price Change	0.3	0.3	0.0
3. Reclassification	33.3	33.3	0.0
Inventory Changes			
a. Receipts @ std	0.0	0.0	0.0
(1). Purchases	0.0	0.0	0.0
(2). Returns from customers	0.0	0.0	0.0
b. Issues @ std	-2.5	-2.5	0.0
(1). Sales	0.0	0.0	0.0
(2). Returns to suppliers	-2.5	-2.5	0.0
(3). Disposals	0.0	0.0	0.0
c. Adjustments @ std	-0.7	-0.7	0.0
(1). Capitalizations	-0.1	-0.1	0.0
(2). Gains and losses	0.0	0.0	0.0
(3). Other	-0.6	-0.6	0.0
Inventory EOP	30.1	30.1	0.0
Stockpile Costs			
1. Storage	0.0	0.0	0.0
2. Management	0.0	0.0	0.0
3. Maintenance/Other	0.0	0.0	0.0
Total Cost	0.0	0.0	0.0
WRM Budget Request			
1. Obligations @ cost			
a. Additional WRM Investment	0.0	0.0	0.0
b. Replen./Repair WRM Reinvest.	0.0	0.0	0.0
c. Stock Rotation/Obsolescence	0.0	0.0	0.0
d. Assemble/Disassemble	0.0	0.0	0.0
e. Other	0.0	0.0	0.0
Total Request	0.0	0.0	0.0

WAR RESERVE MATERIAL
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)
FY 2019

Stockpile Status			
	Total	WRM Protected	WRM Other
1. Inventory BOP @ std	30.1	30.1	0.0
2. Price Change	0.7	0.7	0.0
3. Reclassification	30.8	30.8	0.0
Inventory Changes			
a. Receipts @ std	0.0	0.0	0.0
(1). Purchases	0.0	0.0	0.0
(2). Returns from customers	0.0	0.0	0.0
b. Issues @ std	-2.6	-2.6	0.0
(1). Sales	0.0	0.0	0.0
(2). Returns to suppliers	-2.6	-2.6	0.0
(3). Disposals	0.0	0.0	0.0
c. Adjustments @ std	0.0	0.0	0.0
(1). Capitalizations	0.0	0.0	0.0
(2). Gains and losses	0.0	0.0	0.0
(3). Other	0.0	0.0	0.0
Inventory EOP	28.2	28.2	0.0
Stockpile Costs			
1. Storage	0.0	0.0	0.0
2. Management	0.0	0.0	0.0
3. Maintenance/Other	0.0	0.0	0.0
Total Cost	0.0	0.0	0.0
WRM Budget Request			
1. Obligations @ cost			
a. Additional WRM Investment	0.0	0.0	0.0
b. Replen./Repair WRM Reinvest.	0.0	0.0	0.0
c. Stock Rotation/Obsolescence	0.0	0.0	0.0
d. Assemble/Disassemble	0.0	0.0	0.0
e. Other	0.0	0.0	0.0
Total Request	0.0	0.0	0.0

13. 6% Depot Capital Investment

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DEPOT MAINTENANCE SIX PERCENT CAPITAL INVESTMENT PLAN
DEPARTMENT OF THE NAVY
FISCAL YEAR (FY) 2019 BUDGET ESTIMATES
FEBRUARY 2018
(DOLLARS IN MILLIONS)

	REVENUE (Maintenance, Repair, Overhaul) 3 year average			**BUDGETED CAPITAL** (Modernization, Efficiency)		
	FY 14-16	**FY 15-17**	**FY 16-18**	**FY 2017**	**FY 2018**	**FY 2019**
	6,754.1	7,095.8	7,406.0			
	7,095.8	7,406.0	7,961.4			
	7,406.0	7,961.4	8,632.2			
Revenue (Avg)	7,085.3	7,487.7	7,999.8			
Working Capital Fund	2,469.6	2,523.0	2,618.9			
Appropriations (if applicable)	4,615.7	4,964.7	5,381.0			
Total Revenue	7,085.3	7,487.7	7,999.8			
WCF Depot Maintenance Capital Investment						
Facilities/ Work Environment				79.2	67.5	57.9
Equipment				44.2	48.1	52.5
Equipment (Non-Capital Investment Program)				11.2	11.1	10.4
Processes				0.0	0.6	0.6
Total WCF Investment				134.6	127.2	121.4
Appropriated Funding						
MILCON				61.2	188.3	220.8
Procurement				63.7	186.4	240.4
Operation & Maintenance				336.0	224.6	264.9
Total Appropriated Funding				460.9	599.3	726.1
Component Total				595.5	726.5	847.5
Minimum 6% Investment				425.1	449.3	480.0
Investment Over/Under Requirement				170.4	277.3	367.5
Projected Investment				**8.41%**	**9.70%**	**10.59%**

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